Exam4 Training

QUESTION & ANSWER

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Exam : **350-401**

Title : Implementing and Operating Cisco Enterprise Network Core Technologies (ENCOR)

Version : V14.02

1.Which function does a fabric edge node perform in an SD-Access deployment?
A. Connects endpoints to the fabric and forwards their traffic.
B. Encapsulates end-user data traffic into LISP.
C. Connects the SD-Access fabric to another fabric or external Layer 3 networks.
D. Provides reachability between border nodes in the fabric underlay.
Answer: A

2.mobility express
Refer to the exhibit.

```
R1# sh run | begin line con
line con 0
  exec timeout 0 0
  privilege level 15
  logging synchronous
  stopbits 1
line aux o
  exec timeout 0 0
  privilege level 15
  logging synchronous
  stopbits 1
line vty 0 4
  password 7 045802150C2E
  login
line vty 5 15
  password 7 045802150C2E
  login
l
end
```

```
R1# sh run | include aaa | enable
no aaa new-model
R1#
```

Which privilege level is assigned to VTY users?
A. 1
B. 7
C. 13
D. 15
Answer: A

3.What is the difference between a RIB and a FIB?

A. The FIB is populated based on RIB content.
B. The RIB maintains a minor image of the FIB.
C. The RIB is used to make IP source prefix-based switching decisions.
D. The FIB is where all IP routing information is stored.
Answer: A

4.Which requirement for an Ansible-managed node is true?
A. It must have an SSH server running.
B. It must be a Linux server or a Cisco device.
C. It must support ad hoc commands.
D. It must have an Ansible Tower installed.
Answer: A

5.A client device fails to see the enterprise SSID, but other client devices are connected to it.
What is the cause of this issue?
A. The client has incorrect credentials stored for the configured broadcast SSID.
B. The hidden SSID was not manually configured on the client.
C. The broadcast SSID was not manually configured on the client.
D. The client has incorrect credentials stored for the configured hidden SSID.
Answer: B

6.Which OSPF network types are compatible and allow communication through the two peering devices?
A. point-to-multipoint to non broadcast
B. broadcast to non broadcast
C. point-to-multipoint to broadcast
D. broadcast to point-to-point
Answer: B
Explanation:
Reference: https://www.freeccnaworkbook.com/workbooks/ccna/configuring-ospf-network-types

7.Which NGFW mode blocks flows crossing the firewall?
A. tap
B. inline
C. passive
D. inline tap
Answer: B
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/security/firepower-ngfw/200924-configuring-firepower-threat-defense-int.html

8.Which statement about route targets is true when using VRF-Lite?
A. Route targets control the import and export of routes into a customer routing table.
B. When BGP is configured, route targets are transmitted as BGP standard communities.
C. Route targets allow customers to be assigned overlapping addresses.

D. Route targets uniquely identify the customer routing table.
Answer: A

9.How does Cisco TrustSec enable more flexible access controls for dynamic networking environments and data centers?
A. uses flexible NetFlow
B. assigns a VLAN to the endpoint
C. classifies traffic based on advanced application recognition
D. classifies traffic based on the contextual identity of the endpoint rather than its IP address
Answer: D
Explanation:
Reference: https://www.cisco.com/c/dam/en/us/products/collateral/security/identity-services-engine/at_a_glance_c45-726831.pdf

10.Refer to the exhibit.

```
R1#debug ip ospf hello
R1#debug condition interface Fa0\1
        Condition 1 Set
```

Which statement about the OPSF debug output is true?
A. The output displays OSPF hello messages which router R1 has sent or received on interface Fa0/1.
B. The output displays OSPF messages which router R1 has sent or received on all interfaces.
C. The output displays OSPF messages which router R1 has sent or received on interface Fa0/1.
D. The output displays OSPF hello and LSACK messages which router R1 has sent or received.
Answer: A

11.Which LISP infrastructure device provides connectivity between non-LISP sites and LISP sites by receiving non-LISP traffic with a LISP site destination?
A. PITR
B. map resolver
C. map server
D. PETR
Answer: A
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/solutions/Enterprise/Data_Center/DCI/5-0/LISPmobility/DCI_LISP_Host_Mobility/LISPmobile_2.html

12.Which two protocols are used with YANG data models? (Choose two.)
A. TLS
B. RESTCONF
C. SSH
D. NETCONF
E. HTTPS
Answer: BD

13.Which HTTP status code is the correct response for a request with an incorrect password applied to a REST API session?
A. HTTP Status Code: 200
B. HTTP Status Code: 302
C. HTTP Status Code: 401
D. HTTP Status Code: 504
Answer: C
Explanation:
Reference: https://developer.mozilla.org/en-US/docs/Web/HTTP/Status/401

14.The login method is configured on the VTY lines of a router with these parameters.
- The first method for authentication is TACACS
- If TACACS is unavailable, login is allowed without any provided credentials
Which configuration accomplishes this task?
A）

```
R1#sh run | include aaa
aaa new-model
aaa authentication login telnet group tacacs+ none
aaa session-id common

R1#sh run | section vty
line vty 0 4

R1#sh run | include username
R1#
```

B)

```
R1#sh run | include aaa
aaa new-model
aaa authentication login default group tacacs+
aaa session-id common

R1#sh run | section vty
line vty 0 4
 transport input none
R1#
```

C)

```
R1#sh run | include aaa
aaa new-model
aaa authentication login VTY group tacacs+ none
aaa session-id common

R1#sh run | section vty
line vty 0 4
 password 7 02050D480809

R1#sh run | include username
R1#
```

D)

```
R1#sh run | include aaa
aaa new-model
aaa authentication login default group tacacs+ none
aaa session-id common

R1#sh run | section vty
line vty 0 4
 password 7 02050D480809

R1#sh run | include username
R1#
```

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

15.Which statement about multicast RPs is true?
A. RPs are required only when using protocol independent multicast dense mode.
B. RPs are required for protocol independent multicast sparse mode and dense mode.
C. By default, the RP is needed periodically to maintain sessions with sources and receivers.
D. By default, the RP is needed only to start new sessions with sources and receivers.
Answer: D
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/ios/solutions_docs/ip_multicast/White_papers/rps.html

16.To increase total throughput and redundancy on the links between the wireless controller and switch, the customer enabled LAG on the wireless controller.
Which EtherChannel mode must be configured on the switch to allow the WLC to connect?
A. Active
B. Passive
C. On
D. Auto
Answer: C
Explanation:
Reference: https://community.cisco.com/t5/wireless-mobility-documents/lag-link-aggregation/ta-

p/3128669

17.Which feature does Cisco TrustSec use to provide scalable, secure communication throughout a network?
A. security group tag ACL assigned to each port on a switch
B. security group tag number assigned to each user on a switch
C. security group tag number assigned to each port on a network
D. security group tag ACL assigned to each router on a network
Answer: B
Explanation:
Reference: https://www.cisco.com/c/dam/en/us/solutions/collateral/borderless-networks/trustsec/C07-730151-00_overview_of_trustSec_og.pdf

18.An engineer configures a WLAN with fast transition enabled. Some legacy clients fail to connect to this WLAN.
Which feature allows the legacy clients to connect while still allowing other clients to use fast transition based on their OUIs?
A. over the DS
B. 802.11k
C. adaptive R
D. 802.11v
Answer: C

19.Which exhibit displays a valid JSON file?
A)

```
{
    "hostname": "edge_router_1"
    "interfaces": {
          "GigabitEthernet1/1"
          "GigabitEthernet1/2"
          "GigabitEthernet1/3"
    }
}
```

B)

```
{
    "hostname": "edge_router_1",
    "interfaces": {
          "GigabitEthernet1/1",
          "GigabitEthernet1/2",
          "GigabitEthernet1/3",
    },
}
```

C)

```
{
    "hostname": "edge_router_1"
    "interfaces": [
          "GigabitEthernet1/1"
          "GigabitEthernet1/2"
          "GigabitEthernet1/3"
    ]
}
```

D)

```
{
    "hostname": "edge_router_1",
    "interfaces": [
          "GigabitEthernet1/1",
          "GigabitEthernet1/2",
          "GigabitEthernet1/3"
    ]
}
```

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

20.A network administrator is implementing a routing configuration change and enables routing debugs to track routing behavior during the change. The logging output on the terminal is interrupting the command typing process.
Which two actions can the network administrator take to minimize the possibility of typing commands incorrectly? (Choose two.)
A. Configure the logging synchronous global configuration command.
B. Configure the logging synchronous command under the vty.
C. Increase the number of lines on the screen using the terminal length command.
D. Configure the logging delimiter feature.
E. Press the TAB key to reprint the command in a new line.
Answer: AC

21.Which two pieces of information are necessary to compute SNR? (Choose two.)
A. transmit power
B. noise floor
C. EIRP
D. RSSI
E. antenna gain

Answer: BD
Explanation:
Reference: https://community.cisco.com/t5/wireless-mobility-documents/snr-rssi-eirp-and-free-space-path-loss/ta-p/3128478

22.Which statements are used for error handling in Python?
A. try/catch
B. catch/release
C. block/rescue
D. try/except
Answer: D

23.What are two benefits of virtualizing the server with the use of VMs in a data center environment? (Choose two.)
A. reduced rack space, power, and cooling requirements
B. smaller Layer 2 domain
C. increased security
D. speedy deployment
E. reduced IP and MAC address requirements
Answer: AD

24.Which two steps are required for a complete Cisco DNA Center upgrade? (Choose two.)
A. automation backup
B. system update
C. golden image selection
D. proxy configuration
E. application updates
Answer: BE

25.What is a benefit of data modeling languages like YANG?
A. They create more secure and efficient SNMP OIDs.
B. They provide a standardized data structure, which results in configuration scalability and consistency.
C. They enable programmers to change or write their own applications within the device operating system.
D. They make the CLI simpler and more efficient.
Answer: B

26.Refer to the exhibit.

Name is Bob Johnson
Age is 75
is alive

Favorite foods are:
• Cereal
• Mustard
• Onions

What is the JSON syntax that is formed from the data?

A. {Name: Bob Johnson, Age: 75, Alive: true, Favorite Foods: [Cereal, Mustard, Onions]}

B. {“Name”: “Bob Johnson”, “Age”: 75, “Alive”: true, “Favorite Foods”: [“Cereal”, “Mustard”, “Onions”]}

C. {‘Name’: ‘Bob Johnson’, ‘Age’: 75, ‘Alive’: True, ‘Favorite Foods’: ‘Cereal’, ‘Mustard’, ‘Onions’}

D. {“Name”: “Bob Johnson”, “Age”: Seventyfive, “Alive”: true, “Favorite Foods”: [“Cereal”, “Mustard”, “Onions”]}

Answer: B

27.Based on this interface configuration, what is the expected state of OSPF adjacency?

R1:

```
interface GigabitEthernet0/1
  ip address 192.0.2.1 255.255.255.252
  ip ospf 1 area 0
  ip ospf hello-interval 2
  ip ospf cost 1
end
```

R2:

```
interface GigabitEthernet0/1
  ip address 192.0.2.2 255.255.255.252
  ip ospf 1 area 0
  ip ospf cost 500
end
```

A. 2WAY/DROTHER on both routers

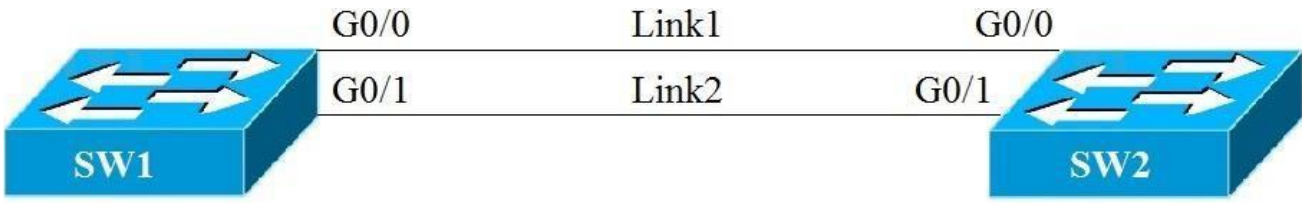
B. not established

C. FULL on both routers

D. FULL/BDR on R1 and FULL/BDR on R2

Answer: B

28.Refer to the exhibit.




```
SW2#show spanning-tree

 VLAN0001

   Spanning tree enabled protocol ieee

   Root ID     Priority    32769
               Address     5000.0005.0000
               Cost        4
               Port        1 (GigabitEthernet0/0)
               Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

   Bridge ID   Priority    32769 (priority 32769 sys-id-ext 1)
               Address     5000.0006.0000
               Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec
               Aging Time  300 sec

Interface           Role  Sts  Cost  Prio.libr  Type
---------------     ----  ---  ----  --------  --------------------

Gi0/0               Root  FWD   4    128.1      P2p
Gi0/1               Alto  BLW   4    32.2       P2p
```

Link1 is a copper connection and Link2 is a fiber connection. The fiber port must be the primary port for all forwarding. The output of the show spanning-tree command on SW2 shows that the fiber port is blocked by spanning tree. An engineer enters the spanning-tree port-priority 32 command on G0/1 on SW2, but the port remains blocked.

Which command should be entered on the ports that are connected to Link2 to resolve the issue?

A. Enter spanning-tree port-priority 4 on SW2.

B. Enter spanning-tree port-priority 32 on SW1.

C. Enter spanning-tree port-priority 224 on SW1.

D. Enter spanning-tree port-priority 64 on SW2.

Answer: B

29.Which JSON syntax is valid?

A. {“switch”: “name”: “dist1”, “interfaces”: [“gig1”, “gig2”, “gig3”]}

B. {/“switch/”: {/“name/”: “dist1”, /“interfaces/”: [“gig1”, “gig2”, “gig3”]}}

C. {“switch”: {“name”: “dist1”, “interfaces”: [“gig1”, “gig2”, “gig3”]}}

D. {‘switch’: (‘name’: ‘dist1’, ‘interfaces’: [‘gig1’, ‘gig2’, ‘gig3’])}

Answer: A

30.What are two common sources of interference for Wi-Fi networks? (Choose two.)

A. LED lights

B. radar

C. fire alarm
D. conventional oven
E. rogue AP
Answer: BE

31.When using TLS for syslog, which configuration allows for secure and reliable transportation of messages to its default port?
A. logging host 10.2.3.4 vrf mgmt transport tcp port 514
B. logging host 10.2.3.4 vrf mgmt transport udp port 514
C. logging host 10.2.3.4 vrf mgmt transport tcp port 6514
D. logging host 10.2.3.4 vrf mgmt transport udp port 6514
Answer: C
Explanation:
Reference: https://tools.ietf.org/html/rfc5425

32.Which behavior can be expected when the HSRP version is changed from 1 to 2?
A. No changes occur because the standby router is upgraded before the active router.
B. No changes occur because version 1 and 2 use the same virtual MAC OUI.
C. Each HSRP group reinitializes because the virtual MAC address has changed.
D. Each HSRP group reinitializes because the multicast address has changed.
Answer: C

33.Which protocol does REST API rely on to secure the communication channel?
A. HTTP
B. SSH
C. HTTPS
D. TCP
Answer: C

34.Refer to this output.
R1# *Feb 14 37:09:53.129: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed state to up
What is the logging severity level?
A. notification
B. emergency
C. critical
D. alert
Answer: A

35.Refer to the exhibit.

```
R1#show ip bgp
BGP table version is 32, local router ID is 192.168.101.5
Status codes: S suppressed, d damped, h history, *valid, > best, i - internal,
              r RIB-failure, S Stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, c RIB-compressed,
Origin codes: i - IGP, e - EGP, ? - incomplete
RPKI validation codes: V valid, I invalid, N Not found
     Network          Next Hop            Metric LocPrf Weight Path
*    192.168.102.0    192.168.101.18           80             0 64517i
*                     192.168.101.14           80         80  0 64516i
*                     192.168.101.10                          0 64515 64515i
*>                    192.168.101.2                       32768 64513i
*                     192.168.101.6                       80  0 64514 64514i
```

Which IP address becomes the active next hop for 192.168.102.0/24 when 192.168.101.2 fails?

A. 192.168.101.10

B. 192.168.101.14

C. 192.168.101.6

D. 192.168.101.18

Answer: D

36.Which PAgP mode combination prevents an EtherChannel from forming?

A. auto/desirable

B. desirable/desirable

C. desirable/auto

D. auto/auto

Answer: D

Explanation:

Reference: https://www.omnisecu.com/cisco-certified-network-associate-ccna/etherchannel-pagp-and-lacp-modes.php

37.If a VRRP master router fails, which router is selected as the new master router?

A. router with the lowest priority

B. router with the highest priority

C. router with the highest loopback address

D. router with the lowest loopback address

Answer: B

38.Which QoS component alters a packet to change the way that traffic is treated in the network?

A. policing

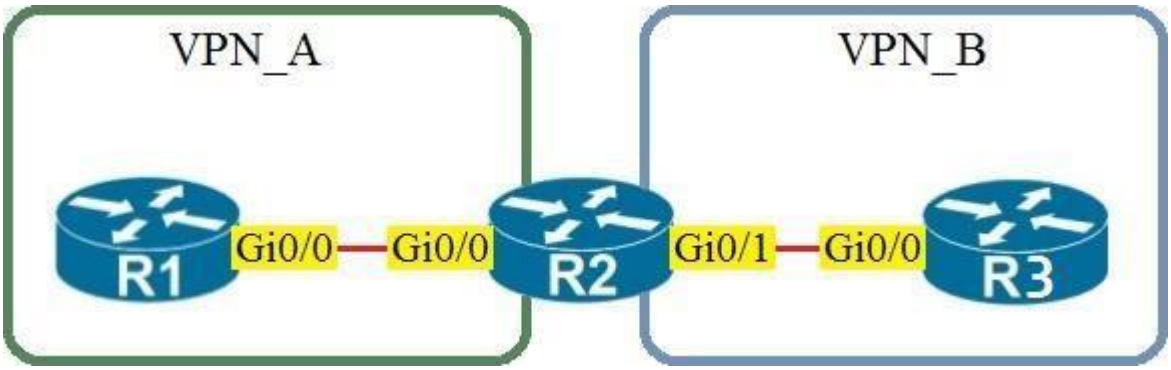
B. classification

C. marking

D. shaping

Answer: C

39.Refer to the exhibit.



Assuming that R1 is a CE router, which VRF is assigned to Gi0/0 on R1?

A. default VRF

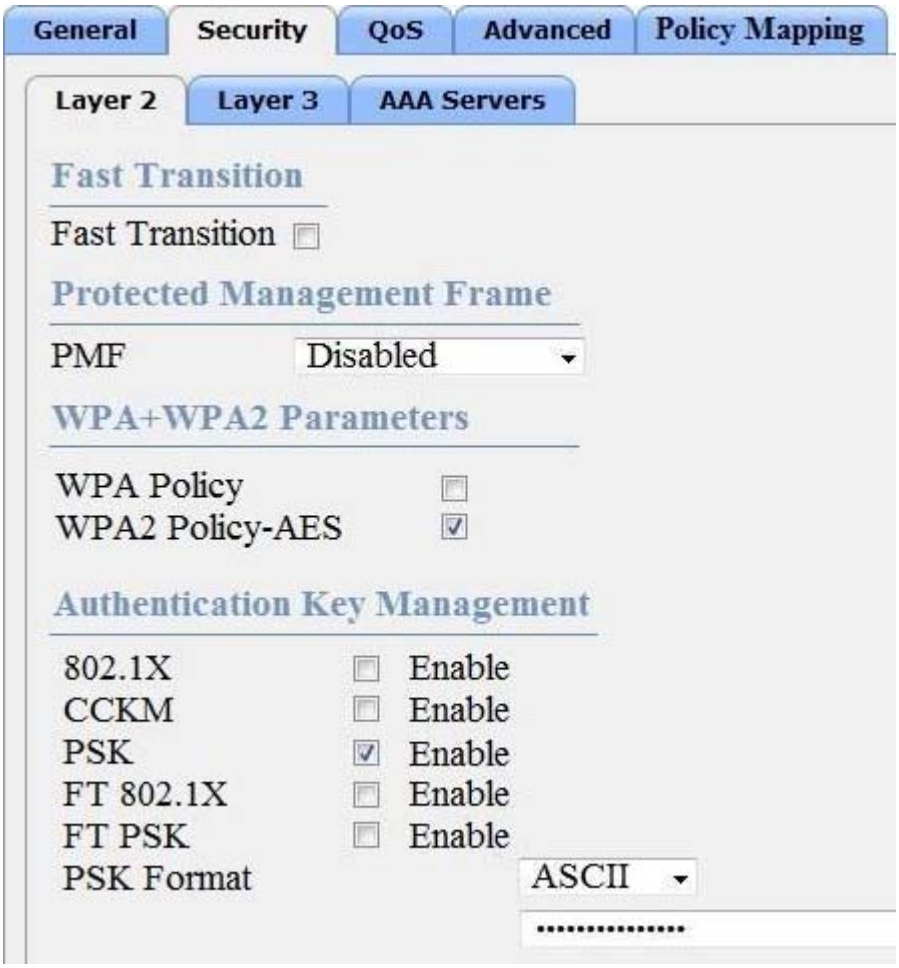
B. VRF VPN_A

C. VRF VPN_B

D. management VRF

Answer: A

40.Refer to the exhibit.



Based on the configuration in this WLAN security setting, which method can a client use to authenticate to the network?

A. text string
B. username and password
C. RADIUS token
D. certificate
Answer: A

41.Which two mechanisms are available to secure NTP? (Choose two.)
A. IPsec
B. IP prefix list-based
C. encrypted authentication
D. TACACS-based authentication
E. IP access list-based
Answer: CE
Explanation:
Reference: https://www.cisco.com/c/dam/en/us/td/docs/ios-xml/ios/bsm/configuration/xe-3se/3650/bsm-xe-3se-3650-book.html

42.Which technology provides a secure communication channel for all traffic at Layer 2 of the OSI model?
A. SSL
B. Cisco TrustSec
C. MACsec
D. IPsec
Answer: C

43.Refer to the exhibit.

```
Extended IP access list EGRESS
10 permit ip 10.0.0.0.0.0.0.255 any
!
<Output Omitted>
!
interface GigabitEthernet0/0
ip address 209.165.200.225  255.255.255.0
ip access-group EGRESS out
duplex auto
speed auto
media-type rj45
!
```

An engineer must block all traffic from a router to its directly connected subnet 209.165.200.0/24. The engineer applies access control list EGRESS in the outbound direction on the GigabitEthernet0/0 interface of the router.
However, the router can still ping hosts on the 209.165.200.0/24 subnet.
Which explanation of this behavior is true?
A. Access control lists that are applied outbound to a router interface do not affect traffic that is sourced

from the router.
B. After an access control list is applied to an interface, that interface must be shut and no shut for the access control list to take effect.
C. Only standard access control lists can block traffic from a source IP address.
D. The access control list must contain an explicit deny to block traffic from the router.
Answer: A

44.Which two methods are used by an AP that is trying to discover a wireless LAN controller? (Choose two.)
A. Cisco Discovery Protocol neighbor
B. querying other APs
C. DHCP Option 43
D. broadcasting on the local subnet
E. DNS lookup CISCO-DNA-PRIMARY.localdomain
Answer: CD
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/wireless/5500-series-wireless-controllers/119286-lap-notjoin-wlc-tshoot.html#backinfo

45.Which IP SLA operation requires the IP SLA responder to be configured on the remote end?
A. UDP jitter
B. ICMP jitter
C. TCP connect
D. ICMP echo
Answer: A
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/46sg/configuration/guide/Wrapper-46SG/swipsla.pdf

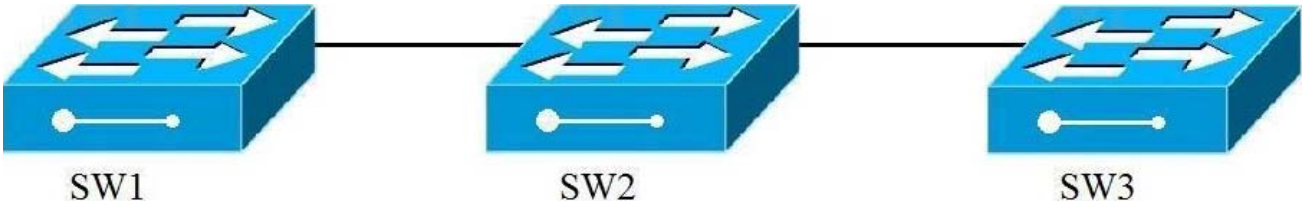
46.Which statement explains why Type 1 hypervisor is considered more efficient than Type2 hypervisor?
A. Type 1 hypervisor is the only type of hypervisor that supports hardware acceleration techniques.
B. Type 1 hypervisor relies on the existing OS of the host machine to access CPU, memory, storage, and network resources.
C. Type 1 hypervisor runs directly on the physical hardware of the host machine without relying on the underlying OS.
D. Type 1 hypervisor enables other operating systems to run on it.
Answer: C

47.A client with IP address 209.165.201.25 must access a web server on port 80 at 209.165.200.225. To allow this traffic, an engineer must add a statement to an access control list that is applied in the inbound direction on the port connecting to the web servers.
Which statement allows this traffic?
A. permit tcp host 209.165.200.225 lt 80 host 209.165.201.25
B. permit tcp host 209.165.201.25 host 209.165.200.225 eq 80

C. permit tcp host 209.165.200.225 eq 80 host 209.165.201.25
D. permit tcp host 209.165.200.225 host 209.165.201.25 eq 80
Answer: B

48.In OSPF, which LSA type is responsible for pointing to the ASBR router?
A. type 1
B. type 2
C. type 3
D. type 4
Answer: D

49.Refer to the exhibit.



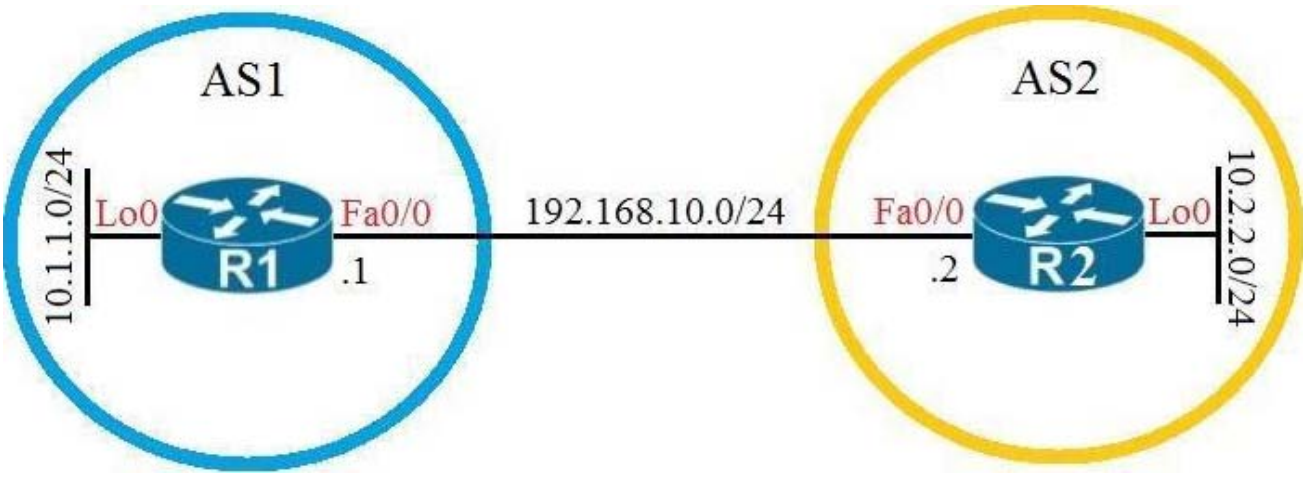
VLANs 50 and 60 exist on the trunk links between all switches. All access ports on SW3 are configured for VLAN 50 and SW1 is the VTP server.
Which command ensures that SW3 receives frames only from VLAN 50?
A. SW1(config)#vtp mode transparent
B. SW3(config)#vtp mode transparent
C. SW2(config)#vtp pruning
D. SW1(config)#vtp pruning
Answer: D
Explanation:
Reference: https://www.orbit-computer-solutions.com/vtp-pruning/

50.Which statement about a fabric access point is true?
A. It is in local mode and must be connected directly to the fabric edge switch.
B. It is in local mode and must be connected directly to the fabric border node
C. It is in FlexConnect mode and must be connected directly to the fabric border node.
D. It is in FlexConnect mode and must be connected directly to the fabric edge switch.
Answer: A
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/sda-sdg-2019oct.html

51.Which First Hop Redundancy Protocol maximizes uplink utilization and minimizes the amount of configuration that is necessary?
A. GLBP
B. HSRP v2
C. VRRP
D. HSRP v1
Answer: A

52.Which standard access control entry permits traffic from odd-numbered hosts in the 10.0.0.0/24 subnet?
A. permit 10.0.0.0 0.0.0.1
B. permit 10.0.0.1 0.0.0.254
C. permit 10.0.0.1 0.0.0.0
D. permit 10.0.0.0 255.255.255.254
Answer: B

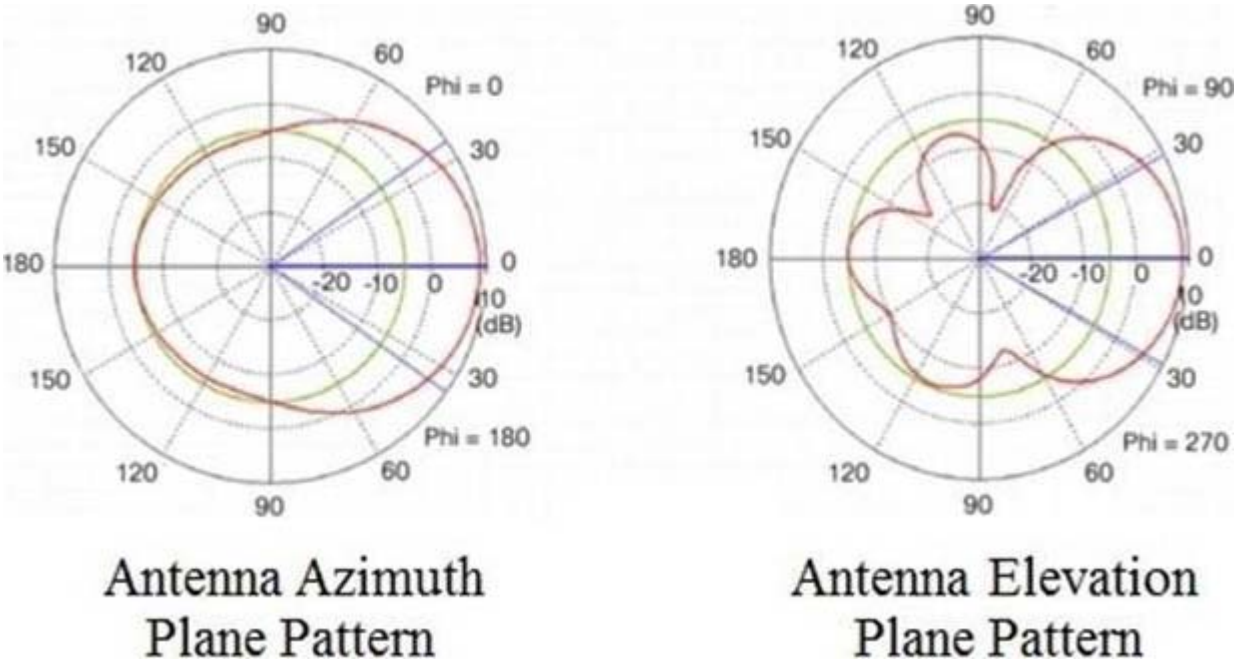
53.Refer to the exhibit.



Which configuration establishes EBGP connected neighborship between these two directly connected neighbors and exchanges the loopback network of the two routers through BGP?
A. R1(config)#router bgp 1
R1(config-router)#neighbor 192.168.10.2 remote-as 2
R1(config-router)#network 10.1.1.0 mask 255.255.255.0
R2(config)#router bgp 2
R2(config-router)#neighbor 192.168.10.1 remote-as 1
R2(config-router)#network 10.2.2.0 mask 255.255.255.0
B. R1(config)#router bgp 1
R1(config-router)#neighbor 10.2.2.2 remote-as 2
R1(config-router)#network 10.1.1.0 mask 255.255.255.0
R2(config)#router bgp 2
R2(config-router)#neighbor 10.1.1.1 remote-as 1
R2(config-router)#network 10.2.2.0 mask 255.255.255.0
C. R1(config)#router bgp 1
R1(config-router)#neighbor 192.168.10.2 remote-as 2
R1(config-router)#network 10.0.0.0 mask 255.0.0.0
R2(config)#router bgp 2
R2(config-router)#neighbor 192.168.10.1 remote-as 1
R2(config-router)#network 10.0.0.0 mask 255.0.0.0
D. R1(config)#router bgp 1
R1(config-router)#neighbor 10.2.2.2 remote-as 2

R1(config-router)#neighbor 10.2.2.2 update-source |o0
R1(config-router)#network 10.1.1.0 mask 255.255.255.0
R2(config)#router bgp 2
R2(config-router)#neighbor 10.1.1.1 remote-as 1
R2(config-router)#neighbor 10.1.1.1 update-source |o0
R2(config-router)#network 10.2.2.0 mask 255.255.255.0
Answer: A

54.Refer to the exhibit.



Which type of antenna do the radiation patterns present?
A. Yagi
B. patch
C. omnidirectional
D. dipole
Answer: B
Explanation:
Reference: https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/prod_white_paper0900aecd806a1a3e.html

55.Which method creates an EEM applet policy that is registered with EEM and runs on demand or manually?
A. event manager applet ondemand event none action 1.0 syslog priority critical msg 'This is a message from ondemand'
B. event manager applet ondemand action 1.0 syslog priority critical msg 'This is a message from ondemand'
C. event manager applet ondemand event register action 1.0 syslog priority critical msg 'This is a message from ondemand'
D. event manager applet ondemand event manual action 1.0 syslog priority critical msg 'This is a

message from ondemand'
Answer: A

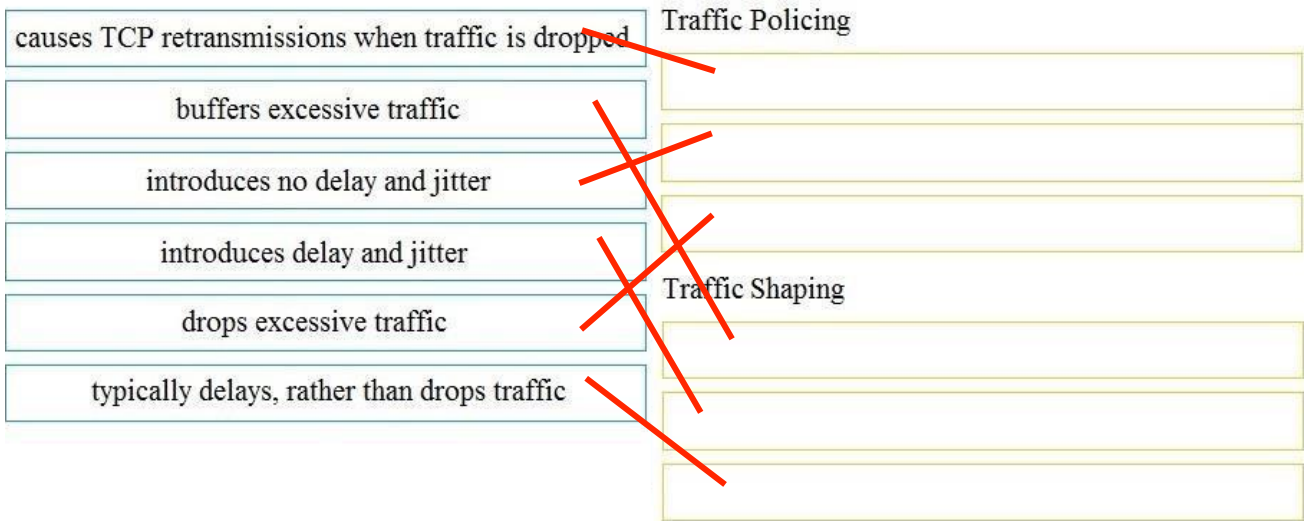
56.An engineer is configuring local web authentication on a WLAN. The engineer chooses the Authentication radio button under the Layer 3 Security options for Web Policy.
Which device presents the web authentication for the WLAN?
A. ISE server
B. RADIUS server
C. anchor WLC
D. local WLC
Answer: D

57.Which controller is the single plane of management for Cisco SD-WAN?
A. vBond
B. vSmart
C. vManage
D. vEdge
Answer: C
Explanation:
Reference:
https://www.cisco.com/c/dam/en/us/td/docs/solutions/CVD/SDWAN/CVD-SD-WAN-Design-2018OCT.pdf

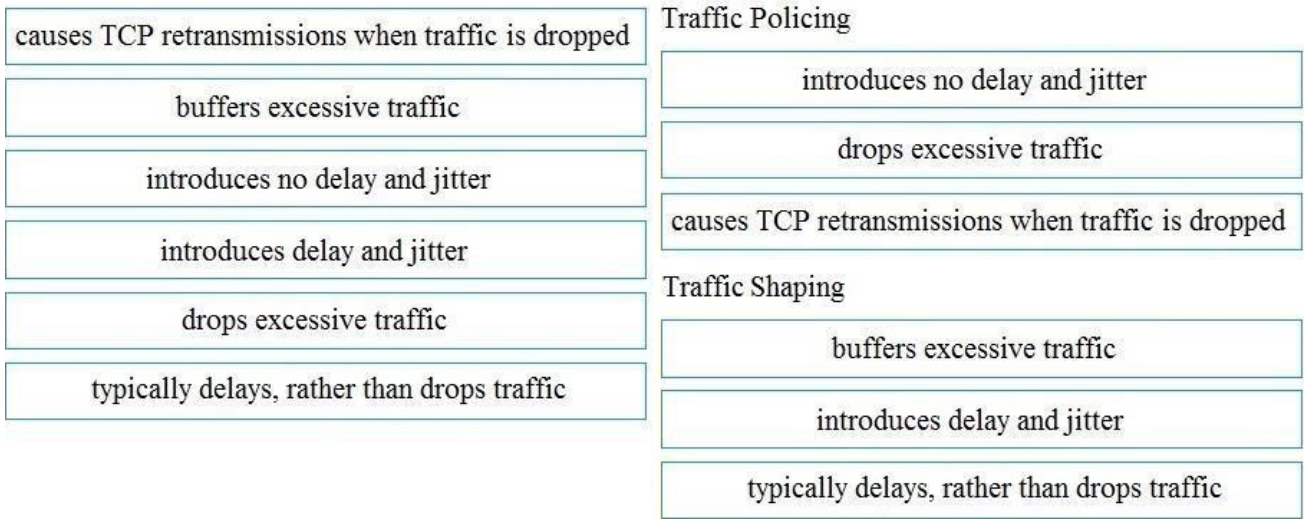
58.A network is being migrated from IPv4 to IPv6 using a dual-stack approach. Network management is already 100%Pv6 enabled.
In a dual-stack network with two dual-stack NetFlow collectors, how many flow exporters are needed per network device in the flexible NetFlow configuration?
A. 1
B. 2
C. 4
D. 8
Answer: B

59.DRAG DROP
Drag and drop the descriptions from the left onto the correct QoS components on the right.

Answer Area



Answer:
Answer Area



60.Which statement about TLS is true when using RESTCONF to write configurations on network devices?
A. It is used for HTTP and HTTPS requests.
B. It requires certificates for authentication.
C. It is provided using NGINX acting as a proxy web server.
D. It is not supported on Cisco devices.
Answer: C
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b_166_programmability_cg/b_166_programmability_cg_chapter_01011.html

61.Which reason could cause an OSPF neighborship to be in the EXSTART/EXCHANGE state?
A. mismatched OSPF link costs

B. mismatched OSPF network type
C. mismatched areas
D. mismatched MTU size
Answer: D
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/13684-12.html#neighbors

62.Which LISP device is responsible for publishing EID-to-RLOC mappings for a site?
A. ETR
B. MR
C. ITR
D. MS
Answer: A
Explanation:
Reference: https://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/locator-id-separation-protocol-lisp/white_paper_c11-652502.html

63.Which method does the enable secret password option use to encrypt device passwords?
A. MD5
B. PAP
C. CHAP
D. AES
Answer: A
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/security-vpn/remote-authentication-dial-user-service-radius/107614-64.html

64.Which statement about agent-based versus agentless configuration management tools is true?
A. Agentless tools use proxy nodes to interface with slave nodes.
B. Agentless tools require no messaging systems between master and slaves.
C. Agent-based tools do not require a high-level language interpreter such as Python or Ruby on slave nodes.
D. Agent-based tools do not require installation of additional software packages on the slave nodes.
Answer: C

65.Which statement about Cisco Express Forwarding is true?
A. The CPU of a router becomes directly involved with packet switching decisions.
B. It uses a fast cache that is maintained in a router data plane.
C. It maintains two tables in the data plane: the FIB and adjacency table.
D. It makes forwarding decisions by a process that is scheduled through the IOS scheduler.
Answer: C

66.Refer to the exhibit.

```
access-list 1 permit 10.1.1.0 0.0.0.31
ip nat pool CISCO 209.165.201.1. 209.165.201.30 netmask 255.255.255.224
ip nat inside source list 1 pool CISCO
```

What are two effects of this configuration? (Choose two.)

A. It establishes a one-to-one NAT translation.

B. The 209.165.201.0/27 subnet is assigned as the outside local address range.

C. The 10.1.1.0/27 subnet is assigned as the inside local addresses.

D. Inside source addresses are translated to the 209.165.201.0/27 subnet.

E. The 10.1.1.0/27 subnet is assigned as the inside global address range.

Answer: CD

67.When configuration WPA2 Enterprise on a WLAN, which additional security component configuration is required?

A. PKI server

B. NTP server

C. RADIUS server

D. TACACS server

Answer: C

Explanation:

Reference: https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/100708-wpa-uwn-config.html#conf

68.What is the structure of a JSON web token?

A. three parts separated by dots: header, payload, and signature

B. three parts separated by dots: version, header, and signature

C. header and payload

D. payload and signature

Answer: A

Explanation:

Reference: https://auth0.com/docs/tokens/references/jwt-structure

69.A response code of 404 is received while using the REST API on Cisco DNA Center to POST to this URI: /dna/intent/api/v1/template-programmer/project What does the code mean?

A. The POST/PUT request was fulfilled and a new resource was created. Information about the resource is in the response body.

B. The request was accepted for processing, but the processing was not completed.

C. The client made a request for a resource that does not exist.

D. The server has not implemented the functionality that is needed to fulfill the request.

Answer: C

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/application-policy-infrastructure-controller-enterprise-module/1-2-x/config-guide/b_apic-em_config_guide_v_1-2-x/b_apic-em_config_guide_v_1-2x_chapter_01001.html

70.What is a benefit of deploying an on-premises infrastructure versus a cloud infrastructure deployment?
A. ability to quickly increase compute power without the need to install additional hardware
B. less power and coding resources needed to run infrastructure on-premises
C. faster deployment times because additional infrastructure does not need to be purchased
D. lower latency between systems that are physically located near each other
Answer: D

71.A customer has several small branches and wants to deploy a Wi-Fi solution with local management using CAPWAP.
Which deployment model meets this requirement?
A. local mode
B. autonomous
C. SD-Access wireless
D. Mobility Express
Answer: D

72.Which two operations are valid for RESTCONF? (Choose two.)
A. PULL
B. PUSH
C. PATCH
D. REMOVE
E. ADD
F. HEAD
Answer: CF
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/166/b_166_programmability_cg/b_166_programmability_cg_chapter_01011.html

73.Refer to the exhibit.

Clients > Detail

< Back | Apply | Link Test | Remove

Client Properties		AP Properties	
MAC Address	00:09:ef:95:07:bd	AP Address	3c:ce:73:1b:33:39
IP Address	192.100.101.100	AP Name	172.22.253.20
Client Type	Regular	AP Type	Mobile
User Name		WLAN Profile	Staff
Port Number	29	Status	Associated
Interface	Staff	Association ID	0
VLAN ID	1602	802.11 Authentication	Open System
CCX Version	Not Supported	Reason Code	1
E2E Version	Not Supported	Status Code	0
Mobility Role	Anchor	CF Pollable	Not Implemented
Mobility Peer IP Address	172.22.253.20.	CF Poll Request	Not Implemented
Policy Manager State	LUN	Short Preamble	Implemented
Management Frame Protection	No	PBCC	Not Implemented
UpTime (Sec)	3710	Channel Agility	Not Implemented
Power Save Mode	OFF	Timeout	0
Current TxRateSet		WEP State	WEP Enable
Data RateSet	5.5,11.0,6.6,9.0,12.0,19.0,24.0,26.6,40.0,51.6		

The WLC administrator sees that the controller to which a roaming client associates has Mobility Role Anchor configured under Clients > Detail.
Which type of roaming is supported?
A. indirect
B. Layer 3 intercontroller
C. intracontroller
D. Layer 2 intercontroller
Answer: B

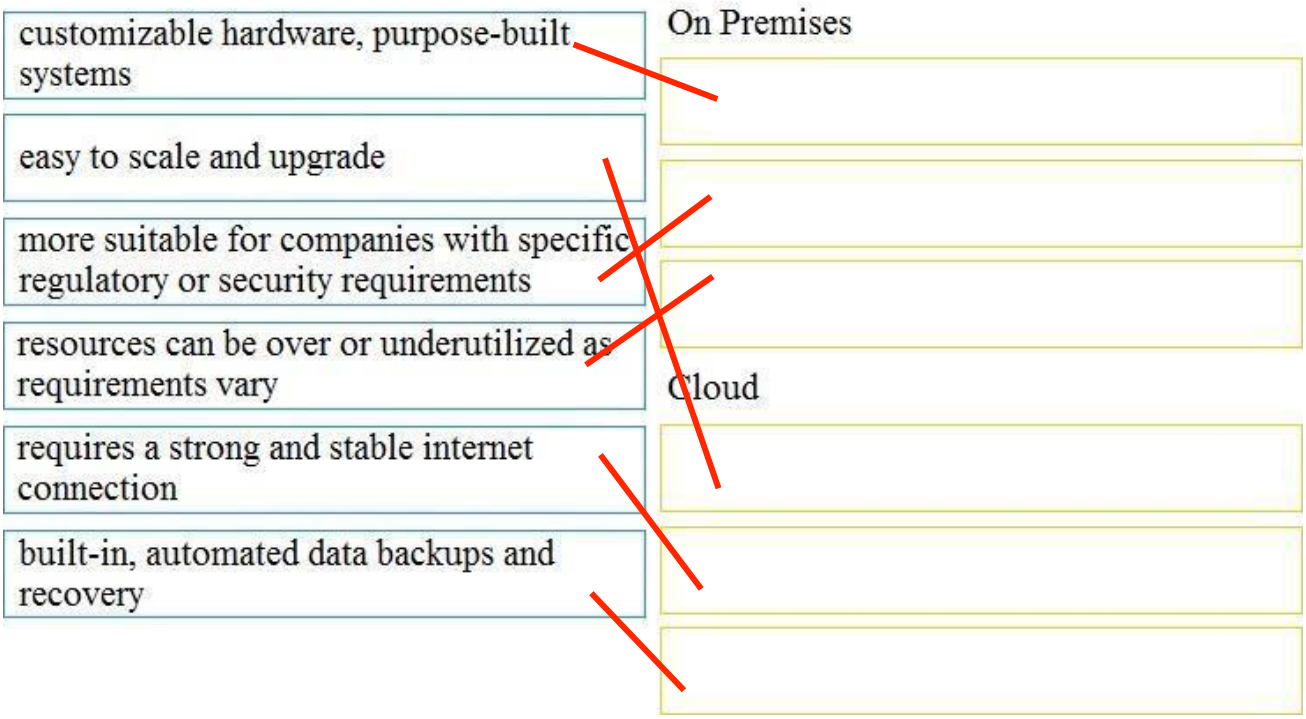
74.In which part of the HTTP message is the content type specified?
A. HTTP method
B. body
C. header
D. URI
Answer: C
Explanation:
Reference: https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Content-Type

75.Which statement about VXLAN is true?

A. VXLAN encapsulates a Layer 2 frame in an IP-UDP header, which allows Layer 2 adjacency across router boundaries.
B. VXLAN uses the Spanning Tree Protocol for loop prevention.
C. VXLAN extends the Layer 2 Segment ID field to 24-bits, which allows up to 4094 unique Layer 2 segments over the same network.
D. VXLAN uses TCP as the transport protocol over the physical data center network.
Answer: A

76.DRAG DROP
Drag and drop the characteristics from the left onto the correct infrastructure deployment types on the right.

Answer Area



Answer:

Answer Area

customizable hardware, purpose-built systems	On Premises
easy to scale and upgrade	resources can be over or underutilized as requirements vary
more suitable for companies with specific regulatory or security requirements	customizable hardware, purpose-built systems
resources can be over or underutilized as requirements vary	more suitable for companies with specific regulatory or security requirements
requires a strong and stable internet connection	Cloud
built-in, automated data backups and recovery	easy to scale and upgrade
	requires a strong and stable internet connection
	built-in, automated data backups and recovery

77.Which statement about Cisco EAP-FAST is true?
A. It requires a client certificate.
B. It is an IETF standard.
C. It does not require a RADIUS server certificate.
D. It operates in transparent mode.
Answer: C
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/99791-eapfast-wlc-rad-config.html

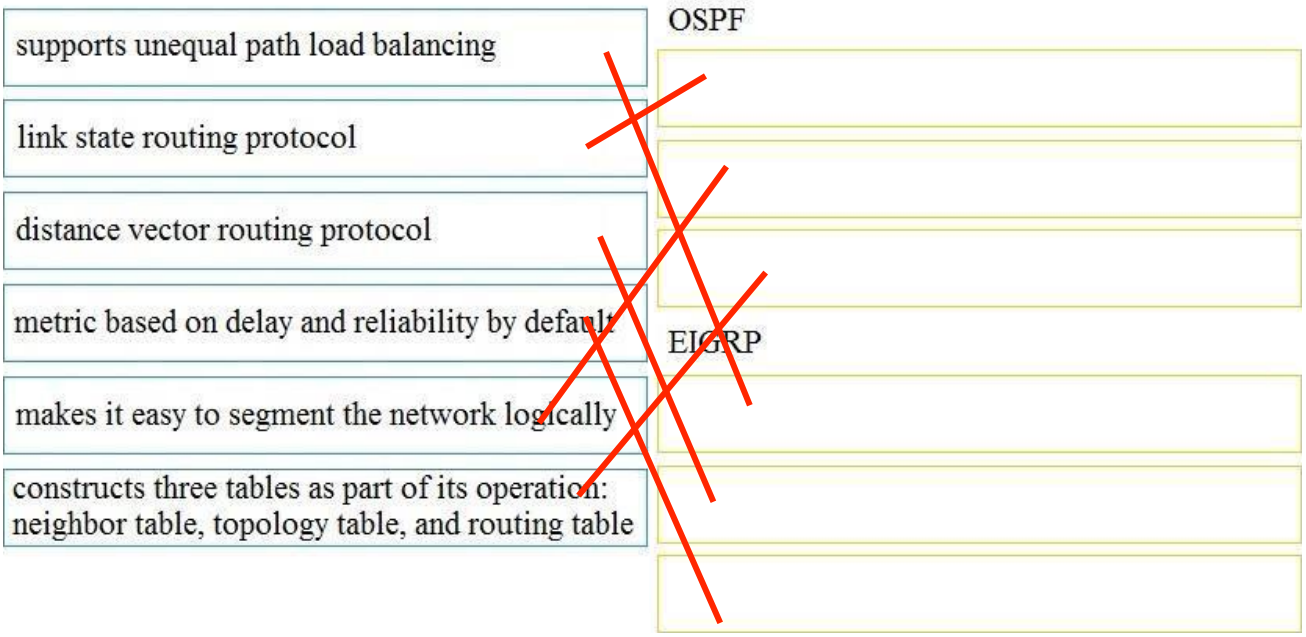
78.What do Cisco DNA southbound APIs provide?
A. interface between the controller and the consumer
B. RESTful API interface for orchestrator communication
C. interface between the controller and the network devices
D. NETCONF API interface for orchestrator communication
Answer: C

79.Which DNS lookup does an access point perform when attempting CAPWAP discovery?
A. CISCO-CONTROLLER.local
B. CAPWAP-CONTROLLER.local
C. CISCO-CAPWAP-CONTROLLER.local
D. CISCO-DNA-CONTROLLER.local
Answer: C
Explanation:

Reference: http://www.revolutionwifi.net/revolutionwifi/2010/11/capwap-controller-discovery-process_23.html

80.Which TCP setting is tuned to minimize the risk of fragmentation on a GRE/IP tunnel?
A. MSS
B. MTU
C. MRU
D. window size
Answer: A

81.DRAG DROP
Drag and drop the characteristics from the left onto the correct routing protocol types on the right.
Answer Area



Answer:

Answer Area

supports unequal path load balancing	OSPF
link state routing protocol	link state routing protocol
distance vector routing protocol	makes it easy to segment the network logically
metric based on delay and reliability by default	metric based on delay and reliability by default
makes it easy to segment the network logically	EIGRP
constructs three tables as part of its operation: neighbor table, topology table, and routing table	supports unequal path load balancing
	distance vector routing protocol
	constructs three tables as part of its operation: neighbor table, topology table, and routing table

82.Which statement about an RSPAN session configuration is true?
A. Only one session can be configured at a time.
B. A special VLAN type must be used as the RSPAN destination.
C. A filter must be configured for RSPAN sessions.
D. Only incoming traffic can be monitored.
Answer: B

83.Refer to the exhibit.

```
Extended IP access list EGRESS
10 permit ip 10.1.100.0  0.0.0.255 10.1.2.0 0.0.0.255
20 deny ip any any
```

An engineer must modify the access control list EGRESS to allow all IP traffic from subnet 10.1.10.0/24 to 10.1.2.0/24. The access control list is applied in the outbound direction on router interface GigabitEthernet 0/1.
Which configuration commands can the engineer use to allow this traffic without disrupting existing traffic flows?
A)

```
config t
   ip access-list extended EGRESS
   permit ip 10.1.10.0 255.255.255.0 10.1.2.0 255.255.255.0
```

B)

```
config t
   ip access-list extended EGRESS2
    permit ip 10.1.10.0 0.0.0.255 10.1.2.0 0.0.0.255
    permit ip 10.1.100.0 0.0.0.255 10.1.2.0 0.0.0.255
    deny ip any any
    !
    interface g0/1
     no ip access-group EGRESS out
     ip access-group EGRESS2 out
```

C)

```
config t
   ip access-list extended EGRESS
   permit ip 10.1.10.0 0.0.0.255 10.1.2.0 0.0.0.255
```

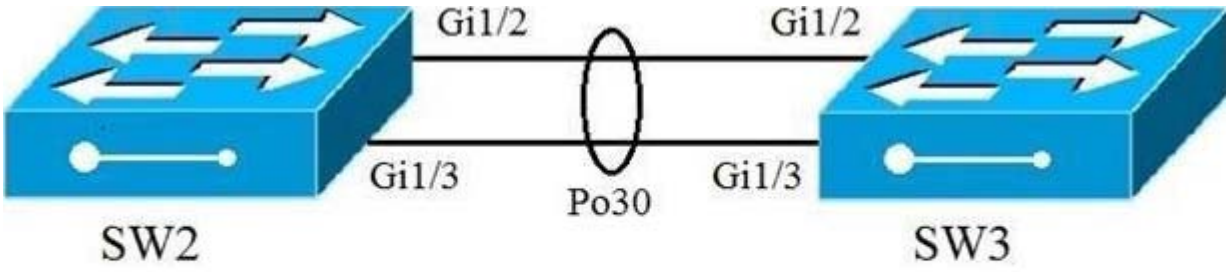
D)

```
config t
   ip access-list extended EGRESS
   5 permit ip 10.1.10.0 0.0.0.255 10.1.2.0 0.0.0.255
```

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

84.What is the role of a fusion router in an SD-Access solution?
A. acts as a DNS server
B. provides additional forwarding capacity to the fabric
C. performs route leaking between user-defined virtual networks and shared services
D. provides connectivity to external networks
Answer: C
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/cloud-systems-management/dna-center/213525-sda-steps-to-configure-fusion-router.html#anc1

85.Refer to the exhibit.




```
Interface gi1/2
Channel-group 30 mode desirable
Port-channel load-balance src-ip

Interface gi1/3
Channel-group 30 mode desirable
Port-channel load-balance src-ip

Interface PortChannel 30
Switchport mode trunk
Switchport encapsulation dotlq
Switchport trunk allowed vlan 10-100
```

A port channel is configured between SW2 and SW3. SW2 is not running a Cisco operating system. When all physical connections are made, the port channel does not establish.
Based on the configuration except of SW3, what is the cause of the problem?
A. The port-channel mode should be set to auto.
B. The port channel on SW2 is using an incompatible protocol.
C. The port-channel trunk is not allowing the native VLAN.
D. The port-channel interface load balance should be set to src-mac.
Answer: B

86.What does this EEM applet event accomplish?
"event snmp oid 1.3.6.1.3.7.0.9.5.3.1.2.9 get-type next entry-op gt entry-val 75 poll-interval 5"
A. Upon the value reaching 75%, a SNMP event is generated and sent to the trap server.
B. It reads an SNMP variable, and when the value exceeds 75%, it triggers an action.
C. It issues email when the value is greater than 75% for five polling cycles.
D. It presents a SNMP variable that can be interrogated.
Answer: B

87.Which method displays text directly into the active console with a synchronous EEM applet policy?
A. event manager applet boom event syslog pattern ‘UP’ action 1.0 syslog priority direct msg ‘logging directly to console’
B. event manager applet boom event syslog pattern ‘UP’ action 1.0 gets ‘logging directly to console’
C. event manager applet boom event syslog pattern ‘UP’ action 1.0 string ‘logging directly to console’
D. event manager applet boom event syslog pattern ‘UP’ action 1.0 puts ‘logging directly to console’

Answer: B
Explanation:
Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/eem/configuration/xe-3s/eem-xe-3s-book/eem-policy-cli.html

88.Which two GRE features are configured to prevent fragmentation? (Choose two.)
A. TCP window size
B. IP MTU
C. TCP MSS
D. DF bit clear
E. MTU ignore
Answer: BC
Explanation:
Reference: https://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulation-gre/25885-pmtud-ipfrag.html

89.Which action is the vSmart controller responsible for in an SD-WAN deployment?
A. onboard vEdge nodes into the SD-WAN fabric
B. gather telemetry data from vEdge routers
C. distribute security information for tunnel establishment between vEdge routers
D. manage, maintain, and gather configuration and status for nodes within the SD-WAN fabric
Answer: C

90.Which description of an SD-access wireless network infrastructure deployment is true?
A. The access point is part of the fabric overlay.
B. The wireless client is part of the fabric overlay.
C. The access point is part of the fabric underlay.
D. The WLC is part of the fabric underlay.
Answer: A

91.Which feature is supported by EIGRP but is not supported by OSPF?
A. route filtering
B. unequal-cost load balancing
C. route summarization
D. equal-cost load balancing
Answer: B

92.What is the correct EBGP path attribute list, ordered from most preferred to least preferred, that the BGP best-path algorithm uses?
A. local preference, weight, AS path, MED
B. weight, local preference, AS path, MED
C. weight, AS path, local preference, MED
D. local preference, weight, MED, AS path
Answer: B

93.At which layer does Cisco DNA Center support REST controls?
A. session layer
B. northbound APIs
C. EEM applets or scripts
D. YAML output from responses to API calls
Answer: B

94.On which protocol or technology is the fabric data plane based in Cisco SD-Access fabric?
A. VXLAN
B. LISP
C. Cisco TrustSec
D. IS-IS
Answer: A

95.What is the difference between the enable password and the enable secret password when service password encryption is enabled on an IOS device?
A. The enable secret password is protected via stronger cryptography mechanisms.
B. The enable password cannot be decrypted.
C. The enable password is encrypted with a stronger encryption method.
D. There is no difference and both passwords are encrypted identically.
Answer: A

96.Which access control list allows only TCP traffic with a destination port range of 22-443, excluding port 80?
A. deny tcp any any eq 80permit tcp any any gt 21 it 444
B. permit tcp any any range 22 443deny tcp any any eq 80
C. permit tcp any any ne 80
D. deny tcp any any ne 80 permit tcp anyany range 22 443
Answer: A

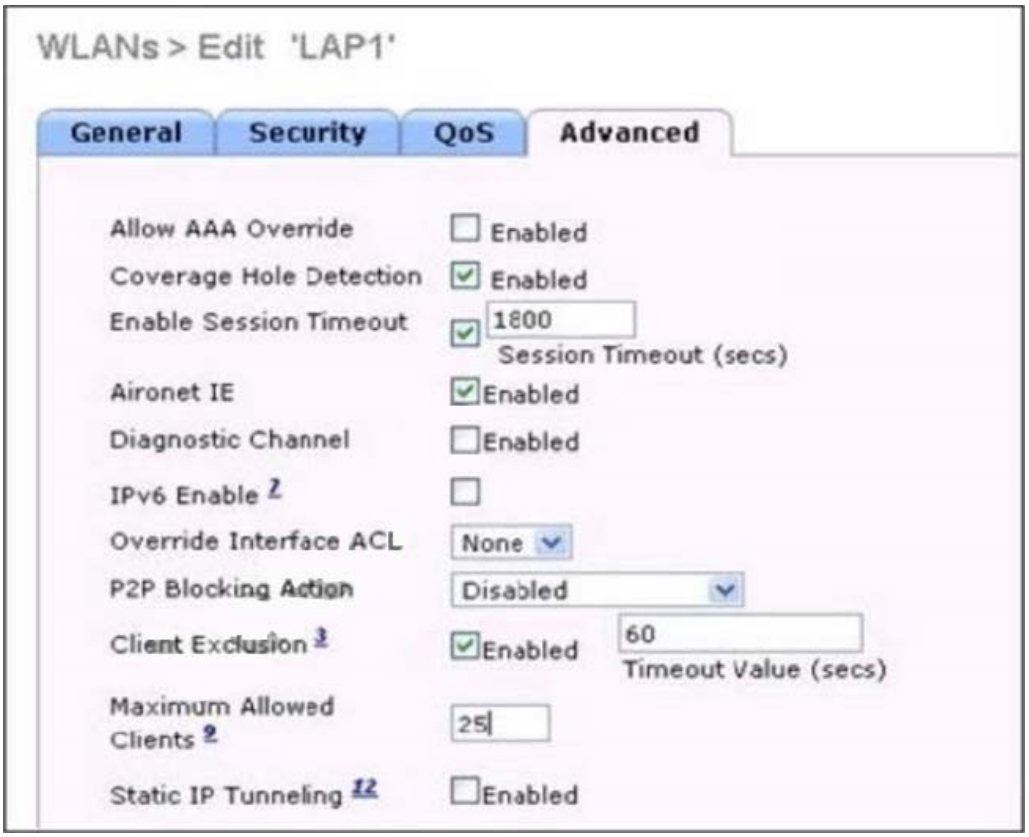
97.Which statement describes the IP and MAC allocation requirements for virtual machines on Type 1 hypervisors?
A. Virtual machines do not require a unique IP or unique MAC. They share the IP and MAC address of the physical server.
B. Each virtual machine requires a unique IP address but shares the MAC address with the physical server.
C. Each virtual machine requires a unique IP and MAC addresses to be able to reach to other nodes.
D. Each virtual machine requires a unique MAC address but shares the IP address with the physical server.
Answer: C

98.A local router shows an EBGP neighbor in the Active state.
Which statement is true about the local router?

A. The local router is attempting to open a TCP session with the neighboring router.
B. The local router is receiving prefixes from the neighboring router and adding them in RIB-IN.
C. The local router has active prefixes in the forwarding table from the neighboring router.
D. The local router has BGP passive mode configured for the neighboring router.
Answer: A

99.Which feature must be configured to allow packet capture over Layer 3 infrastructure?
A. RSPAN
B. ERSPAN
C. VSPAN
D. IPSPAN
Answer: B

100.Refer to the exhibit.

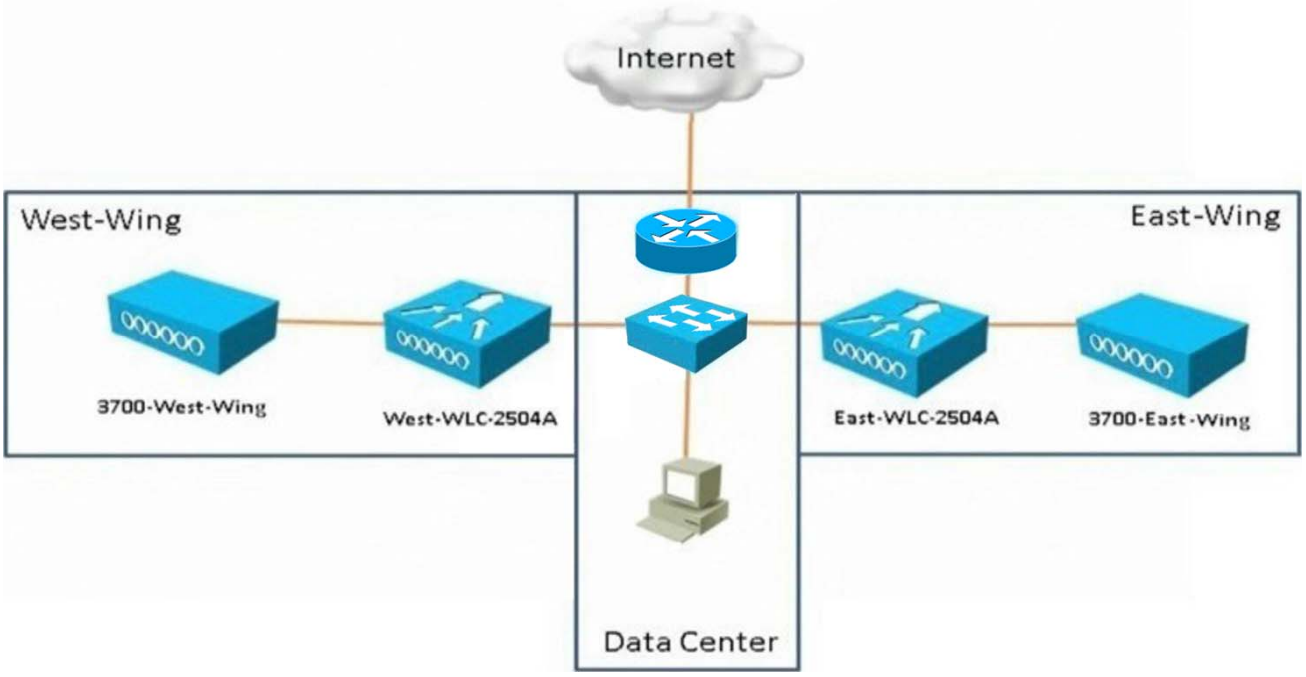


To which setting is the client limitation for WLAN LAP1 configured?
A. 60
B. 1800
C. Client exclusion is not enabled
D. 25
Answer: D

101.Scenario The East-WLC-2504A controller has a problem. When configuration changes are made to the Employees-East-Wing AP Group that covers the East-Wing, none of the APs receive the updates. Refer to the exhibits to determine where the problems are.

SSID Name:	Employees
WLAN ID	10
APs:	Preconfigured on WLC
Dynamic Interface Name:	east-wing
Dynamic Interface IP Address:	172.16.1.6/24
Dynamic Interface Gateway IP Address:	172.16.1.1/24
VLAN:	22
Port Number:	1
AP Group Name:	Employees-East-Wing

Note, not all menu items, text boxes, or radio buttons are active.



Which four changes must be made in the configuration of the East-WLC-2504A controller to restore functionality to the Employees-East-Wing AP Group? (Choose four.)

A. Change the AP in the Employees-East-Wing AP Group.

B. Change the IP Address in the east-wing interface.

C. Change the VLAN Identifier in the east-wing interface.

D. Enable Dynamic AP Management in the east-wing interface.

E. Change the Port Number to 2 in the east-wing interface.

F. Add the Primary Controller and IP address to the 3700-East-Wing AP.

G. Change the SSID in the Employees-East-Wing AP Group.

H. Enable the Employees SSID

Answer: DFGH

Explanation:

References: http://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/69639-wlc-failover.html

102.Which statement about a Cisco APIC controller versus a more traditional SDN controller is true?

A. APIC uses a policy agent to translate policies into instructions

B. APIC supports OpFlex as a Northbound protocol
C. APIC does support a Southbound REST API
D. APIC uses an imperative model
Answer: A

103.Which two statements about Cisco Express Forwarding load balancing are true? (Choose two)
A. Cisco Express Forwarding can load-balance over a maximum of two destinations
B. It combines the source IP address subnet mask to create a hash for each destination
C. Each hash maps directly to a single entry in the RIB
D. Each hash maps directly to a single entry in the adjacency table
E. It combines the source and destination IP addresses to create a hash for each destination
Answer: DE

104.How are the Cisco Express Forwarding table and the FIB related to each other?
A. The FIB is used to populate the Cisco Express Forwarding table
B. The Cisco Express Forwarding table allows route lookups to be forwarded to the route processor for processing before they are sent to the FIB
C. There can be only one FIB but multiple Cisco Express Forwarding tables on IOS devices
D. Cisco Express Forwarding uses a FIB to make IP destination prefix-based switching decisions
Answer: D

105.Which two statements about VRF-lite are true? (Choose two)
A. It can increase the packet switching rate
B. It supports most routing protocols, including EIGRP, ISIS, and OSPF
C. It supports MPLS-VRF label exchange and labeled packets
D. It should be used when a customer’s router is connected to an ISP over OSPF
E. It can support multiple customers on a single switch
Answer: BE

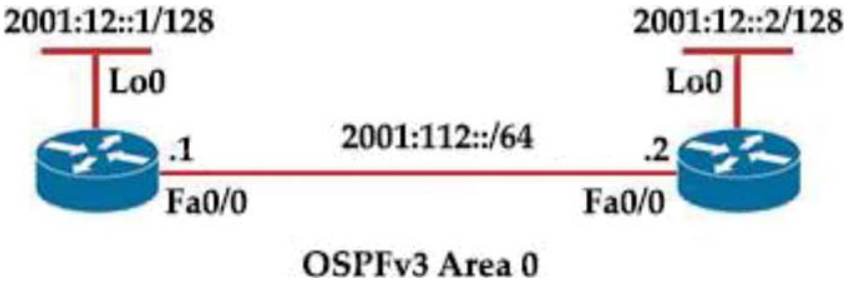
106.What is the main function of VRF-lite?
A. To allow devices to use labels to make Layer 2 Path decisions
B. To segregate multiple routing tables on a single device
C. To connect different autonomous systems together to share routes
D. To route IPv6 traffic across an IPv4 backbone
Answer: B

107.Into which two pieces of information does the LISP protocol split the device identity? (Choose two)
A. Routing Locator
B. Endpoint Identifier
C. Resource Location
D. Enterprise Identifier
E. LISP ID
F. Device ID
Answer: A B

108.Which EIGRP feature allows the use of leak maps?
A. offset-list
B. neighbor
C. address-family
D. stub
Answer: D

109.Which statement about LISP encapsulation in an EIGRP OTP implementation is true?
A. OTP uses LISP encapsulation for dynamic multipoint tunneling
B. OTP maintains the LISP control plane
C. OTP uses LISP encapsulation to obtain routes from neighbors
D. LISP learns the next hop
Answer: B

110.Refer to the exhibit.



Which IPv6 OSPF network type is applied to interface Fa0/0 of R2 by default?
A. broadcast
B. Ethernet
C. multipoint
D. point-to-point
Answer: A

111.Which two statements about HSRP are true? (Choose two)
A. Its virtual MAC is 0000.0C07.ACxx
B. Its multicast virtual MAC is 0000.5E00.01xx
C. Its default configuration allows for pre-emption
D. It supports tracking
E. It supports unique virtual MAC addresses
Answer: A D

112.What are three valid HSRP states? (Choose three)
A. listen
B. learning
C. full
D. established
E. speak

F. INIT
Answer: ABE

113.Which two statements about VRRP are true? (Choose two)
A. It is assigned multicast address 224.0.0.8.
B. The TTL for VRRP packets must be 255.
C. It is assigned multicast address 224.0.0.9.
D. Its IP address number is 115.
E. Three versions of the VRRP protocol have been defined.
F. It supports both MD5 and SHA1 authentication.
Answer: B E

114.Which two statements about IP SLA are true? (Choose two)
A. SNMP access is not supported
B. It uses active traffic monitoring
C. It is Layer 2 transport-independent
D. The IP SLA responder is a component in the source Cisco device
E. It can measure MOS
F. It uses NetFlow for passive traffic monitoring
Answer: BC

115.Refer to the exhibit.

```
event manager applet LARGECONFIG
event cli pattern "show running-config" sync yes
action 1.0 puts "Warning! This device has a VERY LARGE configuration
and may take some time to process"
action 1.1 puts nonewline "Do you wish to continue [Y/N]"
action 1.2 gets response
action 1.3 string toupper "$response"
action 1.4 string match "$_string_result" "Y"
action 2.0 if $_string_result eq 1
action 2.1 cli command "enable”
action 2.2 cli command "show running-config"
action 2.3 puts $_cli_result
action 2.4 cli command "exit"
action 2.9 end
```

Which two statements about the EEM applet configuration are true? (Choose two)
A. The EEM applet runs before the CLI command is executed
B. The EEM applet runs after the CLI command is executed
C. The EEM applet requires a case-insensitive response
D. The running configuration is displayed only if the letter Y is entered at the CLI
Answer: AD

116.Refer to the exhibit.
Which network script automation option or tool is used in the exhibit?
https://mydevice.mycompany.com/getstuff?queryName=errors&queryResults=yes

A. EEM
B. Python
C. Bash script
D. NETCONF
E. REST
Answer: E

117.Refer to the exhibit.
PYTHON CODE
```
import requests
import json
url='http://YOURIP/ins'
switchuser='USERID'
switchpassword='PASSWORD'
myheaders={'content-type':'application/json'}
payload={
"ins_api": {
"version":"1.0",
"type":"cli_show",
"chunk":"0",
"sid":"1",
"input":"show version",
"output_format":"json"
}
}
response = requests.post(url,data=json.dumps(payload),
headers=myheaders,auth=(switchuser,switchpassword)).json()
print(response['ins_api']['outputs']['output']['body']['kickstart_ver_str'])
```
==========
HTTP JSON Response:
```
{
"ins_api": {
"type": "cli_show",
"version":"1.0",
"sid":"eoc",
"outputs":{
"output":{
"input":"show version",
"msg":"Success",
"code":"200",
"body":{
"bios_ver_str":"07.61",
"kickstart_ver_str":"7.0(3)I7(4)",
"bios_cmpl_time":"04/08/2017",
```

"kick_file_name":"bootflash:///nxos.7.0.3.I7.4.bin",
"kick_cmpl_time":"6/14/1970 09:49:04",
"chassis_id": "Nexus9000 93180YC-EX chassis",
"cpu_name": "Intel(R) Xeon(R) CPU @1.80GHz",
"memory": 24633488,
"mem_type":"kB",
"rr_usecs":134703,
"rr_ctime":"Sun Mar 10 15:41:46 2019",
"rr_reason": "Reset Requested by CLI command reload",
"rr_sys_ver":"7.0(3)I7(4)",
"rr_service":"",
"manufacturer": "Cisco Systems, Inc",
"TABLE_package_list": {
"ROW_package_list": {
"package_id": {}
}
}
}
}
}
}

Which HTTP JSON response does the python code output give?

A. NameError: name 'json' is not defined

B. KeyError 'kickstart_ver_str'

C. 7.61

D. 7.0(3)I7(4)

Answer: D

118.Which data modeling language is commonly used by NETCONF?

A. HTML

B. XML

C. YANG

D. REST

Answer: C

119.Which variable in an EEM applet is set when you use the sync yes option?

A. $_cli_result

B. $_result

C. $_string_result

D. $_exit_status

Answer: D

120.Which component of the Cisco Cyber Threat Defense solution provides user and flow context analysis?

A. Cisco Firepower and Fire SIGHT
B. Cisco Stealth watch system
C. Advanced Malware Protection
D. Cisco Web Security Appliance
Answer: B

121.What is the role of the vsmart controller in a Cisco SD-WAN environment?
A. IT performs authentication and authorization
B. It manages the control plane.
C, It is the centralized network management system.
D. It manages the data plane.
Answer: B

122.Refer to the exhibit.

```
access-list 1 permit 172.16.1.0 0.0.0.255
ip nat inside source list 1 interface gigabitethernet0/0 overload
```

The inside and outside interfaces in the NAT configuration of this device have been contently identified. What is the effect of this configuration?
A. dynamic NAT
B. NAT64
C. PAT
D. static NAT
Answer: C

123.Which two descriptions of FlexConnect mode for Cisco APs are true? (Choose two.)
A. APs that operate in FlexConnect mode cannot detect rogue APs
B. FlexConnect mode is used when the APs are set up in a mesh environment and used to bridge between each other.
C. FlexConnect mode is a feature that is designed to allow specified CAPWAP-enabled APs to exclude themselves from managing data traffic between clients and infrastructure.
D. When connected to the controller, FlexConnect APs can tunnel traffic back to the controller
E. FlexConnect mode is a wireless solution for branch office and remote office deployments
Answer: CD

124.Which devices does Cisco Center configure when deploying an IP-based access control policy?
A. all devices in selected sites
B. selected individual devices
C. All devices integrating with ISE
D. all wired devices
Answer: C

125.Wireless users report frequent disconnections from the wireless network. While troubleshooting a network engineer finds that after the user a disconnect, the connection reestablishes automatically

without any input required.
The engineer also notices these message logs.

```
AP 'AP2' is down Reason: Radio channel set. 6:54:04 PM
AP 'AP4' is down Reason: Radio channel set. 6:44:49 PM
AP 'AP7' is down Reason: Radio channel set. 6:34:32 PM
```

Which action reduces the user impact?
A. increase the dynamic channel assignment interval
B. increase BandSelect
C. increase the AP heartbeat timeout
D. enable coverage hole detection
Answer: A

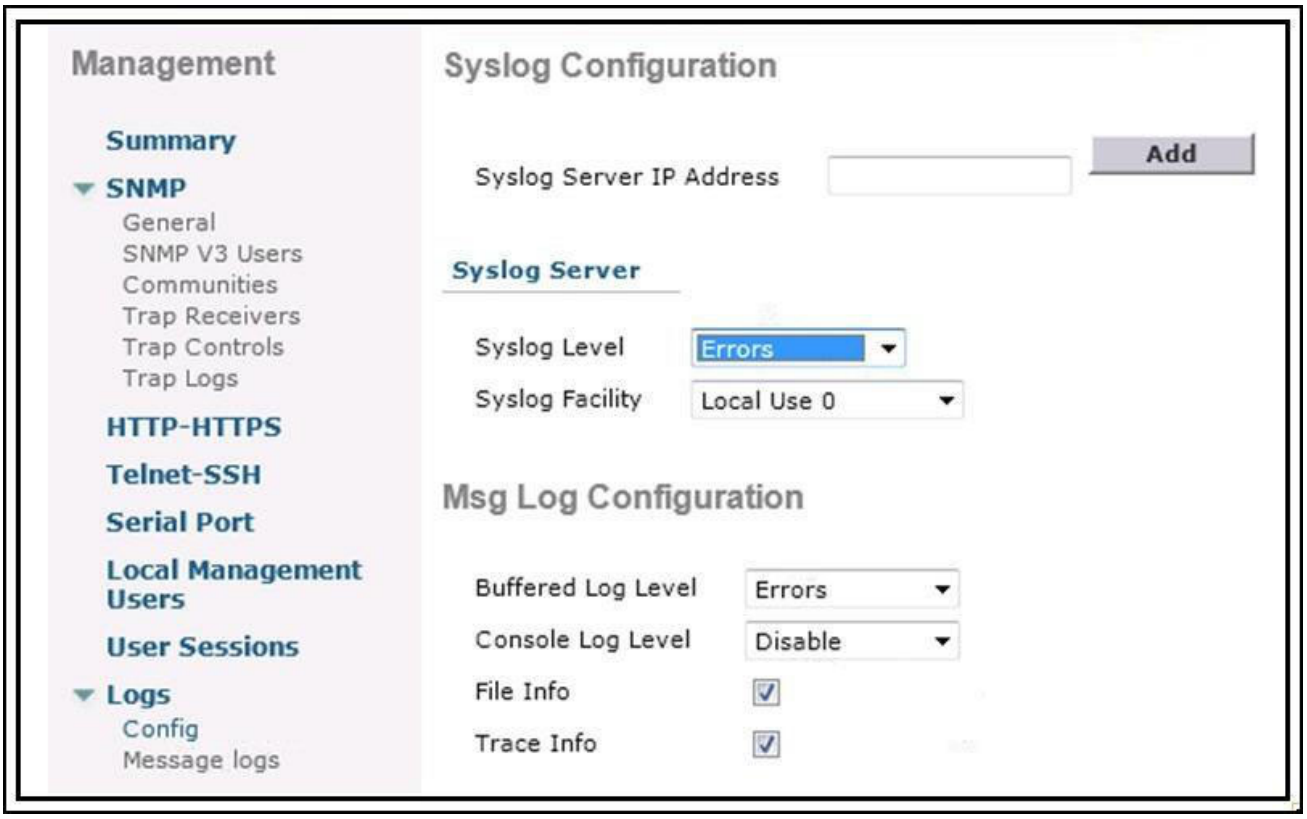
126.Which algorithms are used to secure REST API from brute attacks and minimize the impact?
A. MD5 algorithm-128 and SHA-384
B. SHA-1, SHA-256, and SHA-512
C. SHA-512 and SHA-384
D. PBKDF2, BCrypt, and SCrypt
Answer: D

127.Which two entities are Type 1 hypervisors? (Choose two.)
A. VMware server
B. Microsoft Virtual PC
C. Microsoft Hyper-V
D. Oracle VM VirtualBox
E. VMware ESX
Answer: C, E

128.Which protocol infers that a YANG data model is being used?
A. SNMP
B. REST
C. RESTCONF
D. NX-API
Answer: C

129.You are configuring a controller that runs Cisco IOS XE by using the CLI.
Which three configuration options are used for 802.11w Protected Management Frames? (Choose three.)
A. mandatory
B. association-comeback
C. SA teardown protection
D. saquery-retry-time
E. enable
F. comeback-time
Answer: ABD

130.Refer to the exhibit.



Which level message does the WLC send to the syslog server?

A. syslog level errors and less severity messages

B. syslog level errors messages

C. all syslog levels messages

D. syslog level errors and greater severity messages

Answer: D

131.When a wired client connects to an edge switch in an SDA fabric, which component decides whether the client has access to the network?

A. control-plane node

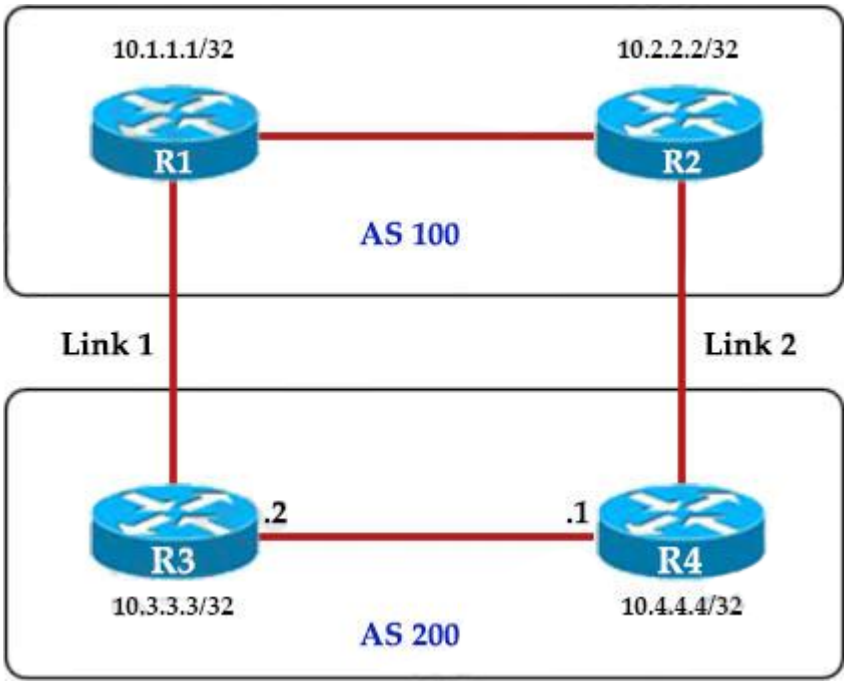
B. Identity Service Engine

C. RADIUS server

D. edge node

Answer: C

132.Refer to the exhibit.



An engineer must ensure that all traffic leaving AS 200 will choose Link 2 as the exit point.
Assuming that all BGP neighbor relationships have been formed and that the attributes have not been changed on any of the routers, which configuration accomplish task?

A. R4(config-router)#bgp default local-preference 200
B. R3(config-router)#neighbor 10.1.1.1 weight 200
C. R3(config-router)#bgp default local-preference 200
D. R4(config-router)#neighbor 10.2.2.2 weight 200

Answer: A

Explanation:

Local preference is an indication to the AS about which path has preference to exit the AS in order to reach a certain network. A path with a higher local preference is preferred. The default value for local preference is 100.

Unlike the weight attribute, which is only relevant to the local router, local preference is an attribute that routers exchange in the same AS. The local preference is set with the “bgp default local-preference value” command.

In this case, both R3 & R4 have exit links but R4 has higher local-preference so R4 will be chosen as the preferred exit point from AS 200.

133.Which configuration restricts the amount of SSH that a router accepts 100 kbps?

A. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir 100000
exceed-action drop

!
!
!
Interface GigabitEthernet0/1
ip address 209.165.200.225 255.255.255.0
ip access-group CoPP_SSH out
duplex auto
speed auto
media-type rj45
service-policy input CoPP_SSH
!
ip access-list extended CoPP_SSH
permit tcp any any eq 22
!
B. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir CoPP_SSH
exceed-action drop
!
!
!
Interface GigabitEthernet0/1
ip address 209.165.200.225 255.255.255.0
ip access-group … out
duplex auto
speed auto
media-type rj45
service-policy input CoPP_SSH
!
Ip access-list extended CoPP_SSH
deny tcp any any eq 22
!
C. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir 100000
exceed-action drop
!
!

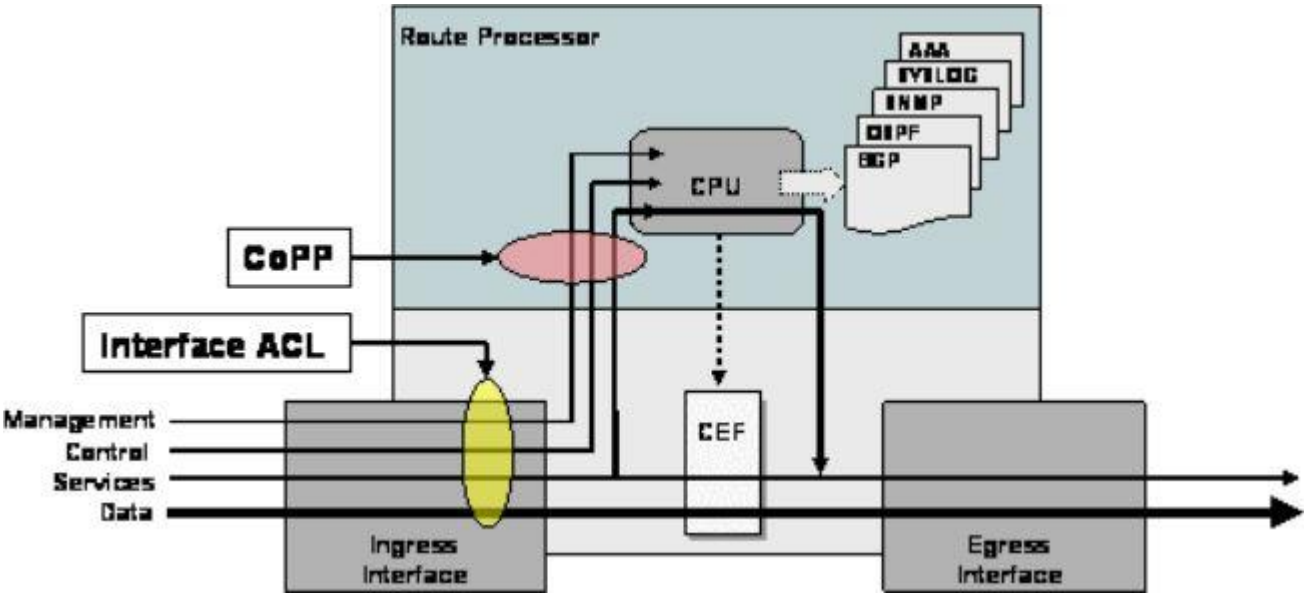
!
Control-plane
service-policy input CoPP_SSH
!
Ip access-list extended CoPP_SSH
deny tcp any any eq 22
!
D. class-map match-all CoPP_SSH
match access-group name CoPP_SSH
!
Policy-map CoPP_SSH
class CoPP_SSH
police cir 100000
exceed-action drop
!
!
!
Control-plane transit
service-policy input CoPP_SSH
!
Ip access-list extended CoPP_SSH
permit tcp any any eq 22
!

Answer: C

Explanation:

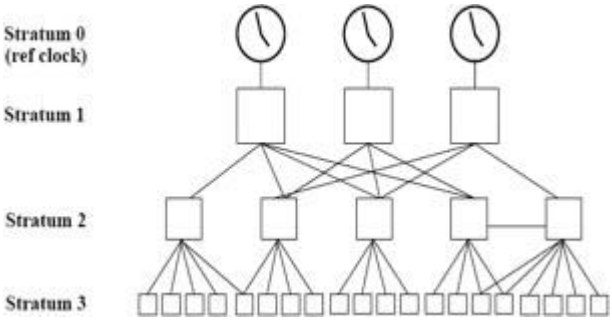
CoPP protects the route processor on network devices by treating route processor resources as a separate entity with its own ingress interface (and in some implementations, egress also). CoPP is used to police traffic that is destined to the route processor of the router such as:

+ routing protocols like OSPF, EIGRP, or BGP.
+ Gateway redundancy protocols like HSRP, VRRP, or GLBP.
+ Network management protocols like telnet, SSH, SNMP, or RADIUS.



Therefore, we must apply the CoPP to deal with SSH because it is in the management plane. CoPP must be put under “control-plane” command.

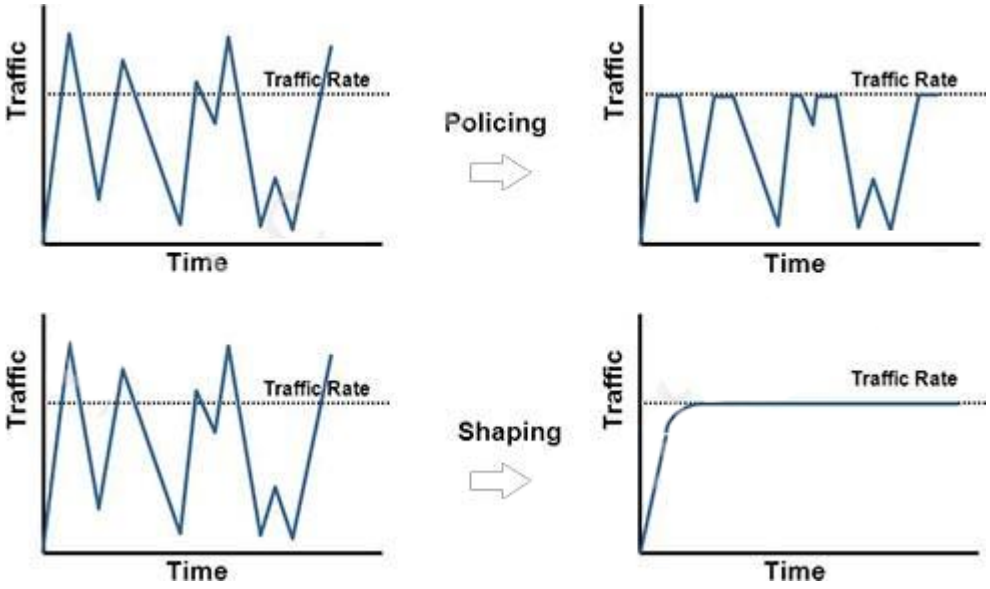
134.What NTP stratum level is a server that is connected directly to an authoritative time source?
A. Stratum 0
B. Stratum 1
C. Stratum 14
D. Stratum 15
Answer: B
Explanation:
The stratum levels define the distance from the reference clock. A reference clock is a stratum 0 device that is assumed to be accurate and has little or no delay associated with it. Stratum 0 servers cannot be used on the network but they are directly connected to computers which then operate as stratum-1 servers. A stratum 1 time server acts as a primary network time standard.



A stratum 2 server is connected to the stratum 1 server; then a stratum 3 server is connected to the stratum 2 server and so on. A stratum 2 server gets its time via NTP packet requests from a stratum 1 server. A stratum 3 server gets its time via NTP packet requests from a stratum-2 server… A stratum server may also peer with other stratum servers at the same level to provide more stable and robust time for all devices in the peer group (for example a stratum 2 server can peer with other stratum 2 servers). NTP uses the concept of a stratum to describe how many NTP hops away a machine is from an authoritative time source. A stratum 1 time server typically has an authoritative time source (such as a

radio or atomic clock, or a Global Positioning System (GPS) time source) directly attached, a stratum 2 time server receives its time via NTP from a stratum 1 time server, and so on.
Reference:
https://www.cisco.com/c/en/us/td/docs/routers/asr920/configuration/guide/bsm/16-6-1/b-bsm-xe-16-6-1-asr920/bsm-time-calendar-set.html

135.How does QoS traffic shaping alleviate network congestion?
A. It drops packets when traffic exceeds a certain bitrate.
B. It buffers and queue packets above the committed rate.
C. It fragments large packets and queues them for delivery.
D. It drops packets randomly from lower priority queues.
Answer: B
Explanation:
Traffic shaping retains excess packets in a queue and then schedules the excess for later transmission over increments of time. The result of traffic shaping is a smoothed packet output rate.



136.An engineer is describing QoS to a client.
Which two facts apply to traffic policing? (Choose two)
A. Policing adapts to network congestion by queuing excess traffic
B. Policing should be performed as close to the destination as possible
C. Policing drops traffic that exceeds the defined rate
D. Policing typically delays the traffic, rather than drops it
E. Policing should be performed as close to the source as possible
Answer: C E
Explanation:
Traffic policing propagates bursts. When the traffic rate reaches the configured maximum rate (or committed information rate), excess traffic is dropped (or remarked). The result is an output rate that appears as a saw-tooth with crests and troughs.
Unlike traffic shaping, traffic policing does not cause delay.
Classification (which includes traffic policing, traffic shaping and queuing techniques) should take place at

the network edge. It is recommended that classification occur as close to the source of the traffic as possible.
Also according to this Cisco link, “policing traffic as close to the source as possible”.

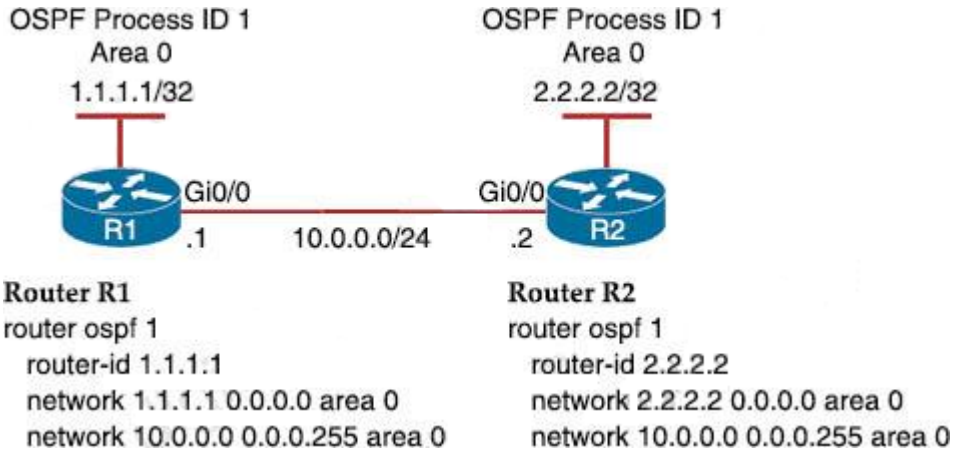
137.What mechanism does PIM use to forward multicast traffic?
A. PIM sparse mode uses a pull model to deliver multicast traffic
B. PIM dense mode uses a pull model to deliver multicast traffic
C. PIM sparse mode uses receivers to register with the RP
D. PIM sparse mode uses a flood and prune model to deliver multicast traffic
Answer: A
Explanation:
PIM dense mode (PIM-DM) uses a push model to flood multicast traffic to every corner of the network. This push model is a brute-force method of delivering data to the receivers. This method would be efficient in certain deployments in which there are active receivers on every subnet in the network.
PIM-DM initially floods multicast traffic throughout the network. Routers that have no downstream neighbors prune the unwanted traffic. This process repeats every 3 minutes.
PIM Sparse Mode (PIM-SM) uses a pull model to deliver multicast traffic. Only network segments with active receivers that have explicitly requested the data receive the traffic. PIM-SM distributes information about active sources by forwarding data packets on the shared tree. Because PIM-SM uses shared trees (at least initially), it requires the use of an RP. The RP must be administratively configured in the network.
Answer C seems to be correct but it is not, PIM spare mode uses sources (not receivers) to register with the RP. Sources register with the RP, and then data is forwarded down the shared tree to the receivers.
Reference: Selecting MPLS VPN Services Book, page 193

138.Which two namespaces does the LISP network architecture and protocol use? (Choose two)
A. TLOC
B. RLOC
C. DNS
D. VTEP
E. EID
Answer: B E
Explanation:
Locator ID Separation Protocol (LISP) is a network architecture and protocol that implements the use of two namespaces instead of a single IP address:
+ Endpoint identifiers (EIDs)—assigned to end hosts.
+ Routing locators (RLOCs)—assigned to devices (primarily routers) that make up the global routing system.
Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_lisp/configuration/xe-3s/irl-xe-3s-book/irl-overview.html

139.Which First Hop Redundancy Protocol should be used to meet a design requirements for more efficient default bandwidth usage across multiple devices?
A. GLBP

B. LCAP
C. HSRP
D. VRRP
Answer: A
Explanation:
The main disadvantage of HSRP and VRRP is that only one gateway is elected to be the active gateway and used to forward traffic whilst the rest are unused until the active one fails. Gateway Load Balancing Protocol (GLBP) is a Cisco proprietary protocol and performs the similar function to HSRP and VRRP but it supports load balancing among members in a GLBP group.

140.Refer to the exhibit.



A network engineer is configuring OSPF between router R1 and router R2. The engineer must ensure that a DR/BDR election does not occur on the Gigabit Ethernet interfaces in area 0.
Which configuration set accomplishes this goal?
A. R1 (config-if) #interface Gi0/0
R1 (config-if) #ip ospf network point-to-point
R2 (config-if) #interface Gi0/0
R2 (config-if) #ip ospf network point-to-point
B. R1 (config-if) #interface Gi0/0
R1 (config-if) #ip ospf network broadcast
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf network broadcast
C. R1(config-if)#interface Gi0/0
R1(config-if)#ip ospf database-filter all out
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf database-filter all out
D. R1(config-if)#interface Gi0/0
R1(config-if)#ip ospf priority 1
R2(config-if)#interface Gi0/0
R2(config-if)#ip ospf priority 1
Answer: A
Explanation:
Broadcast and Non-Broadcast networks elect DR/BDR while Point-to-point/multipoint do not elect

DR/BDR. Therefore we have to set the two Gi0/0 interfaces to point-to-point or point-to-multipoint network to ensure that a DR/BDR election does not occur.

141.What are two reasons why broadcast radiation is caused in the virtual machine environment? (Choose two)

A. vSwitch must interrupt the server CPU to process the broadcast packet

B. The Layer 2 domain can be large in virtual machine environments

C. Virtual machines communicate primarily through broadcast mode

D. Communication between vSwitch and network switch is broadcast based

E. Communication between vSwitch and network switch is multicast based

Answer: AD

Explanation:

Broadcast radiation is the accumulation of broadcast and multicast traffic on a computer network. Extreme amounts of broadcast traffic constitute a broadcast storm.

The amount of broadcast traffic you should see within a broadcast domain is directly proportional to the size of the broadcast domain. Therefore if the layer 2 domain in virtual machine environment is too large, broadcast radiation may occur -> VLANs should be used to reduce broadcast radiation.

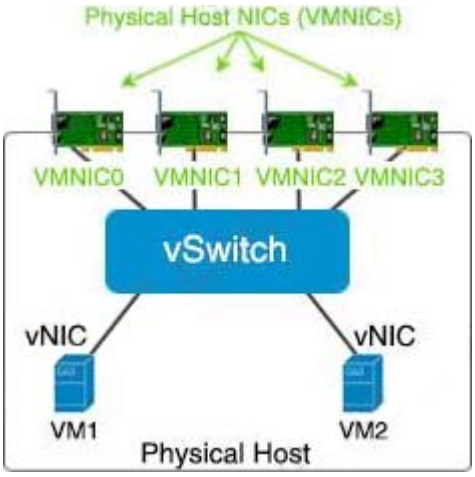
Also if virtual machines communicate via broadcast too much, broadcast radiation may occur.

Another reason for broadcast radiation is using a trunk (to extend VLANs) from the network switch to the physical server.

Note about the structure of virtualization in a hypervisor:

Hypervisors provide virtual switch (vSwitch) that Virtual Machines (VMs) use to communicate with other VMs on the same host. The vSwitch may also be connected to the host's physical NIC to allow VMs to get layer 2 access to the outside world.

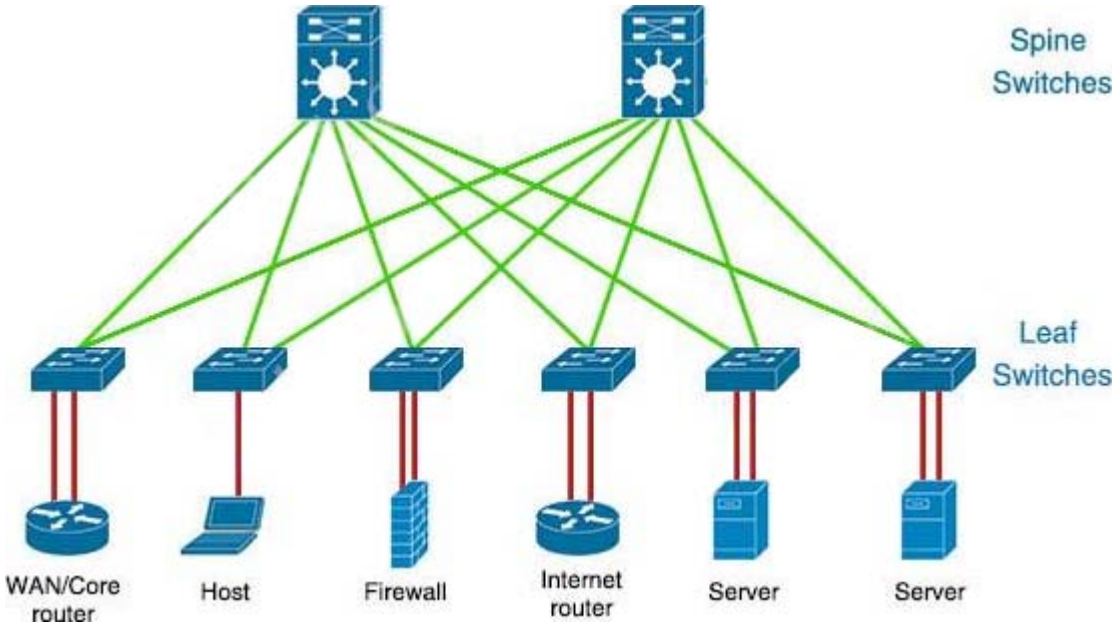
Each VM is provided with a virtual NIC (vNIC) that is connected to the virtual switch. Multiple vNICs can connect to a single vSwitch, allowing VMs on a physical host to communicate with one another at layer 2 without having to go out to a physical switch.



Although vSwitch does not run Spanning-tree protocol but vSwitch implements other loop prevention mechanisms. For example, a frame that enters from one VMNIC is not going to go out of the physical host from a different VMNIC card.

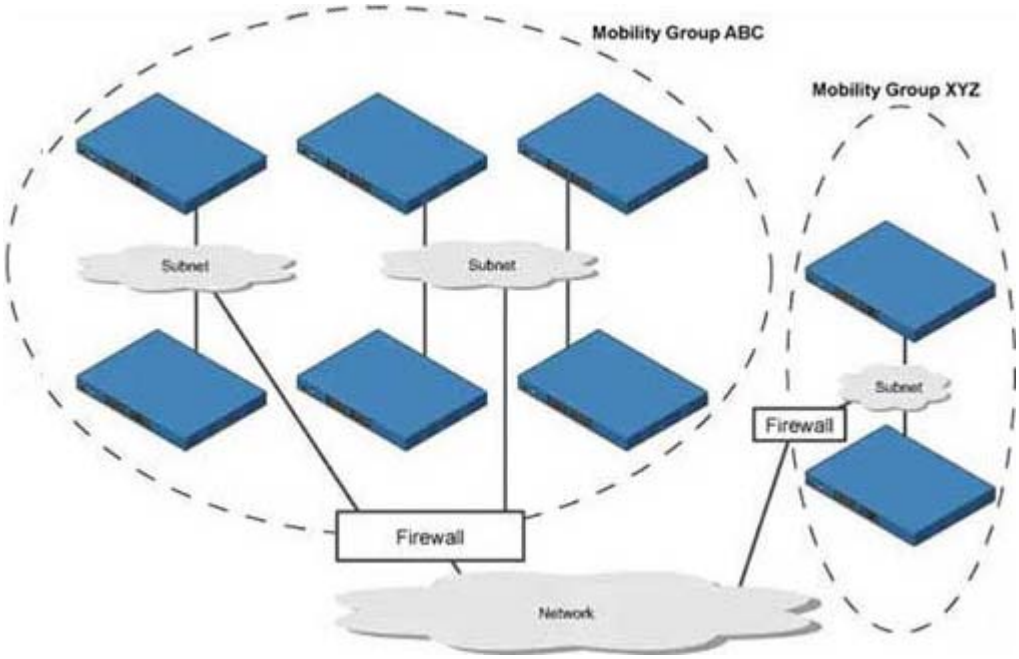
142.A company plans to implement intent-based networking in its campus infrastructure.

Which design facilities a migrate from a traditional campus design to a programmer fabric designer?
A. Layer 2 access
B. three-tier
C. two-tier
D. routed access
Answer: B
Explanation:
Intent-based Networking (IBN) transforms a hardware-centric, manual network into a controller-led network that captures business intent and translates it into policies that can be automated and applied consistently across the network. The goal is for the network to continuously monitor and adjust network performance to help assure desired business outcomes. IBN builds on software-defined networking (SDN). SDN usually uses spine-leaf architecture, which is typically deployed as two layers: spines (such as an aggregation layer), and leaves (such as an access layer).



143.When a wireless client roams between two different wireless controllers, a network connectivity outage is experience for a period of time.
Which configuration issue would cause this problem?
A. Not all of the controllers in the mobility group are using the same mobility group name
B. Not all of the controllers within the mobility group are using the same virtual interface IP address
C. All of the controllers within the mobility group are using the same virtual interface IP address
D. All of the controllers in the mobility group are using the same mobility group name
Answer: A
Explanation:
A prerequisite for configuring Mobility Groups is “All controllers must be configured with the same virtual interface IP address”. If all the controllers within a mobility group are not using the same virtual interface, inter-controller roaming may appear to work, but the handoff does not complete, and the client loses connectivity for a period of time. -> Answer B is correct.
Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/8-5/config-guide/b_cg85/mobility_groups.html

Answer A is not correct because when the client moves to a different mobility group (with different mobility group name), that client would be connected (provided that the new connected controller had information about this client in its mobility list already) or drop (if the new connected controller have not had information about this client in its mobility list). For more information please read the note below.
Note:
A mobility group is a set of controllers, identified by the same mobility group name that defines the realm of seamless roaming for wireless clients. By creating a mobility group, you can enable multiple controllers in a network to dynamically share information and forward data traffic when inter-controller or inter-subnet roaming occurs. Controllers in the same mobility group can share the context and state of client devices as well as their list of access points so that they do not consider each other's access points as rogue devices.



Let's take an example:
The controllers in the ABC mobility group share access point and client information with each other. The controllers in the ABC mobility group do not share the access point or client information with the XYZ controllers, which are in a different mobility group. Therefore if a client from ABC mobility group moves to XYZ mobility group, and the new connected controller does not have information about this client in its mobility list, that client will be dropped.
Note: Clients may roam between access points in different mobility groups if the controllers are included in each other's mobility lists.

144.What is the role of the RP in PIM sparse mode?
A. The RP responds to the PIM join messages with the source of requested multicast group
B. The RP maintains default aging timeouts for all multicast streams requested by the receivers
C. The RP acts as a control-plane node and does not receive or forward multicast packets
D. The RP is the multicast that is the root of the PIM-SM shared multicast distribution tree
Answer: A

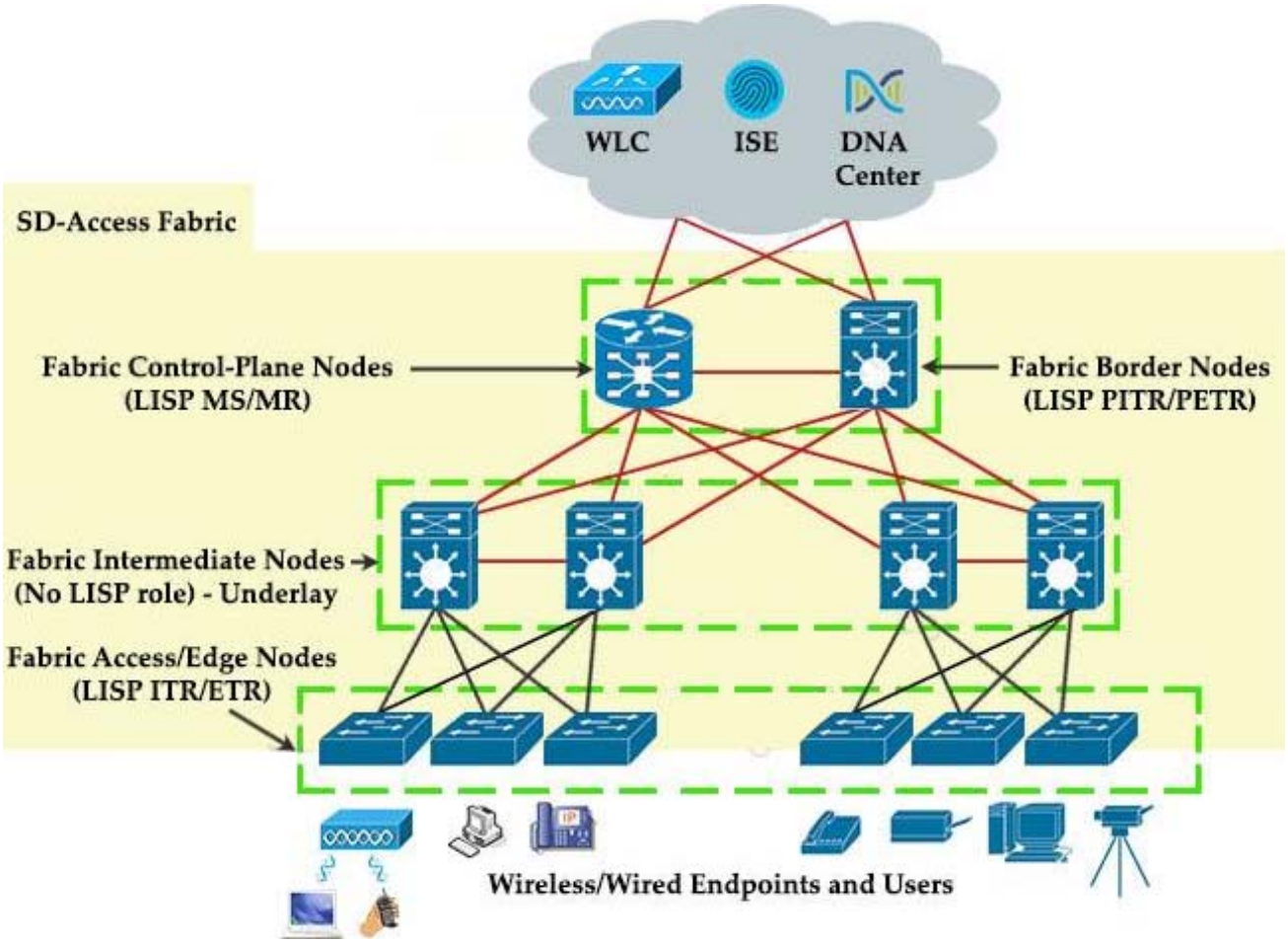
145.A network administrator is preparing a Python script to configure a Cisco IOS XE-based device on the

network. The administrator is worried that colleagues will make changes to the device while the script is running.
Which operation of the client manager in prevent colleague making changes to the device while the script is running?
A. m.lock (config='running')
B. m.lock (target='running')
C. m.freeze (target='running')
D. m.freeze(config='running')
Answer: B
Explanation:
The example below shows the usage of lock command:

```
def demo(host, user, names):
    With manager. Connect(host=host, port=22, username=user) as m:
        With m.locked(target='running'):
            for n in names:
                m.edit_config (target='running', config=template % n)
```

The command "m.locked (target='running')" causes a lock to be acquired on the running datastore.

146.What are two device roles in Cisco SD-Access fabric? (Choose two)
A. core switch
B. vBond controller
C. edge node
D. access switch
E. border node
Answer: C E
Explanation:
There are five basic device roles in the fabric overlay:
+ Control plane node: This node contains the settings, protocols, and mapping tables to provide the endpoint-to-location (EID-to-RLOC) mapping system for the fabric overlay.
+ Fabric border node: This fabric device (for example, core layer device) connects external Layer 3 networks to the SDA fabric.
+ Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.
+ Fabric WLAN controller (WLC): This fabric device connects APs and wireless endpoints to the SDA fabric.
+ Intermediate nodes: These are intermediate routers or extended switches that do not provide any sort of SD-Access fabric role other than underlay services.



Reference: CCNP and CCIE Enterprise Core ENCOR 350-401 Official Cert Guide

147.Drag and drop the LISP components from the left onto the function they perform on the right. Not all options are used.

LISP map resolver	accepts LISP encapsulated map requests
LISP proxy ETR	learns of EID prefix mapping entries from an ETR
LISP route reflector	receives traffic from LISP sites and sends it to non-LISP sites
LISP ITR	receives packets from site-facing interfaces
LISP map server	

Answer:

LISP map resolver	LISP map resolver
LISP proxy ETR	LISP map server
LISP route reflector	LISP proxy ETR
LISP ITR	LISP ITR
LISP map server	

Explanation:

ITR is the function that maps the destination EID to a destination RLOC and then encapsulates the original packet with an additional header that has the source IP address of the ITR RLOC and the destination IP address of the RLOC of an Egress Tunnel Router (ETR). After the encapsulation, the original packet become a LISP packet.

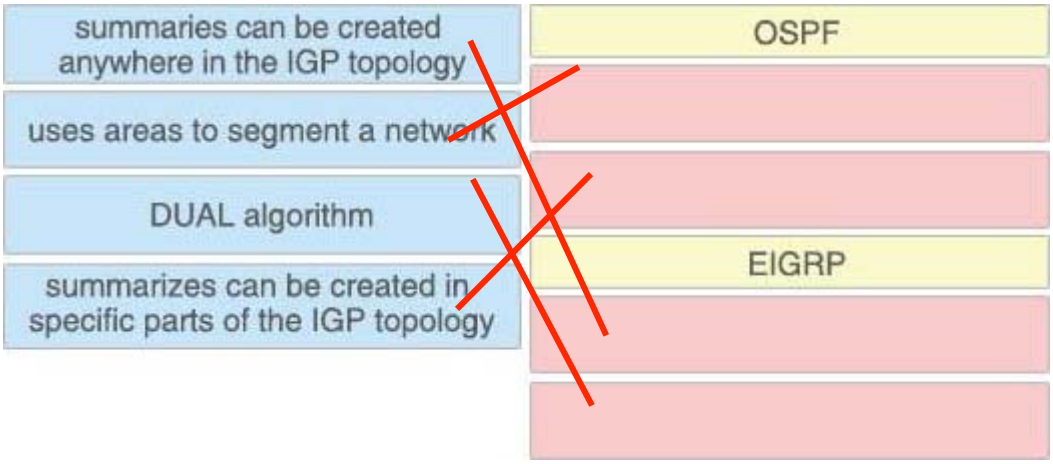
ETR is the function that receives LISP encapsulated packets, decapsulates them and forwards to its local EIDs. This function also requires EID-to-RLOC mappings so we need to point out an “map-server” IP address and the key (password) for authentication.

A LISP proxy ETR (PETR) implements ETR functions on behalf of non-LISP sites. A PETR is typically used when a LISP site needs to send traffic to non-LISP sites but the LISP site is connected through a service provider that does not accept no routable EIDs as packet sources. PETRs act just like ETRs but for EIDs that send traffic to destinations at non-LISP sites.

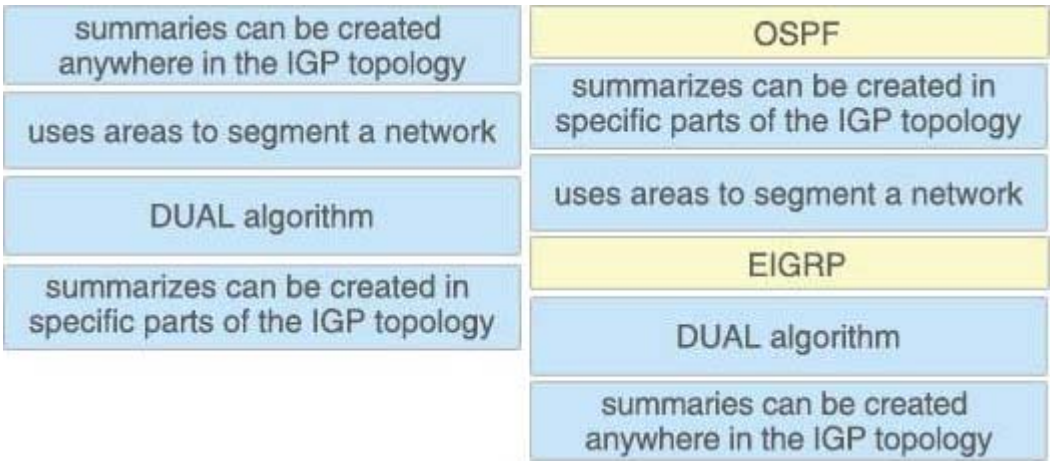
Map Server (MS) processes the registration of authentication keys and EID-to-RLOC mappings. ETRs sends periodic Map-Register messages to all its configured Map Servers.

Map Resolver (MR): a LISP component which accepts LISP Encapsulated Map Requests, typically from an ITR, quickly determines whether or not the destination IP address is part of the EID namespace

148.Drag and Drop the description from the left onto the routing protocol they describe on the right.



Answer:



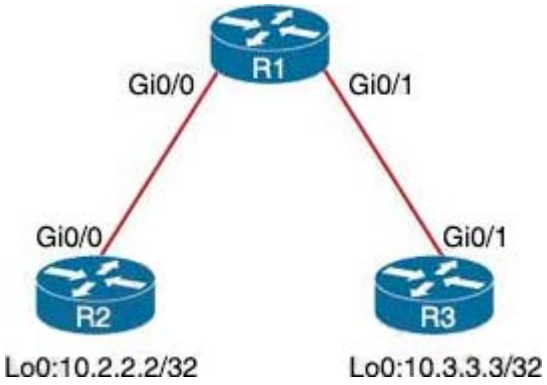
Explanation:
Unlike OSPF where we can summarize only on ABR or ASBR, in EIGRP we can summarize anywhere. Manual summarization can be applied anywhere in EIGRP domain, on every router, on every interface via the ip summary-address eigrp as-number address mask [administrative-distance] command (for example: ip summary-address eigrp 1 192.168.16.0 255.255.248.0). Summary route will exist in routing table as long as at least one more specific route will exist. If the last specific route will disappear, summary route also will fade out. The metric used by EIGRP manual summary route is the minimum metric of the specific routes.

149.Which component handles the orchestration plane of the Cisco SD-WAN?
A. vBond
B. vSmart
C. vManage
D. vEdge
Answer: A
Explanation:
+ Orchestration plane (vBond) assists in securely onboarding the SD-WAN WAN Edge routers into the SD-WAN overlay. The vBond controller, or orchestrator, authenticates and authorizes the SD-WAN components onto the network. The vBond orchestrator takes an added responsibility to distribute the list of vSmart and vManage controller information to the WAN Edge routers. vBond is the only device in SD-WAN that requires a public IP address as it is the first point of contact and authentication for all SD-WAN components to join the SD-WAN fabric. All other components need to know the vBond IP or DNS information.

150.Which access point mode allows a supported AP to function like a WLAN client would, associating and identifying client connectivity issues?
A. client mode
B. SE-connect mode
C. sensor mode
D. sniffer mode
Answer: D
Explanation:
An lightweight AP (LAP) operates in one of six different modes:

+ Local mode (default mode): measures noise floor and interference, and scans for intrusion detection (IDS) events every 180 seconds on unused channels
+ Flex Connect, formerly known as Hybrid Remote Edge AP (H-REAP), mode: allows data traffic to be switched locally and not go back to the controller. The Flex Connect AP can perform standalone client authentication and switch VLAN traffic locally even when it's disconnected to the WLC (Local Switched). Flex Connect AP can also tunnel (via CAPWAP) both user wireless data and control traffic to a centralized WLC (Central Switched).
+ Monitor mode: does not handle data traffic between clients and the infrastructure. It acts like a sensor for location-based services (LBS), rogue AP detection, and IDS
+ Rogue detector mode: monitor for rogue APs. It does not handle data at all.
+ Sniffer mode: run as a sniffer and captures and forwards all the packets on a particular channel to a remote machine where you can use protocol analysis tool (Wireshark, Airopeek, etc) to review the packets and diagnose issues. Strictly used for troubleshooting purposes.
+ Bridge mode: bridge together the WLAN and the wired infrastructure together.

151.Refer to the exhibit.



An engineer must deny Telnet traffic from the loopback interface of router R3 to the loopback interface of router R2 during the weekend hours. All other traffic between the loopback interfaces of routers R3 and R2 must be allowed at all times.
Which command accomplish this task?
A. R3(config)#time-range WEEKEND
R3(config-time-range)#periodic Saturday Sunday 00:00 to 23:59
R3(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R3(config)#access-list 150 permit ip any any time-range WEEKEND
R3(config)#interface Gi0/1
R3(config-if)#ip access-group 150 out
B. R1(config)#time-range WEEKEND
R1(config-time-range)#periodic Friday Sunday 00:00 to 00:00
R1(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R1(config)#access-list 150 permit ip any any
R1(config)#interface Gi0/1
R1(config-if)#ip access-group 150 in
C. R1(config)#time-range WEEKEND
R1(config-time-range)#periodic weekend 00:00 to 23:59
R1(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND

R1(config)#access-list 150 permit ip any any
R1(config)#interface Gi0/1
R1(config-if)#ip access-group 150 in
D. R3(config)#time-range WEEKEND
R3(config-time-range)#periodic weekend 00:00 to 23:59
R3(config)#access-list 150 deny tcp host 10.3.3.3 host 10.2.2.2 eq 23 time-range WEEKEND
R3(config)#access-list 150 permit ip any any time-range WEEKEND
R3(config)#interface Gi0/1
R3(config-if)#ip access-group 150 out
Answer: C
Explanation:
We cannot filter traffic that is originated from the local router (R3 in this case) so we can only configure the ACL on R1 or R2. “Weekend hours” means from Saturday morning through Sunday night so we have to configure: “periodic weekend 00:00 to 23:59”.
Note: The time is specified in 24-hour time (hh:mm), where the hours range from 0 to 23 and the minutes range from 0 to 59.

152.Which tool is used in Cisco DNA Center to build generic configurations that are able to be applied on device with similar network settings?
A. Command Runner
B. Template Editor
C. Application Policies
D. Authentication Template
Answer: D
Explanation:
Cisco DNA Center provides an interactive editor called Template Editor to author CLI templates. Template Editor is a centralized CLI management tool to help design a set of device configurations that you need to build devices in a branch. When you have a site, office, or branch that uses a similar set of devices and configurations, you can use Template Editor to build generic configurations and apply the configurations to one or more devices in the branch.
Reference:
https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/network-automation-and-management/dna-center/1-3/user_guide/b_cisco_dna_center_ug_1_3/b_cisco_dna_center_ug_1_3_chapter_0111.html

153.A client device roams between access points located on different floors in an atrium. The access points joined to the same controller and configuration in local mode. The access points are in different IP addresses, but the client VLAN in the group same.
What type of roam occurs?
A. inter-controller
B. inter-subnet
C. intra-VLAN
D. intra-controller
Answer: B

Explanation:
Mobility, or roaming, is a wireless LAN client's ability to maintain its association seamlessly from one access point to another securely and with as little latency as possible.
Three popular types of client roaming are:
Intra-Controller Roaming: Each controller supports same-controller client roaming across access points managed by the same controller. This roaming is transparent to the client as the session is sustained, and the client continues using the same DHCP-assigned or client-assigned IP address.
Inter-Controller Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group and on the same subnet. This roaming is also transparent to the client because the session is sustained and a tunnel between controllers allows the client to continue using the same DHCP- or client-assigned IP address as long as the session remains active.
Inter-Subnet Roaming: Multiple-controller deployments support client roaming across access points managed by controllers in the same mobility group on different subnets. This roaming is transparent to the client because the session is sustained and a tunnel between the controllers allows the client to continue using the same DHCP-assigned or client-assigned IP address as long as the session remains active.
Reference:
https://www.cisco.com/c/en/us/td/docs/wireless/controller/7-4/configuration/guides/consolidated/b_cg74_CONSOLIDATED/b_cg74_CONSOLIDATED_chapter_01100.html
In three types of client roaming above, only with Inter-Subnet Roaming the controllers are in different subnets.

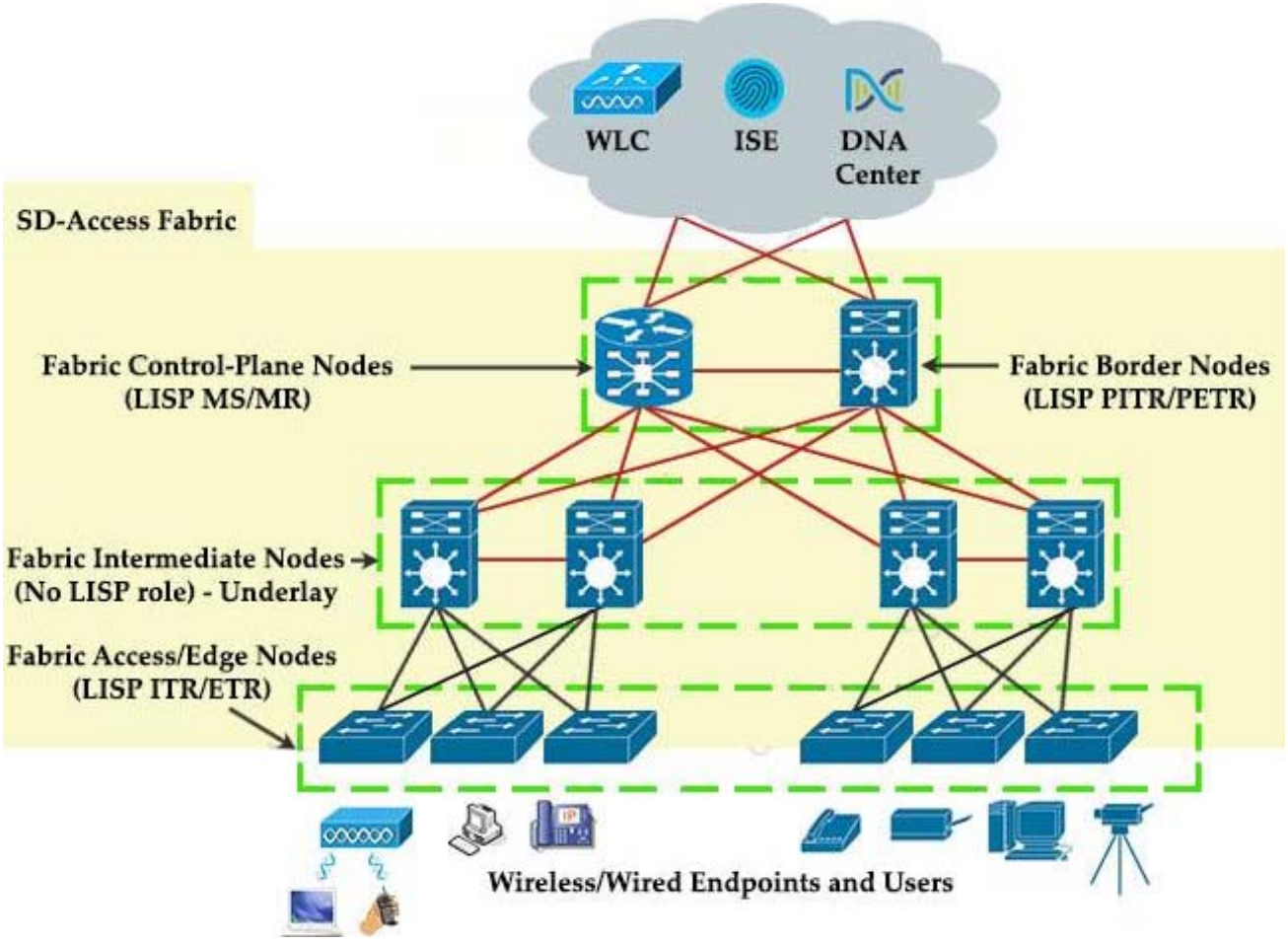
154.What does the LAP send when multiple WLCs respond to the CISCO_CAPWAP-CONTROLLER.localdomain hostname during the CAPWAP discovery and join process?
A. broadcast discover request
B. join request to all the WLCs
C. unicast discovery request to each WLC
D. Unicast discovery request to the first WLC that resolves the domain name
Answer: D

155.Refer to the exhibit.

```
vlan 222
 remote-span
!
vlan 223
 remote-span
!
monitor session 1 source interface FastEthernet0/1 tx
monitor session 1 source interface FastEthernet0/2 rx
monitor session 1 source interface port-channel 5
monitor session 1 destination remote vlan 222
!
```

What is the result when a technician adds the monitor session 1 destination remote vlan 233 command?
A. The RSPAN VLAN is replaced by VLAN 223
B. RSPAN traffic is sent to VLANs 222 and 223
C. An error is flagged for configuring two destinations
D. RSPAN traffic is split between VLANs 222 and 223
Answer: B

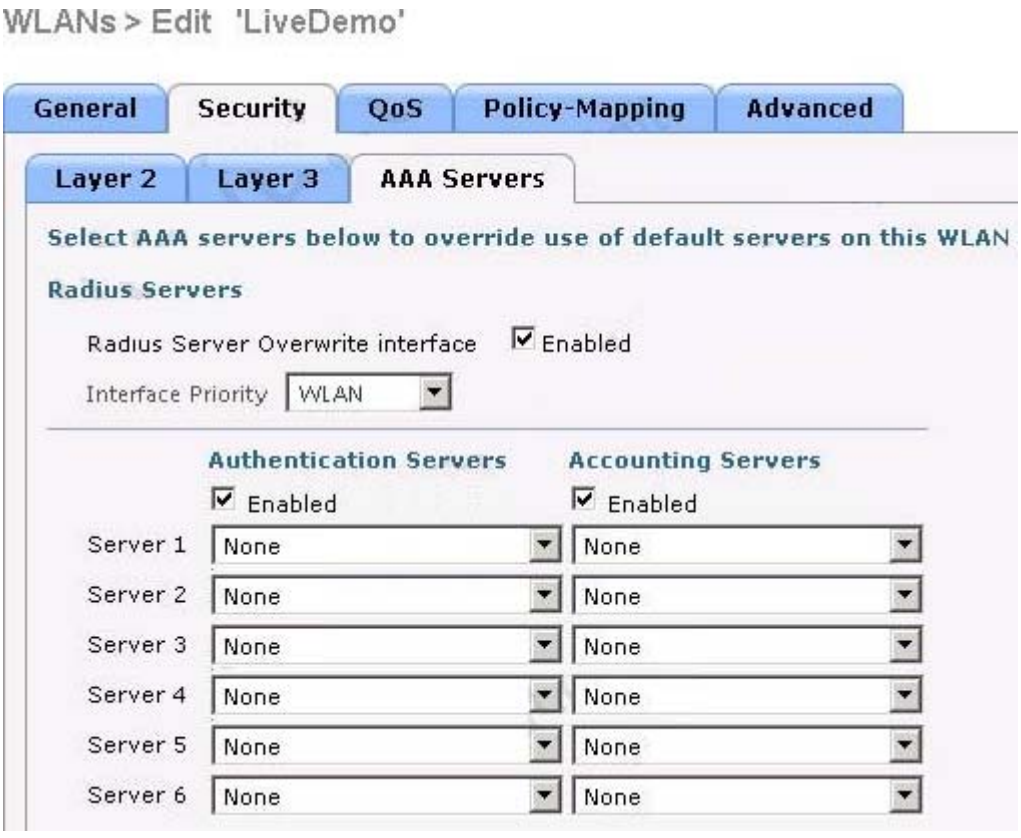
156.In an SD-Access solution what is the role of a fabric edge node?
A. to connect external Layer 3-network to the SD-Access fabric
B. to connect wired endpoint to the SD-Access fabric
C. to advertise fabric IP address space to external network
D. to connect the fusion router to the SD-Access fabric
Answer: B
Explanation:
+ Fabric edge node: This fabric device (for example, access or distribution layer device) connects wired endpoints to the SDA fabric.



157.An engineer must protect their company against ransom ware attacks.
Which solution allows the engineer to block the execution stage and prevent file encryption?
A. Use Cisco AMP deployment with the Malicious Activity Protection engineer enabled
B. Use Cisco AMP deployment with the Exploit Prevention engine enabled

C. Use Cisco Firepower and block traffic to TOR networks
D. Use Cisco Firepower with Intrusion Policy and snort rules blocking SMB exploitation
Answer: A
Explanation:
Ransomware are malicious software that locks up critical resources of the users. Ransomware uses well-established public/private key cryptography which leaves the only way of recovering the files being the payment of the ransom, or restoring files from backups.
Cisco Advanced Malware Protection (AMP) for Endpoints Malicious Activity Protection (MAP) engine defends your endpoints by monitoring the system and identifying processes that exhibit malicious activities when they execute and stops them from running. Because the MAP engine detects threats by observing the behavior of the process at run time, it can generically determine if a system is under attack by a new variant of ransomware or malware that may have eluded other security products and detection technology, such as legacy signature-based malware detection. The first release of the MAP engine targets identification, blocking, and quarantine of ransomware attacks on the endpoint.
Reference:
https://www.cisco.com/c/dam/en/us/products/collateral/security/amp-for-endpoints/white-paper-c11-740980.pdf

158.Refer to the exhibit.



Assuming the WLC's interfaces are not in the same subnet as the RADIUS server, which interface would the WLC use as the source for all RADIUS-related traffic?
A. the interface specified on the WLAN configuration
B. any interface configured on the WLC
C. the controller management interface

D. the controller virtual interface
Answer: A

159.Which benefit is offered by a cloud infrastructure deployment but is lacking in an on-premises deployment?
A. efficient scalability
B. virtualization
C. storage capacity
D. supported systems
Answer: A

160.Which DHCP option helps lightweight APs find the IP address of a wireless LAN controller?
A. Option 43
B. Option 60
C. Option 67
D. Option 150
Answer: A

161.A network administrator applies the following configuration to an IOS device.
aaa new-model
aaa authentication login default local group tacacs+
What is the process of password checks when a login attempt is made to the device?
A. A TACACS+ server is checked first. If that check fail, a database is checked
B. A TACACS+ server is checked first. If that check fail, a RADIUS server is checked. If that check fail, a local database is checked
C. A local database is checked first. If that fails, a TACACS+server is checked, if that check fails, a RADIUS server is checked
D. A local database is checked first. If that check fails, a TACACS+server is checked
Answer: A
Explanation:
The “aaa authentication login default local group tacacs+” command is broken down as follows:
+ The ‘aaa authentication’ part is simply saying we want to configure authentication settings.
+ The ‘login’ is stating that we want to prompt for a username/password when a connection is made to the device.
+ The ‘default’ means we want to apply for all login connections (such as tty, vty, console and aux). If we use this keyword, we don’t need to configure anything else under tty, vty and aux lines. If we don’t use this keyword then we have to specify which line(s) we want to apply the authentication feature.
+ The ‘local group tacacs+” means all users are authenticated using router’s local database (the first method). If the credentials are not found on the local database, then the TACACS+ server is used (the second method).

162.Why is an AP joining a different WLC than the one specified through option 43?
A. The WLC is running a different software version
B. The API is joining a primed WLC

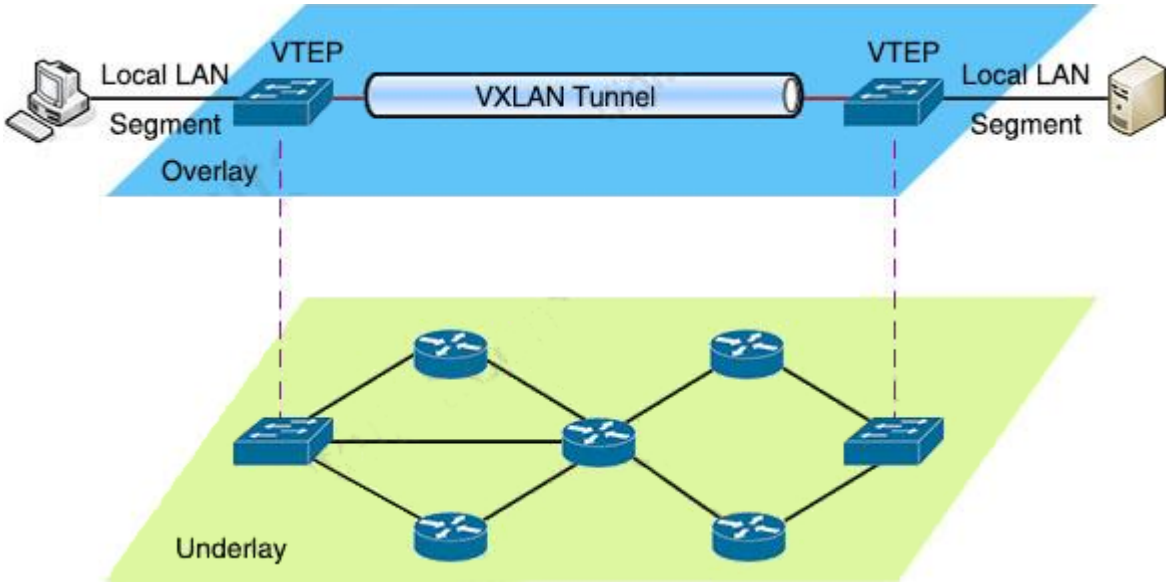
C. The AP multicast traffic unable to reach the WLC through Layer 3
D. The APs broadcast traffic is unable to reach the WLC through Layer 2
Answer: B

163.Which method of account authentication does OAuth 2.0 within REST APIs?
A. username/role combination
B. access tokens
C. cookie authentication
D. basic signature workflow
Answer: B
Explanation:
The most common implementations of OAuth (OAuth 2.0) use one or both of these tokens:
+ access token: sent like an API key, it allows the application to access a user's data; optionally, access tokens can expire.
+ refresh token: optionally part of an OAuth flow, refresh tokens retrieve a new access token if they have expired. OAuth2 combines Authentication and Authorization to allow more sophisticated scope and validity control.

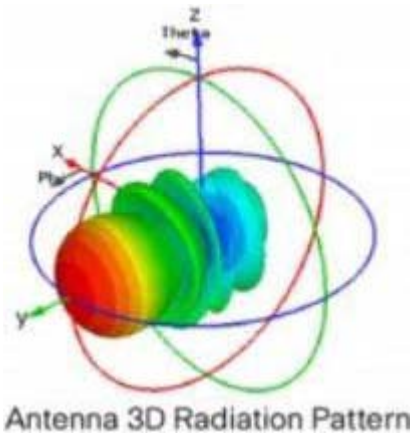
164.What does the Cisco DNA Center use to enable the delivery of applications through a network and to yield analytics for innovation?
A. process adapters
B. Command Runner
C. intent-based APIs
D. domain adapters
Answer: C
Explanation:
The Cisco DNA Center open platform for intent-based networking provides 360-degree extensibility across multiple components, including:
+ Intent-based APIs leverage the controller to enable business and IT applications to deliver intent to the network and to reap network analytics and insights for IT and business innovation. These enable APIs that allow Cisco DNA Center to receive input from a variety of sources, both internal to IT and from line-of-business applications, related to application policy, provisioning, software image management, and assurance. …
Reference:
https://www.cisco.com/c/en/us/products/collateral/cloud-systems-management/dna-center/nb-06-dna-cent-plat-sol-over-cte-en.html

165.Which action is a function of VTEP in VXLAN?
A. tunneling traffic from IPv6 to IPv4 VXLANs
B. allowing encrypted communication on the local VXLAN Ethernet segment
C. encapsulating and de-encapsulating VXLAN Ethernet frames
D. tunneling traffic from IPv4 to IPv6 VXLANs
Answer: C
Explanation:

VTEPs connect between Overlay and Underlay network and they are responsible for encapsulating frame into VXLAN packets to send across IP network (Underlay) then decapsulating when the packets leaves the VXLAN tunnel.
VTEPs connect between Overlay and Underlay network and they are responsible for encapsulating frame into VXLAN packets to send across IP network (Underlay) then decapsulating when the packets leaves the VXLAN tunnel.



166.Which type of antenna does the radiation pattern represent?



A. Yagi
B. multidirectional
C. directional patch
D. omnidirectional
Answer: A
Explanation:
A Yagi antenna is formed by driving a simple antenna, typically a dipole or dipole-like antenna, and shaping the beam using a well-chosen series of non-driven elements whose length and spacing are tightly controlled.

Reference:
https://www.cisco.com/c/en/us/products/collateral/wireless/aironet-antennas-accessories/prod_white_paper0900aecd806a1a3e.htm

167.Refer to the exhibit.

```
SwitchC#show vtp status
VTP Version                     : 2
Configuration Revision          : 0
Maximum VLANs supported locally   : 255
Number of existing VLANs        : 8
VTP Operating Mode              : Transparent
VTP Domain Name                 : cisco.com
VTP Pruning Mode                : Disabled
VTP V2 Mode                     : Disabled
VTP Traps Generation            : Disabled
MD5 digest                      : 0xE5 0x28 0x5D 0x3E 0x2F 0xE5 0xAD 0x2B
Configuration last modified by 0.0.0.0 at 1-10-19 09:01:38

SwitchC#show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/3, Fa0/4, Fa0/5, Fa0/6
                                                Fa0/7, Fa0/8, Fa0/9, Fa0/10
                                                Fa0/11, Fa0/12, Fa0/13, Fa0/14
                                                Fa0/15, Fa0/16, Fa0/17, Fa0/18
                                                Fa0/19, Fa0/20, Fa0/21, Fa0/22
                                                Fa0/23, Fa0/24, Po1
110  Finance                          active
210  HR                               active    Fa0/1
310  Sales                            active    Fa0/2
[...output omitted...]

SwitchC#show int trunk
Port        Mode         Encapsulation  Status        Native vlan
Gig1/1      on           802.1q         trunking      1
Gig1/2      on           802.1q         trunking      1

Port        Vlans allowed on trunk
Gig1/1      1-1005
Gig1/2      1-1005

Port        Vlans allowed and active in management domain
Gig1/1      1,110,210,310
Gig1/2      1,110,210,310

Port        Vlans in spanning tree forwarding state and not pruned
Gig1/1      1,110,210,310
Gig1/2      1,110,210,310

SwitchC#show run interface port-channel 1
interface Port-channel 1
 description Uplink_to_Core
 switchport mode trunk
```

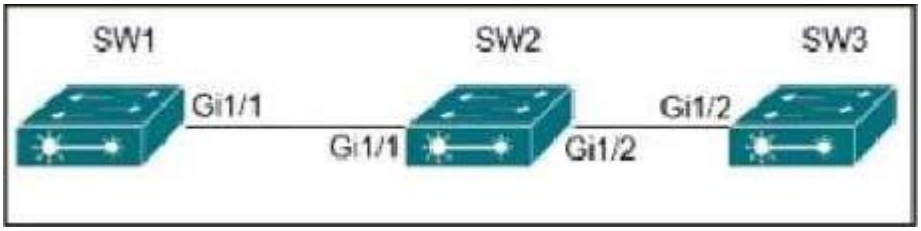
SwitchC connects HR and Sales to the Core switch However, business needs require that no traffic from the Finance VLAN traverse this switch.
Which command meets this requirement?

A. SwitchC(config)#vtp pruning
B. SwitchC(config)#vtp pruning vlan 110
C. SwitchC(config)#interface port-channel 1
SwitchC(config-if)#switchport trunk allowed vlan add 210, 310
D. SwitchC(config)#interface port-channel 1
SwitchC(config-if)#switchport trunk allowed vlan remove 110
Answer: D

168.Which HHTP status code is the correct response for a request with an incorrect password applied to a REST API session?
A. HTTP Status Code 200
B. HTTP Status Code 302
C. HTTP Status Code 401
D. HTTP Status Code: 504
Answer: C

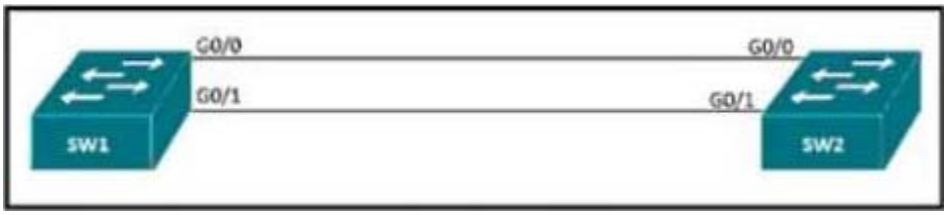
169.Which feature of EIGRP is not supported in OSPF?
A. load balancing of unequal-cost paths
B. load balance over four equal-costs paths
C. uses interface bandwidth to determine best path
D. per-packet load balancing over multiple paths
Answer: A

170.Company policy restricts VLAN 10 to be allowed only on SW1 and SW2. All other VLANs can be on all three switches. An administrator has noticed that VLAN 10 has propagated to SW3.



Which configuration corrects the issue?
A. SW1(config)#int gi1/1
SW1(config)#switchport trunk allowed vlan 1-9, 11-4094
B. SW1(config)#int gi1/2
SW1(config)#switchport trunk allowed vlan 10
C. SW1(config)#int gi1/2
SW1(config)#switchport trunk allowed vlan 1-9, 11-4094
D. SW1(config)#int gi1/1
SW1(config)#switchport trunk allowed vlan 10
Answer: A

171.Refer to the exhibit.



An engineer reconfigures the pot-channel between SW1 and SW2 from an access port to a trunk and immediately notices this error in SW1's log.
Which command set resolves this error?
A. SW1(config-if)#interface G0/0
SW1(config-if)#no spanning-tree bpdugard enable
SW1(config-if)#shut
SW1(config-if)#no shut
B. SW1(config-if)#interface G0/0
SW1(config-if)#spanning-tree bpdugard enable
SW1(config-if)#shut
SW1(config-if)#no shut
C. SW1(config-if)#interface G0/1
SW1(config-if)#spanning-tree bpdugard enable
SW1(config-if)#shut
SW1(config-if)#no shut
D. SW1(config-if)#interface G0/0
SW1(config-if)#no spanning-tree bpdufilter
SW1(config-if)#shut
SW1(config-if)#no shut
Answer: B

172.Refer to the exhibit.
An engineer is designing a guest portal on Cisco ISE using the default configuration. During the testing phase, the engineer receives a warning when displaying the guest portal. (YOUR CONNECTION IS NOT PRIVATE WARNING)
Which issue is occurring?
A. The server that is providing the portal has an expired certificate
B. The server that is providing the portal has a self-signed certificate
C. The connection is using an unsupported protocol
D. The connection is using an unsupported browser
Answer: A

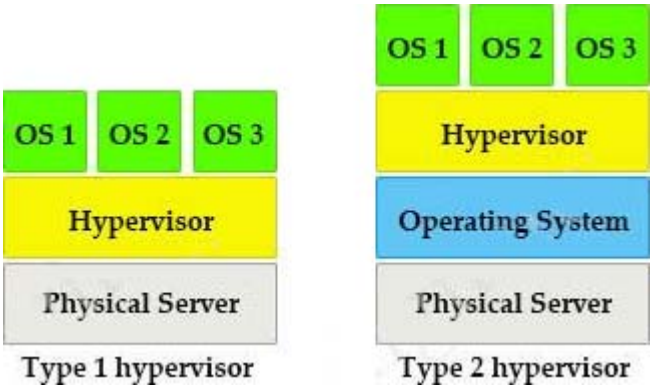
173.Which characteristic distinguishes Ansible from Chef?
A. Ansible pushes the configuration to the client. Chef client pulls the configuration from the server
B. Ansible lacks redundancy support for the master server. Chef runs two masters in an active/active mode
C. The Ansible server can run on Linux, Unix or Windows. The Chef server must run on Linux or Unix
D. Ansible uses Ruby to manage configurations. Chef uses YAML to manage configurations
Answer: A
Explanation:

Ansible works by connecting to your nodes and pushing out small programs, called “Ansible modules” to them. These programs are written to be resource models of the desired state of the system. Ansible then executes these modules (over SSH by default), and removes them when finished.
Chef is a much older, mature solution to configure management. Unlike Ansible, it does require an installation of an agent on each server, named chef-client. Also, unlike Ansible, it has a Chef server that each client pulls configuration from.

174.In a Cisco SD-WAN solution, how is the health of a data plane tunnel monitored?
A. using BFD
B. with IP SLA
C. with OMP
D. ARP probing
Answer: A
Explanation:
The BFD (Bidirectional Forwarding Detection) is a protocol that detects link failures as part of the Cisco SD-WAN (Viptela) high availability solution, is enabled by default on all vEdge routers, and you cannot disable it.

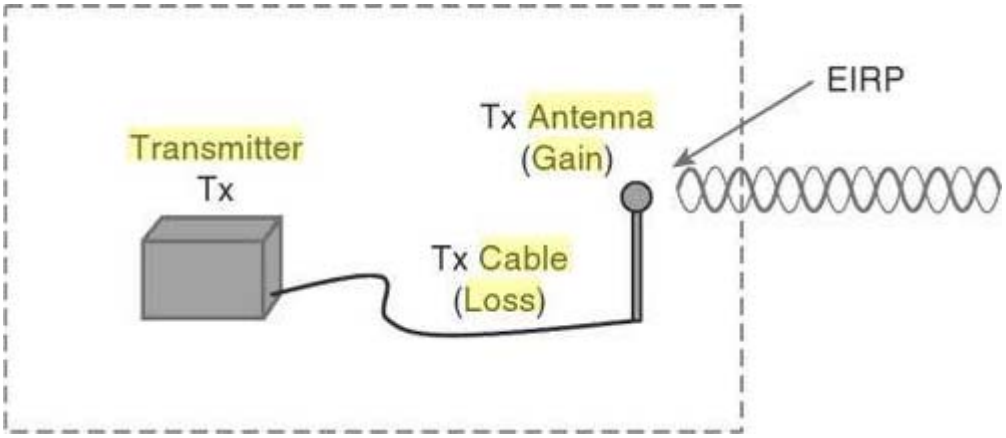
175.What function does VXLAN perform in an SD-Access deployment?
A. systems management and orchestration
B. control plane forwarding
C. policy plane forwarding
D. data plane forwarding
Answer: D

176.A server running Linux is providing support for virtual machines along with DNS and DHCP services for a small business.
Which technology does this represent?
A. Type 2 hypervisor
B. container
C. Type 1 hypervisor
D. hardware pass-through
Answer: A
Explanation:
In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).



177.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
Answer: C
Explanation:
Portfast feature should only be used on edge ports (ports directly connected to end stations). Neither edge ports or PortFast enabled ports generate topology changes when the link toggles so we cannot say Portfast reduces the STP convergence time.
PortFast causes a switch or trunk port to enter the spanning tree forwarding state immediately, bypassing the listening and learning states so answer 'It immediately puts the port into the forwarding state when the switch is reloaded ' is the best choice.

178.What is calculated using the numerical values of the transmitter power level, cable loss and antenna gain?
A. SNR
B. RSSI
C. dBi
D. EIRP
Answer: D
Explanation:
Once you know the complete combination of transmitter power level, the length of cable, and the antenna gain, you can figure out the actual power level that will be radiated from the antenna. This is known as the effective isotropic radiated power (EIRP), measured in dBm.
EIRP is a very important parameter because it is regulated by governmental agencies in most countries. In those cases, a system cannot radiate signals higher than a maximum allowable EIRP. To find the EIRP of a system, simply add the transmitter power level to the antenna gain and subtract the cable loss.



EIRP = Tx Power – Tx Cable + Tx Antenna
Suppose a transmitter is configured for a power level of 10 dBm (10 mW). answer 'SNR' cable with 5-dB loss connects the transmitter to an antenna with an 8-dBi gain. The resulting EIRP of the system is 10 dBm - 5 dB + 8 dBi, or 13 dBm.
You might notice that the EIRP is made up of decibel-milliwatt (dBm), dB relative to an isotropic antenna (dBi), and decibel (dB) values. Even though the units appear to be differrent, you can safely combine them because they are all in the dB “domain”.
Reference: CCNA Wireless 640-722 Official Cert Guide

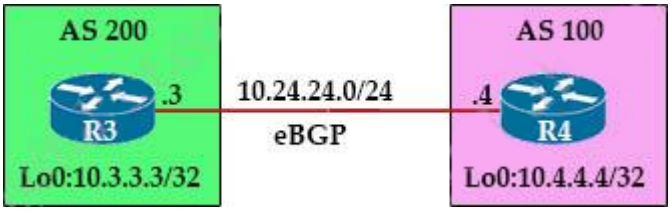
179.Which two security features are available when implementing NTP? (Choose two)
A. encrypted authentication mechanism
B. dock offset authentication
C. broadcast association mode
D. access list based restriction scheme
E. symmetric server passwords
Answer: D
Explanation:
The time kept on a machine is a critical resource and it is strongly recommend that you use the security features of NTP to avoid the accidental or malicious setting of incorrect time. **The two security features available are an access list-based restriction scheme and an encrypted authentication mechanism**.
Reference: https://www.cisco.com/c/en/us/support/docs/availability/high-availability/19643-ntpm.html

180.Refer to the exhibit.

An engineer reconfigures the port-channel between SW1 and SW2 from an access port to a trunk and immediately notices this error in SW1’s log.
%PM-SP-4-ERR_DISABLE: bpduguard error detected on Gi0/0, putting Gi0/0 in err-disable state.
Which command set resolves this error?
A. Sw1(config)# interface G0/0
Sw1(config-if)# no spanning-tree bpduguard enable

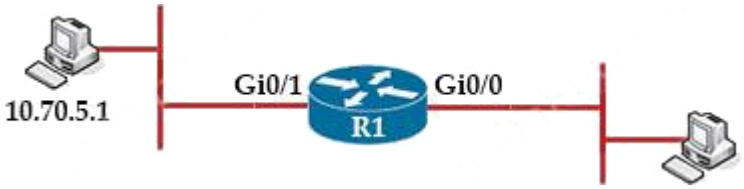
Sw1(config-if)# shut
Sw1(config-if)# no shut
B. Sw1(config)# interface G0/0
Sw1(config-if)# spanning-tree bpduguard enable
Sw1(config-if)# shut
Sw1(config-if)# no shut
C. Sw1(config)# interface G0/1
Sw1(config-if)# spanning-tree bpduguard enable
Sw1(config-if)# shut
Sw1(config-if)# no shut
D. Sw1(config)# interface G0/0
Sw1(config-if)# no spanning-tree bpdufilter
Sw1(config-if)# shut
Sw1(config-if)# no shut
Answer: A

181.Refer to the exhibit.



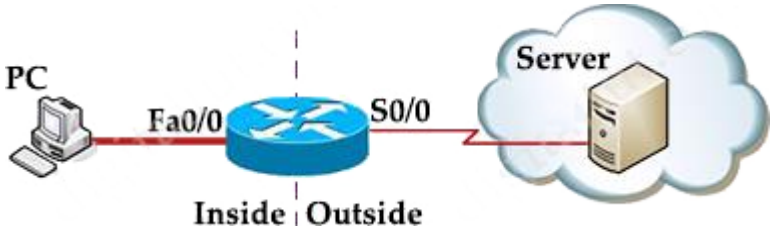
An engineer must establish eBGP peering between router R3 and router R4. Both routers should use their loopback interfaces as the BGP router ID.
Which configuration set accomplishes this task?
A. R3(config)#router bgp 200
R3(config-router)#neighbor 10.24.24.4 remote-as 100
R3(config-router)#bgp router-id 10.3.3.3
R4(config)#router bgp 100
R4(config-router)#neighbor 10.24.24.3 remote-as 200
R4(config-router)#bgp router-id 10.4.4.4
B. R3(config)#router bgp 200
R3(config-router)#neighbor 10.4.4.4 remote-as 100
R3(config-router)#neighbor 10.4.4.4 update-source loopback0
R4(config)#router bgp 100
R4(config-router)#neighbor 10.3.3.3 remote-as 200
R4(config-router)#neighbor 10.3.3.3 update-source loopback0
C. R3(config)#router bgp 200
R3(config-router)#neighbor 10.24.24.4 remote-as 100
R3(config-router)#neighbor 10.24.24.4 update-source loopback0
R4(config)#router bgp 100
R4(config-router)#neighbor 10.24.24.3 remote-as 200
R4(config-router)#neighbor 10.24.24.3 update-source loopback0
Answer: A

182.Refer to the exhibit.



R1(config)# ip nat inside source static 10.70.5.1 10.45.1.7
A network architect has partially configured static NAT. which commands should be asked to complete the configuration?
A. R1(config)#interface GigabitEthernet0/0
R1(config)#ip pat outside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip pat inside
B. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat outside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat inside
C. R1(config)#interface GigabitEthernet0/0
R1(config)#ip nat inside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip nat outside
D. R1(config)#interface GigabitEthernet0/0
R1(config)#ip pat inside
R1(config)#interface GigabitEthernet0/1
R1(config)#ip pat outside
Answer: B

183.What is the result of applying this access control list?
ip access-list extended STATEFUL
10 permit tcp any any established
20 deny ip any any
A. TCP traffic with the DF bit set is allowed
B. TCP traffic with the SYN bit set is allowed
C. TCP traffic with the ACK bit set is allowed
D. TCP traffic with the URG bit set is allowed
Answer: C
Explanation:
The **established** keyword is only applicable to TCP access list entries to match TCP segments that have the ACK and/or RST control bit set (regardless of the source and destination ports), which assumes that a TCP connection has already been established in one direction only.
Let's see an example below:



Suppose you only want to allow the hosts inside your company to telnet to an outside server but not vice versa, you can simply use an “established” access-list like this:

access-list 100 permit tcp any any established

access-list 101 permit tcp any any eq telnet

!

interface S0/0

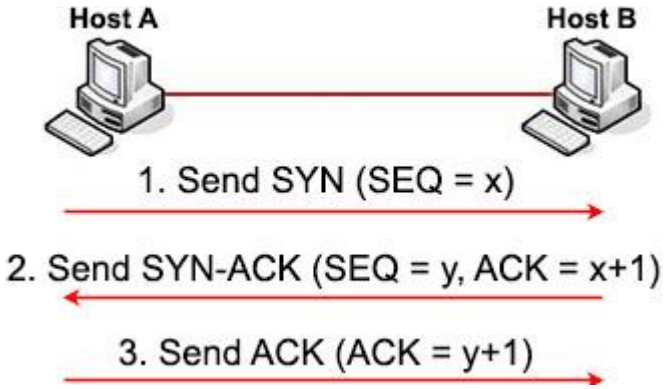
ip access-group 100 in

ip access-group 101 out

Note:

Suppose hostA wants to start communicating with hostB using TCP. Before they can send real data, a three-way handshake must be established first.

Let’s see how this process takes place:



1. First hostA will send a **SYN message** (a TCP segment with SYN flag set to 1, SYN is short for SYNchronize) to indicate it wants to setup a connection with hostB. This message includes a sequence (SEQ) number for tracking purpose. This sequence number can be any 32-bit number (range from 0 to 2^{32}) so we use “x” to represent it.

2. After receiving SYN message from hostA, hostB replies with **SYN-ACK message** (some books may call it “SYN/ACK” or “SYN, ACK” message. ACK is short for ACKnowledge). This message includes a SYN sequence number and an ACK number:

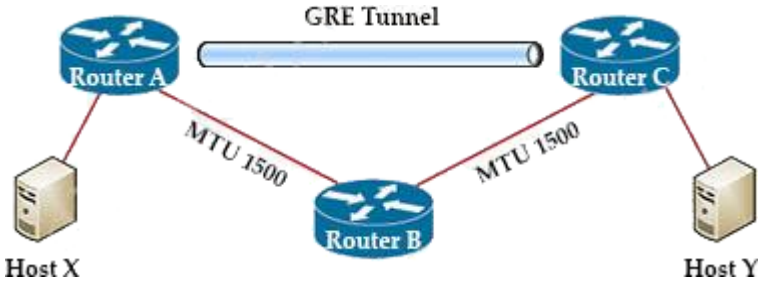
+ SYN sequence number (let’s called it “y”) is a random number and does not have any relationship with Host A’s SYN SEQ number.

+ ACK number is the next number of Host A’s SYN sequence number it received, so we represent it with “x+1”. It means “I received your part. Now send me the next part (x + 1)”.

The SYN-ACK message indicates hostB accepts to talk to hostA (via ACK part). And ask if hostA still wants to talk to it as well (via SYN part).

3. After Host answer 'TCP traffic with the DF bit set is allowed' received the SYN-ACK message from hostB, it sends an **ACK message** with ACK number “y+1” to hostB. This confirms hostA still wants to talk to hostB.

184.Refer to exhibit.

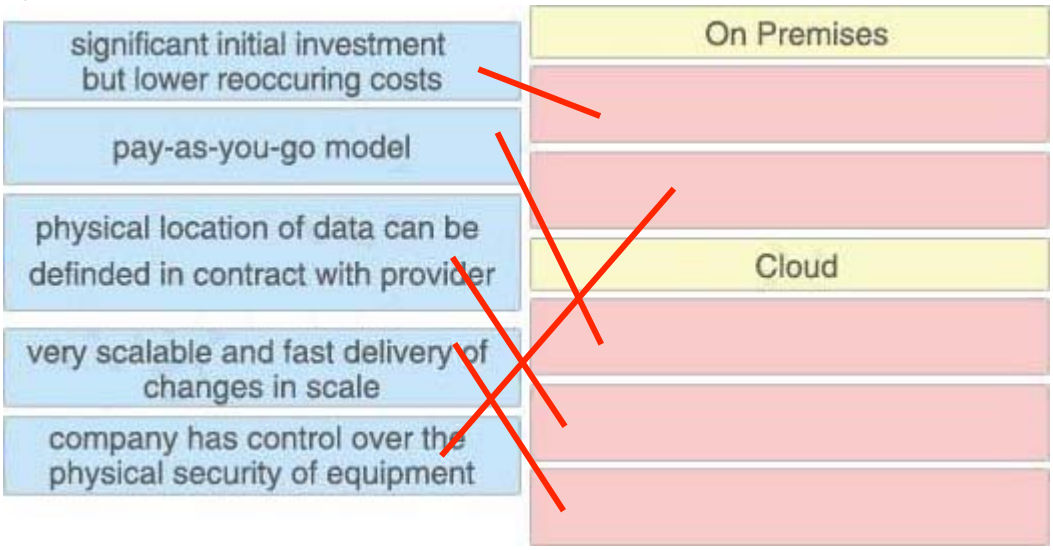


MTU has been configured on the underlying physical topology, and no MTU command has been configured on the tunnel interfaces.
What happens when a 1500-byte IPv4 packet traverses the GRE tunnel from host X to host Y, assuming the DF bit is cleared?
A. The packet arrives on router C without fragmentation.
B. The packet is discarded on router A
C. The packet is discarded on router B
D. The packet arrives on router C fragmented.
Answer: D
Explanation:
If the DF bit is set to clear (not set), routers can fragment packets regardless of the original DF bit setting. Whenever we create tunnel interfaces, the GRE IP MTU is automatically configured 24 bytes less than the outbound physical interface MTU. Ethernet interfaces have an MTU value of 1500 bytes so tunnel interfaces by default will have 1476 bytes MTU, which is 24 bytes less the physical interface.
The process of sending a 1500-byte IPv4 packet (with DF bit set to clear) is shown below:
1. The sender sends a 1500-byte packet (20 byte IPv4 header + 1480 bytes of TCP payload).
2. Since the MTU of the GRE tunnel is 1476, the 1500-byte packet is broken into two IPv4 fragments of 1476 and 44 bytes, each in anticipation of the additional 24 byes of GRE header.
3. The 24 bytes of GRE header is added to each IPv4 fragment. Now the fragments are 1500 (1476 + 24) and 68 (44 + 24) bytes each.
4. The GRE + IPv4 packets that contain the two IPv4 fragments are forwarded to the GRE tunnel peer router.
5. The GRE tunnel peer router removes the GRE headers from the two packets.
6. This router forwards the two packets to the destination host.
7. The destination host reassembles the IPv4 fragments back into the original IPv4 datagram.
Reference:
https://www.cisco.com/c/en/us/support/docs/ip/generic-routing-encapsulation-gre/25885-pmtud-ipfrag.html (Scenario 5)

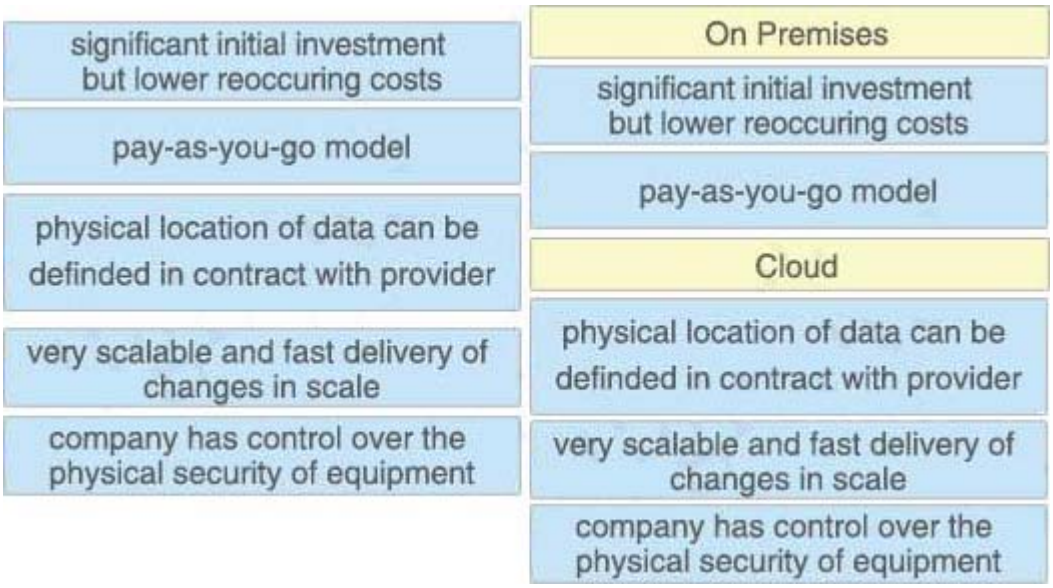
185.What is used to measure the total output energy of a Wi-Fi device?
A. dBi
B. EIRP
C. mW
D. dBm
Answer: C

Explanation:
Output power is measured in mW (milliwatts). answer 'dBi' milliwatt is equal to one thousandth (10^{-3}) of a watt.

186.Drag and drop the characteristics from the left onto the correct infrastructure deployment types on the right.

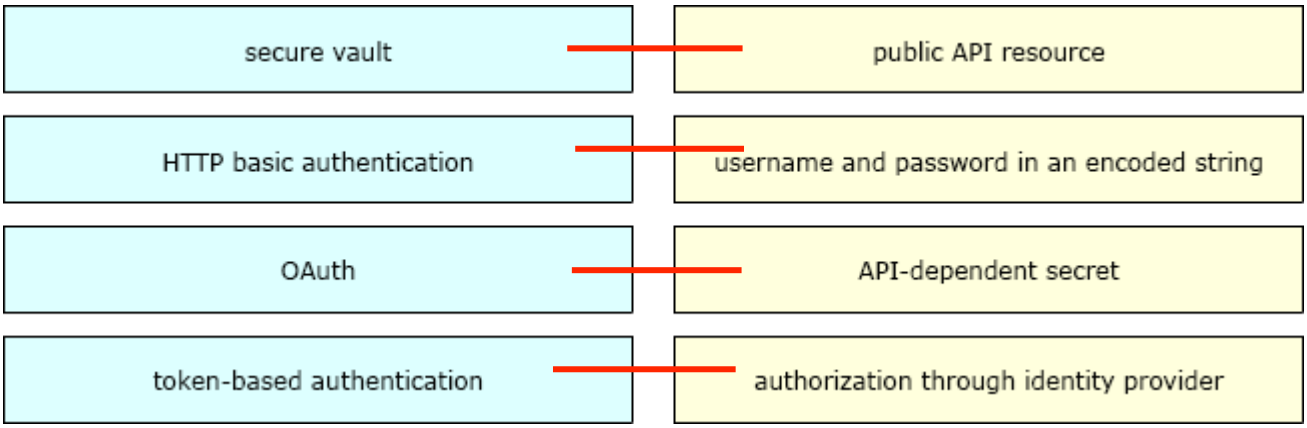


Answer:

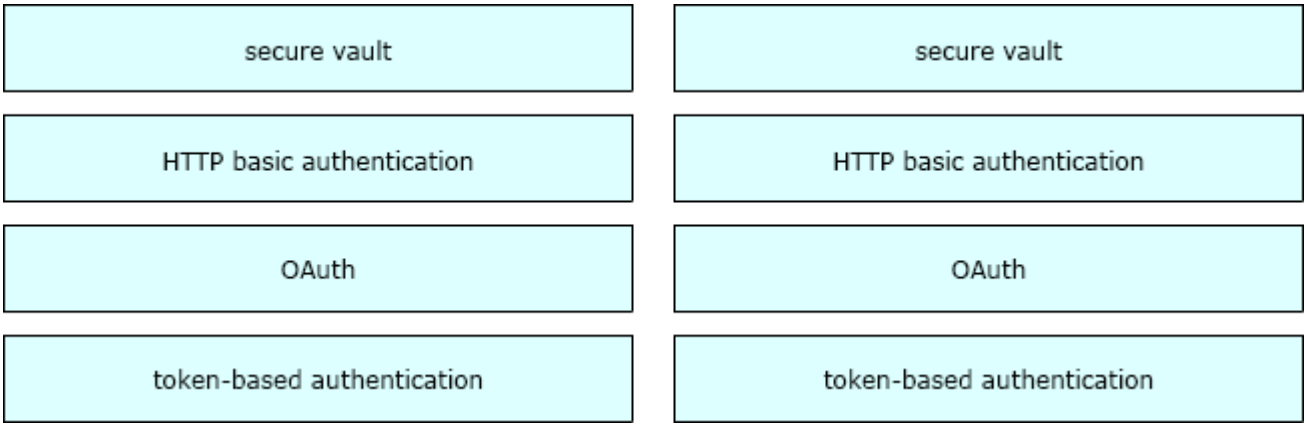


Please type the corresponding numbers of each item on the left to the blank below and arrange them ascendingly. For example: 13524 (which means 135 for first group, 24 for second group)
Please type your answer here: 15(on premises) 234 (cloud)

187.Drag and drop the REST API authentication method from the left to the description on the right.



Answer:



Explanation:

When **Secure Vault** is not in use, all information stored in its container is encrypted. When a user wants to use the files and notes stored within the app, they have to first decrypt the database. This happens by filling in a previously determined Security Lock – which could be a PIN or a password of the user's choosing. When a user leaves the app, it automatically encrypts everything again. This way all data stored in Secure Vault is decrypted only while a user is actively using the app. In all other instances, it remains locked to any attacker, malware or spyware trying to access the data.

How **token-based authentication** works: Users log in to a system and – once authenticated – are provided with a token to access other services without having to enter their username and password multiple times. In short, token-based authentication adds a second layer of security to application, network, or service access.

OAuth is an open standard for authorization used by many APIs and modern applications. The simplest example of OAuth is when you go to log onto a website and it offers one or more opportunities to log on using another website's/service's logon. You then click on the button linked to the other website, the other website authenticates you, and the website you were originally connecting to logs you on itself afterward using permission gained from the second website.

188.Drag and drop the QoS mechanisms from the left to the correct descriptions on the right.

shaping	bandwidth management technique which delays datagrams
policy map	mechanism to create a scheduler for packets prior to forwarding
DSCP	portion of the IP header used to classify packets
service policy	tool to enforce rate-limiting on ingress/egress
policing	portion of the 802.1Q header used to classify packets

Answer:

shaping	shaping
policy map	policy map
DSCP	DSCP
service policy	service policy
policing	policing

Explanation:

To attach a policy map to an input interface, a virtual circuit (VC), an output interface, or a VC that will be used as the service policy for the interface or VC, use the **service-policy** command in the appropriate configuration mode.

Class of Service (CoS) is a 3 bit field within an Ethernet frame header when we use 802.1q which supports virtual LANs on an Ethernet network. This field specifies a priority value which is between 0 and 63 inclusive which can be used in the Quality of Service (QoS) to differentiate traffic.

The **Differentiated Services Code Point (DSCP)** is a 6-bit field in the IP header for the classification of packets. Differentiated Services is a technique which is used to classify and manage network traffic and it helps to provide QoS for modern Internet networks. It can provide services to all kinds of networks.

Traffic policing is also known as rate limiting as it propagates bursts. When the traffic rate reaches the configured maximum rate (or committed information rate), excess traffic is dropped (or remarked). The result is an output rate that appears as a saw-tooth with crests and troughs.

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

189.Which two LISP infrastructure elements are needed to support LISP to non-LISP internetworking?

(Choose two)
A. PETR
B. PIT R
C. MR
D. MS
E. ALT
Answer: AC

190.Which statement about dynamic GRE between ahead end router and a remote router is true?
A. The headend router learns the IP address of the remote end router statically
B. AGRE tunnel without an IP address has a status of administratively down
C. GRE tunnels can be established when the remote router has a dynamic IP address
D. The remote router initiates the tunnel connection
Answer: D

191.Which two statements about AAA authentication are true? (Choose two)
A. RADIUS authentication queries the router's local username database
B. TACACS+ authentication use san RSA server to authenticate users
C. Local usernames are case-insensitive
D. Local authentication is maintained on the router
E. KRB 5 authentication disables user access when an incorrect password is entered
Answer: DE

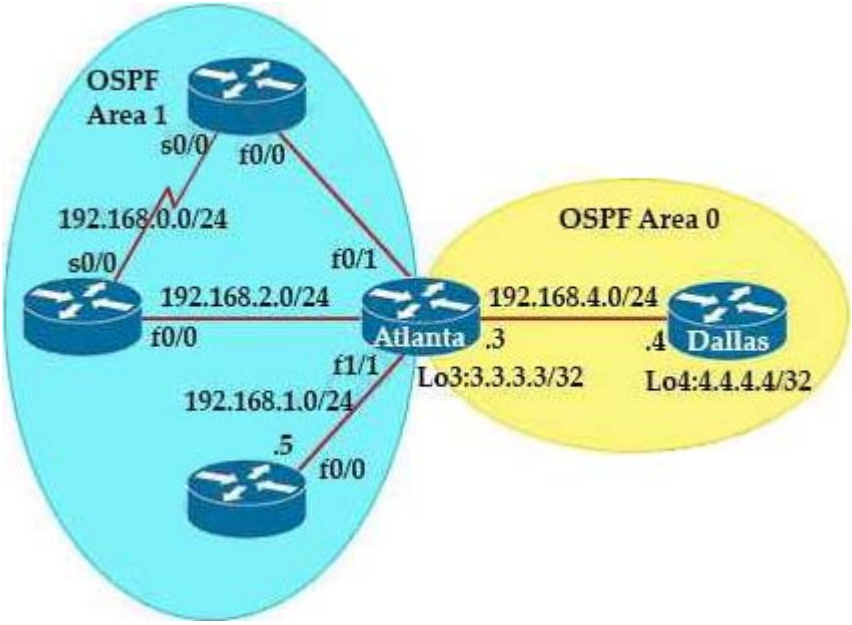
192.Which action is performed by Link Management Protocol in a Cisco stackwise virtual domain?
A. It discovers the stackwise domain and brings up SVL interfaces
B. It rejects any unidirectional link traffic forwarding
C. It determines if the hardware is compatible to form the stackwise virtual domain
D. It determines which switch becomes active or standby
Answer: B
Explanation:
The Link Management Protocol (LMP) performs the following functions:
+ Verifies link integrity by establishing bidirectional traffic forwarding, and rejects any unidirectional links
+ Exchanges periodic hellos to monitor and maintain the health of the links
+ Negotiates the version of StackWise Virtual header between the switches StackWise Virtual link role resolution
Reference:
https://www.cisco.com/c/en/us/products/collateral/switches/catalyst-9000/nb-06-cat-9k-stack-wp-cte-en.html

193.Which two actions provide controlled Layer 2 network connectivity between virtual machines running on
the same hypervisor? (Choose two)
A. Use a single trunk link to an external Layer 2 switch
B. Use a virtual switch provided by the hypervisor

C. Use VXL AN fabric after installing VXL AN tunnelling drivers on the virtual machines
D. Use a single routed link to an external router on stick
E. Use a virtual switch running as a separate virtual machine
Answer: BE

194.How does SSO work with HSRP to minimize network disruptions?
A. It enables HSRP to elect another switch in the group as the active HSRP switch
B. It ensures fast failover in the case of link failure
C. It enables data forwarding along known routes following a switchover, while the routing protocol re converges
D. It enables HSRP to failover to the standby RP on the same device
Answer: D
Explanation:
SSO HSRP alters the behavior of HSRP when a device with redundant Route Processors (RPs) is configured for stateful switchover (SSO) redundancy mode. When an RP is active and the other RP is standby, SSO enables the standby RP to takeover if the active RP fails.
The SSO HSRP feature enables the Cisco IOS HSRP subsystem software to detect that a standby RP is installed and the system is configured in SSO redundancy mode. Further, if the active RP fails, no change occurs to the HSRP group itself and traffic continues to be forwarded through the current active gateway device.
Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipapp_fhrp/configuration/15-s/fhp-15-s-book/fhp-hsrp-sso.html

195.Refer to the exhibit.



```
Dallas#show ip route ospf
    3.0.0.0/32 i subnetted, 1 subnets
O     3.3.3.3 [110/40001] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.0.0/24 [110/145535] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.1.0/24 [110/80000] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.2.0/24 [110/80000] via 192.168.4.3, 00:33:32, FastEthernet0/0
O IA 192.168.3.0/24 [110/44000] via 192.168.4.3, 00:33:32, FastEthernet0/0
```

Which command when applied to the Atlanta router reduces type 3LSA flooding into the backbone area and summarizes the inter-area routes on the Dallas router?

A. Atlanta(config-route) #area 0 range 192.168.0.0255.255.252.0

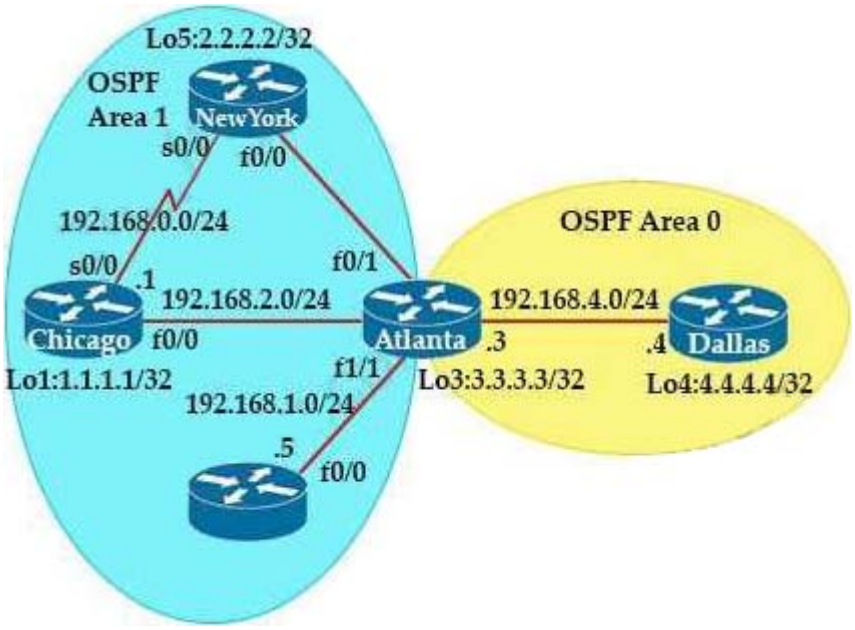
B. Atlanta(config-route) #area 1 range 192.168.0.0255.255.252.0

C. Atlanta(config-route) #area 0 range 192.168.0.0255.255.248.0

D. Atlanta(config-route) #area 1 range 192.168.0.0255.255.248.0

Answer: B

196.Refer the exhibit.




```
Chicago#show ip ospf nei

Neighbor ID  Pri   State      Dead Time  Address         Interface
3.3.3.3        1   FULL/BDR   00:00:35   192.168.2.3     FastEthernet0/0
2.2.2.2        0   FULL/ -    00:00:35   192.168.0.2     Serial0/0

Chicago#show ip ospf int bri
Interface  PID Area      IP Address/Mask  Cost   State Nbrs F/C
Fa0/0      1   1         192.168.2.1/24   40444  DR    1/1
Se0/0      1   1         192.168.0.1/24   65535  P2P   1/1
Chicago#
```

Which router is the designated router on the segment 192.168.0.0/24?

A. Router Chicago because it has a lower router ID

B. Router NewYork because it has a higher router ID

C. This segment has no designated router because it is a nonbroadcast network type.

D. This segment has no designated router because itisap2p network type.

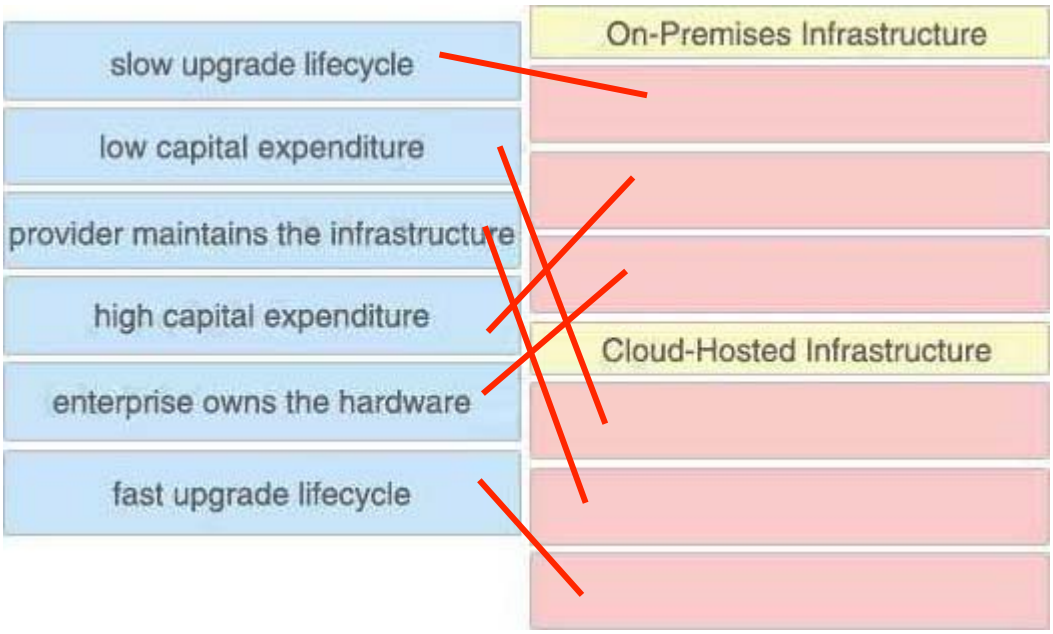
Answer: D

197.An engineer must configure interface GigabitEthernet0/0 for VRRP group 10.
When the router has the highest priority in the group, it must assume the master role.
Initial Configuration

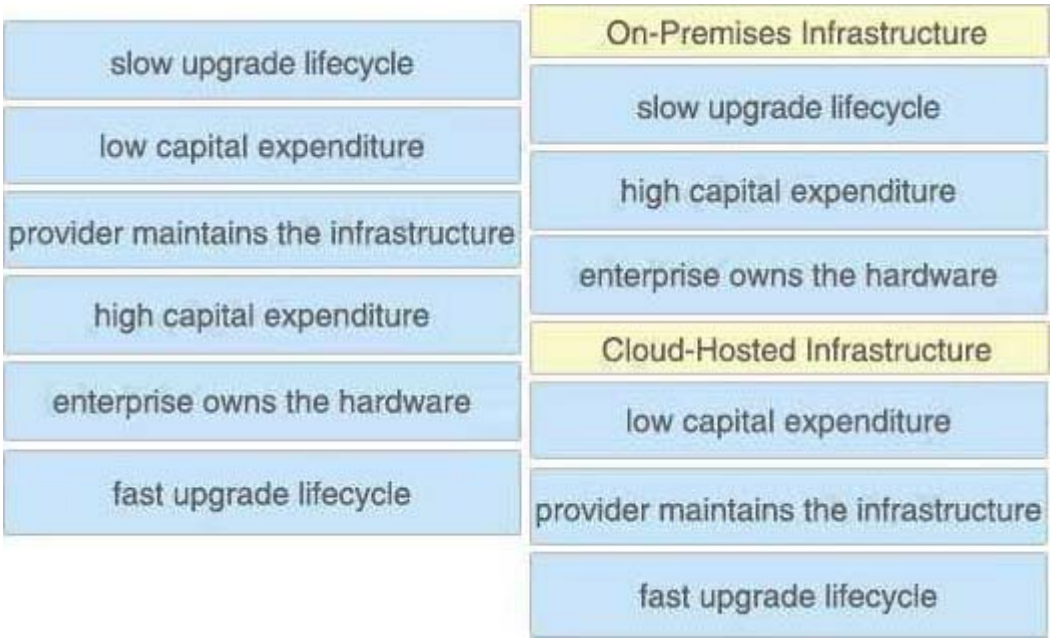
```
interface GigabitEthernet0/0
 description to IDF
 ip address 172.16.13.2 255.255.255.0
```

Which command set must be added to the initial configuration to accomplish this task?
A vrrp10ip 172.16.13.254
vrrp 10 preempt
B. standby 10ip 172.16.13.254
standby 10 priority 120
C. vrrpgroup10ip 1 72.16.13.254255.255.255.0
vrrp group 10 priority 120
D. standby 10ip 1 72.16.13.254255.255.255.0
standby 10 preempt
Answer: A
Explanation:
In fact, VRRP has the preemption enabled by default so we don't need the "vrrp 10 preempt" command. The default priority is100sowedon't need to configure it either. But notice that the correct command to configure the virtual IP address for the group is "vrrp 10 ip {ip-address}" (not"vrrpgroup10ip...") and this command does not include a sub netmask.

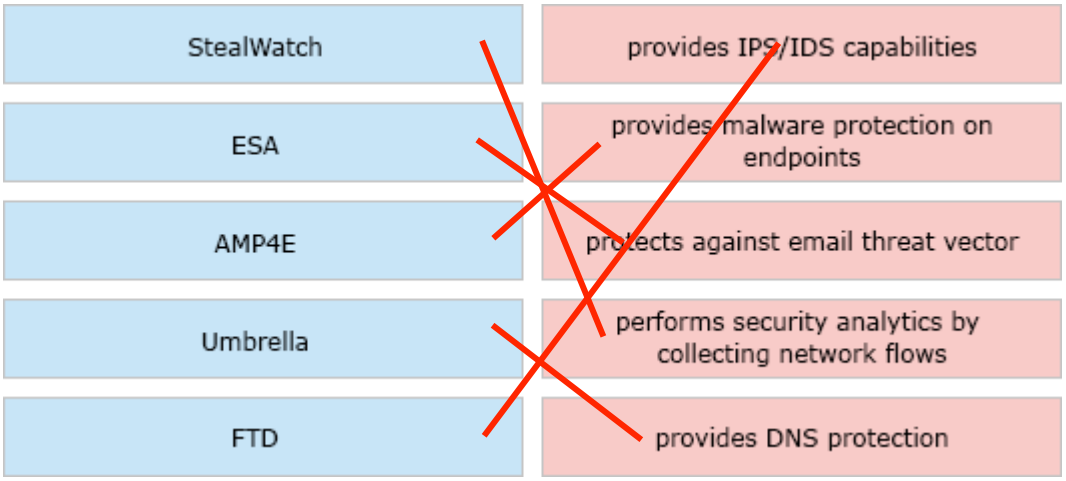
198.Drag and drop the characteristics from the left on to the infrastructure types on the right.
provider maintains the infrastructure



Answer:



199.Drag and drop the threat defense solutions from the left on to their descriptions on the right.



Answer:

200.Refer to the exhibit.

```
Router2#show policy-map control-plane

Control Plane
Service-policy input:CISCO
Class-map:CISCO (match-all)
 20 packets, 11280 bytes
 5 minute offerred rate 0 bps, drop rate 0 bps
 Match:access-group 120
 police:
  8000 bps, 1500 limit, 1500 extended limit
  conformed 15 packets, 6210 bytes; action:transmit
  exceeded 5 packets, 5070 bytes; action:drop
  violated 0 packets, 0 bytes; action:drop
  conformed 0 bps, exceed 0 bps, violate 0 bps
Class-map:class-default (match-any)
 105325 packets, 11415151 bytes
 5 minute offered rate 0 bps, drop rate 0 bps
 Match:any
```

An engineer configures CoPP and enters the show command to verify the implementation.
What is the result of the configuration?

A. All traffic will be policed based on access-list 120
B. If traffic exceeds the specified rate, it will be transmitted and remarked
C. Class-default traffic will be dropped
D. ICMP will be denied based on this configuration

Answer: A

201.Which technology is used to provide Layer 2 and Layer 3 logical networks in the Cisco SD-Access architecture?

A. underlay network
B. overlay network
C. VPN routing/forwarding
D. easy virtual network

Answer: B

Explanation:

An overlay network creates a logical topology used to virtually connect devices that are built over an arbitrary physical underlay topology.
An overlay network is created on top of the underlay network through virtualization (virtual networks). The data plane traffic and control plane signaling are contained within each virtualized network, maintaining isolation among the networks and an independence from the underlay network.
SD-Access allows for the extension of Layer 2 and Layer 3 connectivity across the overlay through the services provided by through LISP.
Reference: https://www.cisco.com/c/en/us/td/docs/solutions/CVD/Campus/cisco-sda-design-guide.html

202.An engineer uses the Design workflow to create a new network infrastructure in Cisco DNA Center.
How is the physical network device hierarchy structured?

A. by location

B. by role

C. by organization

D. by hostname naming convention

Answer: A

203.Refer to the exhibit.

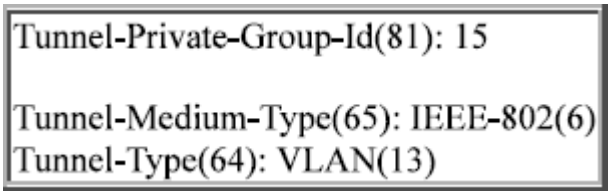
```
(WLC) >show interface summary
Interface Name                Vlan Id
------------------------      -------
deadnet                       999
users1                        14
users2                        15
users3                        16


(WLC) >show wlan 1
WLAN Identifier . . . . . . . . . . . . . . . . . . . 1
Network Name (SSID) . . . . . . . . . . . . . . . . . wlan1
AAA Policy Override . . . . . . . . . . . . . . . . . Enabled
Interface . . . . . . . . . . . . . . . . . . . . . . deadnet
FlexConnect Local Switching . . . . . . . . . Enabled
FlexConnect Central Association . . . . . . . Disabled
flexconnect Central Dhcp Flag . . . . . . . . Disabled
flexconnect nat-pat Flag . . . . . . . . . . . Disabled
flexconnect DNS Override Flag . . . . . . . . Disabled
flexconnect PPPoE pass-through . . . . . . . . Disabled
flexconnect local-switching IP-source-guar . .Disabled
FlexConnect Vlan based Central Switching . .  Enabled
FlexConnect Local Authentication . . . . . .  Disabled
FlexConnect Learn IP Address . . . . . . . .  Enabled

(WLC) >show ap config general FlexAP1
AP Mode . . . . . . . . . . . . . . . . . . . . . . . . FlexConnect
FlexConnect Vlan mode : . . . . . . . . . . . . . . .  Enabled
            Native ID : . . . . . . . . . . . . . . . . . 1
            WLAN 1 : . . . . . . . . . . . . . . . . . . .  10 (AP-Specific)
FlexConnect VLAN ACL Mappings
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . 10
            Ingress ACL : . . . . . . . . . . . . . . . . None
            Egress ACL : . . . . . . . . . . . . . . . .  None
VLAN with least priority : . . . . . . . . . . . . . 13
FlexConnect Group . . . . . . . . . . . . . . . . .  flexgroup1
Group VLAN ACL Mappings
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . 11
            Ingress ACL : . . . . . . . . . . . . . . . . None
            Egress ACL : . . . . . . . . . . . . . . . .  None
Vlan : . . . . . . . . . . . . . . . . . . . . . . . . 12
```

A wireless client is connecting to Flex AP 1 which is currently working standalone mode.

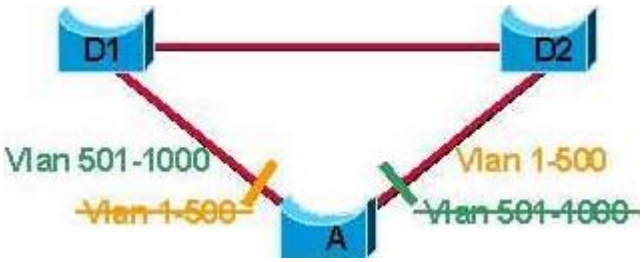
The AAA authentication process is returning the following AVPs:



Which three behaviors will the client experience? (Choose three)
A. While the AP is in standalone mode, the client will be placed in VLAN 15.
B. While the AP is in standalone mode, the client will be placed in VLAN 10.
C. When the AP transitions to connected mode, the client will be de-authenticated.
D. While the AP is in standalone mode, the client will be placed in VLAN 13.
E. When the AP is in connected mode, the client will be placed in VLAN 13.
F. When the AP transitions to connected mode, the client will remain associated
G. When the AP is in connected mode, the client will be placed in VLAN 15.
H. When the AP is in connected mode, the client will be placed in VLAN 10.
Answer: ADE

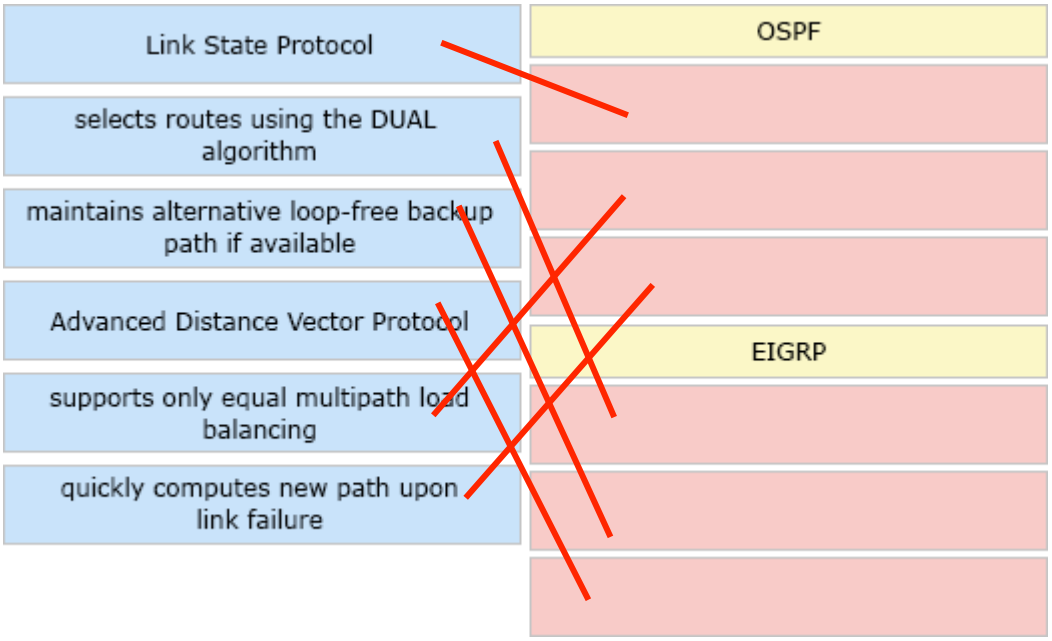
204.Which three methods does Cisco DNA Center use to discover devices? (Choose three)
A. CDP
B. L LDP
C. SNMP
D. ping
E. NETCONF
F. a specified range of IP addresses
Answer: ABF

205.What would be the preferred way to implement a loop less switch network where there are 1500 defined VLANs and it is necessary to load the shared traffic through two main aggregation points based on the VLAN identifier?
A. 802.1D
B. 802.1s
C. 802.1W
D. 802.1AE
Answer: B
Explanation:
Where to Use MST
This diagram shows a common design that features access Switch A with 1000VLANs redundantly connected to two distribution Switches, DI and D 2. In this setup, users connect to Switch A, and the network administrator typically seeks to achieve load balancing on the access switch Up links based on even or odd VLANs, or any other scheme deemed appropriate.

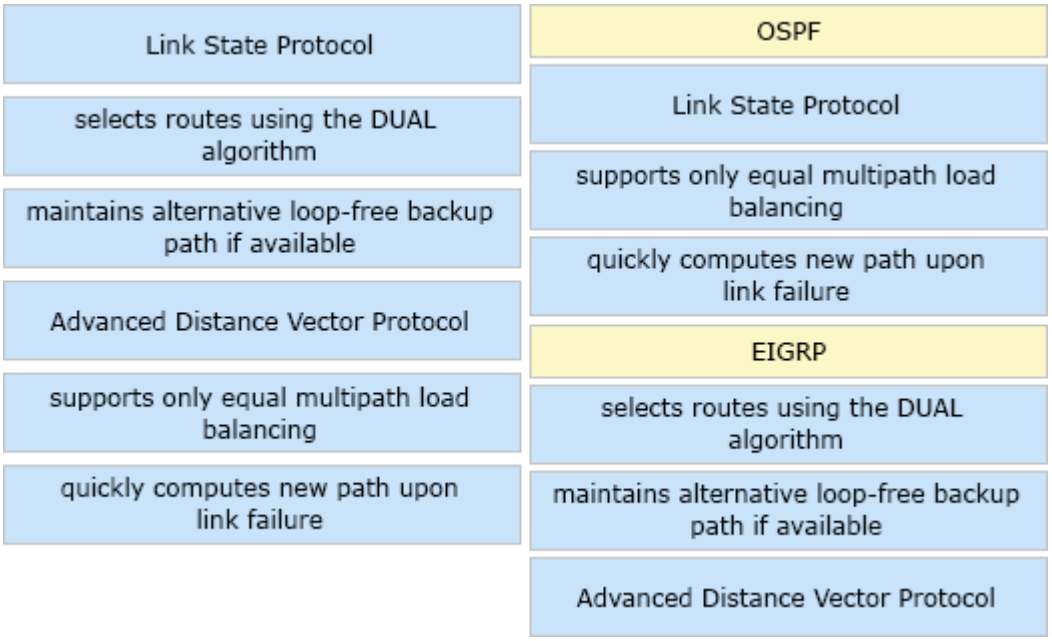


Reference:
https://www.cisco.com/c/en/us/support/docs/lan-switching/spanning-tree-protocol/24248-147.html

206.Drag and drop the characteristics from the left on to the routing protocols they describe on the right.



Answer:

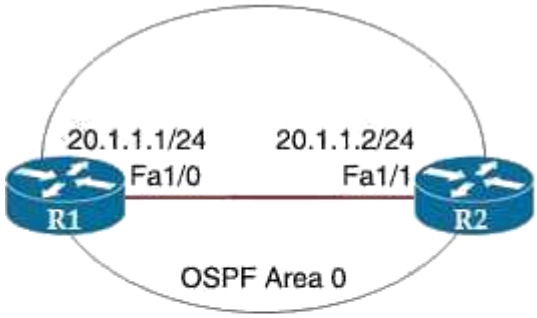


Explanation:
EIGRP maintains alternative loop-free backup via the feasible successors. To qualify as a feasible successor, a router must have an Advertised Distance (AD) less than the Feasible distance (FD) of the current successor route.
Advertised distance (AD): the cost from the neighbor to the destination.
Feasible distance (FD): The sum of the AD plus the cost between the local router and the next-hop router

207.How does the RIB differ from the FIB?
A. The RIB includes many routes to the same destination prefix. The FIB contains only the best route.
B. The FIB maintains network topologies and routing tables. The RIB is a list of routes to particular network destinations.
C. The RIB is used to create network topologies and routing tables. The FIB is a list of routes to particular network destinations.
D. The FIB includes many routes a single destination. The RIB is the best route to a single destination.
Answer: C

208.What is the purpose of an RP in PIM?
A. secure the communication channel between the multicast sender and receiver.
B. ensure the shortest path from the multicast source to the receiver.
C. receive IGMP joins from multicast receivers.
D. send join messages toward a multicast source SPT
Answer: C

209.Refer to the exhibit.




```
hostname R1
router ospf 1
network 0.0.0.0 255.255.255.255 area 0
auto-cost reference-bandwith 1000
!
hostname R2
router ospf 2
network 20.0.0.0 0.0.0.255 area 0
```

Which command must be applied to R2 for an OSPF neighborship to form?
A. network 20.1.1.2 0.0.255.255 area 0
B. network 20.1.1.2 255.255.255.255 area 0
C. network 20.1.1.2 0.0.0.0 area 0
D. network 20.1.1.2 255.255.0.0. area 0

Answer: C
Explanation:
The "network 20.0.0.0 0.0.0.255 area 0', command on R2 did not cover the IP address of Fa1/1 interface of R2 so OSPF did not run on this interface. Therefore we have to use the command "network 20.1.1.2 0.0.255.255 area 0" to turn on OSPF on this interface.
Note: The command "network 20.1.1.2 0.0.255.255 area 0" can be used too so this answer is also correct but answer C is the best answer here.
The "network 0.0.0.0 255.255.255.255 area 0, 5 command on R1 will run OSPF on all active interfaces of R1.

210.Which antenna type should be used for a site-to-site wireless connection?
A. Omnidirectional
B. Yagi
C. dipole
D. patch
Answer: B

211.Refer to the exhibit.

```
<errors xmlns="urn:ietf:params:xml:ns:yang:ietf-restconf">
  <error>
      <error-message>End-of-file reached in XML
stream</error-message>
      <error-path>/ietf-interfaces:interfaces/interface=Giga
bitEthernet2</error-path>
      <error-tag>malformed-message</error-tag>
      <error-type>application</error-type>
  </error>
</errors>
```

An engineer is using XML in an application to send information to a RESTCONF-enabled device. After sending the request, the engineer gets this response message and a HTTP response code of 400.
What do these responses tell the engineer?
A. POST was used instead of PUT to update
B. The Accept header sent was application/xml
C. The Content-Type header sent was application/xml.
D. JSON body was used
Answer: B
Explanation:
Accept and Content-type are both headers sent from a client (a browser) to a service.
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.
The response was sent in XML so we can say the Accept header sent was application/xml.

212.Refer to the exhibit.

```
DSW1#show spanning-tree

MST1
  Spanning tree enabled protocol mstp
  Root ID     Priority    32769
              Address     0018.7363.4300
              Cost        2
              Port        13 (FastEthernet1/0/11)
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

  Bridge ID   Priority 32769 (priority 32768 sys-id- ext 1)
              Address     001b.0d8e.e080
              Hello Time  2 sec  Max Age 20 sec  Forward Delay 15 sec

Interface        Role  Sts    Cost      Prio.Nbr  Type
---------------- ----- -------- --------  ----------  ------------
Fa1/0/7          Desg FWD  2         128.1     P2p Bound (PVST)
Fa1/0/10         Desg FWD  2         128.12    P2p Bound (PVST)
Fa1/0/11         Root FWD  2         128.13    P2p
Fa1/0/12         Altn BLK  2         128.14    P2p

DSW1#show spanning-tree mst

##### MST1     vlans mapped:   10,20
Bridge         address 001b.0d0e.e000 priority   32769 (32768 sysid 1)
Root           address 0018.7363.4300 priority   32769 (32768 sysid 1)
               port    Fa1/0/11       cost       2       (rem hops 19)

------ output omitted ------
```

Which two commands ensure that DSW1 becomes root bridge for VLAN 10 and 20? (Choose two)

A. spanning-tree mstp 1 priority 0

B. spanning-tree mst 1 root primary

C. spanning-tree mst vlan 10, 20 priority root

D. spanning-tree mst 1 priority 4096

E. spanning-tree mst 1 priority 1

F. spanning-tree mstp vlan 10, 20 root primary

Answer: B D

Explanation:

From the second command output (show spanning-tree mst) we learn that MST1 includes VLANs 10 & 20. Therefore if we want DSW1 to become root bridge for these VLANs we need to set the MST 1 region to root -> The command "spanning-tree mst 1 root primary" can do the trick. In fact, this command runs a macro and sets the priority lower than the current root.

Also we can see the current root bridge for these VLANs has the priority of 32769 (default value + sysid) so we can set the priority of DSW1 to a specific lower value. But notice that the priority must be a multiple of 4096. Therefore D is a correct answer.

213.Which two characteristics define the Intent API provided by Cisco DNA Center? (Choose two)

A. northbound API

B. southbound API
C. device-oriented
D. business outcome oriented
E. procedural
Answer: A D
Explanation:
The Intent API is a Northbound REST API that exposes specific capabilities of the Cisco DNA Center platform.
The Intent API provides policy-based abstraction of business intent, allowing focus on an outcome rather than struggling with individual mechanisms steps.
Reference:
https://developer.cisco.com/docs/dna-centei7#!cisco-dna-center-platfomi-overview/intent-api-northbound

214.What is the difference between CEF and process switching?
A. CEF processes packets that are too complex for process switching to manage.
B. CEF is more CPU-intensive than process switching.
C. CEF uses the FIB and the adjacency table to make forwarding decisions, whereas process switching punts each packet.
D. Process switching is faster than CEF.
Answer: C
Explanation:
"Punt" is often used to describe the action of moving a packet from the fast path (CEF) to the route processor for handling.
Cisco Express Forwarding (CEF) provides the ability to switch packets through a device in a very quick and efficient way while also keeping the load on the router's processor low. CEF is made up of two different main components: the Forwarding Information Base (FIB) and the Adjacency Table.
Process switching is the slowest switching methods (compared to fast switching and Cisco Express Forwarding) because it must find a destination in the routing table. Process switching must also construct a new Layer 2 frame header for every packet. With process switching, when a packet comes in, the scheduler calls a process that examines the routing table, determines which interface the packet should be switched to and then switches the packet. The problem is, this happens for the every packet.
Reference: http://www.cisco.com/web/about/security/intelligence/acl-logging.html

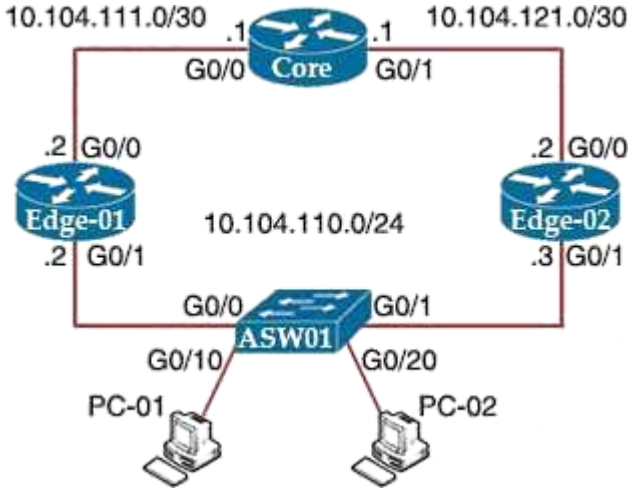
215. Refer to the exhibit.

```
AL-CORE#show mls qos map cos-dscp
        Cos-dscp map:
                cos:   0 1 2  3  4  5  6  7
        ---------------------------------
                dscp:  0 8 16 24 32 45 48 56
```

During deployment, a network engineer notices that voice traffic is not being tagged correctly as it traverses the network.
Which COS to DSCP map must be modified to ensure that voice traffic is treated properly?
A. COS of 5 to DSCP 46

B. COS of 7 to DSCP 48
C. COS of 6 to DSCP 46
D. COS of3 to DSCP of26
Answer: A
Explanation:
CoS value 5 is commonly used for VOIP and CoS value 5 should be mapped to DSCP 46. DSCP 46 is defined as being for EF (Expedited Forwarding) traffic flows and is the value usually assigned to all interactive voice and video traffic. This is to keep the uniformity from end-to-end that DSCP EF (mostly for VOICE RTP) is mapped to COS 5.
Note:
+ CoS is a L2 marking contained within an 802.lq tag,. The values for CoS are 0 - 7
+ DSCP is a L3 marking and has values 0-63
+ The default DSCP-to-CoS mapping for CoS 5 is DSCP 40

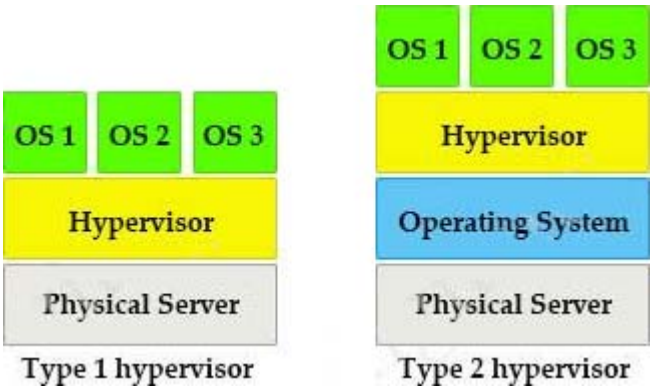
216.Refer to the exhibit.



Edge-01 is currently operational as the HSRP primary with priority 110.
Which command on Edge-02 causes it to take over the forwarding role when Edge-01 is down?
A. standby 10 priority
B. standby 10 timers
C. standby 10 track
D. standby 10 preempt
Answer: D
Explanation:
The "preempt" command enables the HSRP router with the highest priority to immediately become the active router.

217.What is a Type 1 hypervisor?
A. runs directly on a physical server and depends on a previously installed operating system
B. runs directly on a physical server and includes its own operating system
C. runs on a virtual server and depends on an already installed operating system
D. run on a virtual server and includes its own operating system
Answer: B

Explanation:
There are two types of hypervisors: type 1 and type 2 hypervisor.
In type 1 hypervisor (or native hypervisor), the hypervisor is installed directly on the physical server. Then instances of an operating system (OS) are installed on the hypervisor. Type 1 hypervisor has direct access to the hardware resources. Therefore they are more efficient than hosted architectures. Some examples of type 1 hypervisor are VMware vSphere/ESXi, Oracle VM Server, KVM and Microsoft Hyper-V.
In contrast to type 1 hypervisor, a type 2 hypervisor (or hosted hypervisor) runs on top of an operating system and not the physical hardware directly. A big advantage of Type 2 hypervisors is that management console software is not required. Examples of type 2 hypervisor are VMware Workstation (which can run on Windows, Mac and Linux) or Microsoft Virtual PC (only runs on Windows).



218.An engineer reviews a router's logs and discovers the following entry.
Router# *Feb 03 11:13:44 334: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to up
What is the evenfs logging severity level?
A. error
B. notification
C. informational
D. warning
Answer: A
Explanation:

Level	Keyword	Description
0	emergencies	System is unusable
1	alerts	Immediate action is needed
2	critical	Critical conditions exist
3	errors	Error conditions exist
4	warnings	Warning conditions exist
5	notification	Normal, but significant, conditions exist
6	informational	Informational messages
7	debugging	Debugging messages

Number "3" in "%LINK-3-UPDOWN" is the severity level of this message so in this case it is "eirors".

219.Refer to the exhibit.

```
interface Vlan10
 ip vrf forwarding Clients
 ip address 192.168.1.1 255.255.255.0
!
interface Vlan20
 ip vrf forwarding Servers
 ip address 172.16.1.1 255.255.255.0
!
interface Vlan30
 ip vrf forwarding Printers
 ip address 10.1.1.1 255.255.255.0
<output omitted>
router eigrp 1
 network 10.0.0.0
 network 172.16.0.0
 network 192.168.1.0
```

An engineer attempts to configure a router on a stick to route packets between Clients, Servers, and Printers; however, initial tests show that this configuration is not working.
Which command set resolves this issue?

Option A	**Option B**
router eigrp 1 network 10.0.0.0 255.0.0.0 network 172.16.0.0 255.255.0.0 network 192.168.1.0 255.255.0.0	router eigrp 1 network 10.0.0.0 255.255.255.0 network 172.16.0.0 255.255.255.0 network 192.168.1.0 255.255.255.0
Option C	**Option D**
interface Vlan10 no ip vrf forwarding Clients ! interface Vlan20 no ip vrf forwarding Servers ! interface Vlan30 no ip vrf forwarding Printers	interface Vlan10 no ip vrf forwarding Clients ip address 192.168.1.2 255.255.255.0 ! interface Vlan20 no ip vrf forwarding Servers ip address 172.16.1.2 255.255.255.0 ! interface Vlan30 no ip vrf forwarding Printers ip address 10.1.1.2 255.255.255.0

A. Option A
B. Option B
C. Option C
D. Option D
Answer: D
Explanation:

We must reconfigure the IP address after assigning or removing an interface to a VRF. Otherwise that interface does not have an IP address.

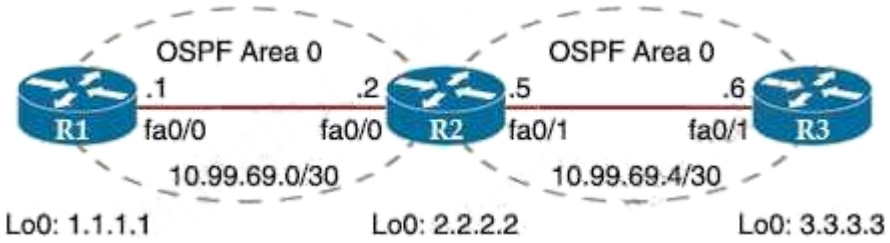
220.How is a data modeling language used?
A. To enable data to be easily structured, grouped validated, and replicated
B. To represent finite and well-defined network elements that cannot be changed
C. To model the flows of unstructured data within the infrastructure
D. To provide human readability to scripting languages
Answer: A
Explanation:
Customer needs are fast evolving. Typically, a network center is a heterogenous mix of various devices at multiple layers of the network. Bulk and automatic configurations need to be accomplished. CLI scraping is not flexible and optimal. Re-writing scripts many times, even for small configuration changes is cumbersome. Bulk configuration changes through CLIs are error-prone and may cause system issues. The solution lies in using data models-a programmatic and standards-based way of writing configurations to any network device, replacing the process of manual configuration. Data models are written in a standard, industry-defined language. Although configurations using CLIs are easier (more human-friendly), automating the configuration using data models results in scalability.
Reference:
https://www.cisco.eom/c/en/us/td/docs/optical/ncs1000/60x/b_Datamodels_cg_ncs1000/b_Datamodels_cg_ncs 1000_chapter_00.pdf

221.Refer to the exhibit.

```
aaa new-model
aaa authentication login authorizationlist tacacs+
tacacs-server host 192.168.0.202
tacacs-server key ciscotestkey
line vty 0 4
login authentication authorizationlist
```

What is the effect of the configuration?
A. The device will allow users at 192.168.0.202 to connect to vty lines 0 through 4 using the password ciscotestkey
B. The device will allow only users at 192 168.0.202 to connect to vty lines 0 through 4
C. When users attempt to connect to vty lines 0 through 4, the device will authenticate them against TACACS+ if local authentication fails
D. The device will authenticate all users connecting to vty lines 0 through 4 against TACACS+
Answer: D

222.Refer to the exhibit.



R1 is able to ping the R3 fa0/1 interface.

```
R1#ping
Protocol [ip]:
Target IP address: 3.3.3.3
Repeat count [5]: 3
Datagram size [100]: 1500
Timeout in seconds [2]:
Extended commands [n]: y
Source address or interface: 1.1.1.1
Type of service [0]:
Set DF bit in IP header? [no]: yes
Validate reply data? [no]:
Data pattern [0xABCD]:
Loose, Strict, Record, Timestamp, Verbose[none]: Record
Number of hops [9]:
Loose, Strict, Record, Timestamp, Verbose[RV]:
Sweep range of sizes [n]:
Type escape sequence to abort.
Sending 3, 1500-byte ICMP Echos to 3.3.3.3, timeout is 2 seconds:
Packet sent with a source address of 1.1.1.1
Packet sent with the DF bit set
Packet has IP options:  Total option bytes= 39, padded length=40
 Record route: <*>
   (0.0.0.0)
   (0.0.0.0)

Unreachable from 10.99.69.2, maximum MTU 1492, Received packet has options
Total option bytes= 39, padded length=40
 Record route: <*>
   (0.0.0.0)
   (0.0.0.0)
<output omitted>
```

Why do the extended pings foil?

A. R2 and R3 do not have an OSPF adjacency

B. R3 is missing a return route to 10.99.69.0/30

C. The maximum packet size accepted by the command is 1476 bytes

D. The DF bit has been set

Answer: D

Explanation:

If the DF bit is set, routers cannot fragment packets. From the output below, we learn that the maximum MTU of R2 is 1492 bytes while we sent ping with 1500 bytes. Therefore these ICMP packets were dropped.

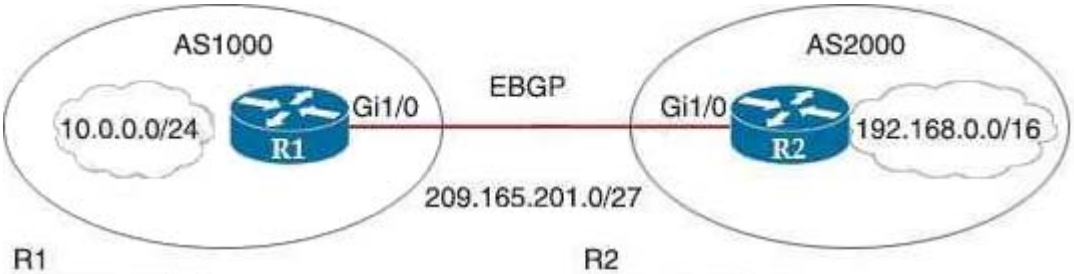
Note: Record option displays the address(es) of the hops (up to nine) the packet goes through.

223.Refer to the exhibit.

```
Tunnel100 is up, line protocol is up
 Hardware is Tunnel
 Internet address is 192.168.200.1/24
 MTU 17912 bytes, BW 100 Kbit/sec, DLY 50000 usec,
  reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation TUNNEL, loopback not set
 Keepalive set (10 sec), retries 3
 Tunnel source 209.165.202.129 (GigabitEthernet0/1)
  Tunnel Subblocks:
   src-track:
    Tunnel100 source tracking subblock associated with GigabitEthernet0/1
    Set of tunnels with source GigabitEthernet0/1, 1 members (includes iterators),
    on interface <OK>
 Tunnel protocol/transport GRE/IP
  Key disabled, sequencing disabled
  Checksumming of packets disabled
 Tunnel TTL 255, Fast tunneling enabled
 Tunnel transport MTU 1476 bytes
```

A network engineer configures a GRE tunnel and enters the show interface tunnel command.
What does the output confirm about the configuration?
A. The keepalive value is modified from the default value.
B. Interface tracking is configured.
C. The tunnel mode is set to the default.
D. The physical interface MTU is 1476 bytes.
Answer: C
Explanation:
From the "Tunnel protocol/transport GRE/IP" line, we can deduce this tunnel is using the default IPv4 Layer-3 tunnel mode. We can return to this default mode with the "tunnel mode gre ip" command.

224.Refer to the exhibit.



R1
```
router bgp 1000
 address-family ipv4 unicast
  neighbor 209.165.201.2 remote-as 2000
  network 10.0.0.0 mask 255.255.255.0
  description Peer Router B
```

R2
```
router bgp 2000
 address-family ipv4 unicast
  neighbor 209.165.201.1 remote-as 1000
  network 10.0.0.0 mask 255.255.255.0
  description Peer Router A
```

Which two commands are needed to allow for full reachability between AS 1000 and AS 2000? (Choose two)

A. R2#no network 10.0.0.0 255.255.255.0
B. R1#network 19.168.0.0 mask 255.255.0.0
C. R1#no network 10.0.0.0 255.255.255.0
D. R2#network 209.165.201.0 mask 255.255.192.0
E. R2#network 192.168.0.0 mask 255.255.0.0
Answer: A E

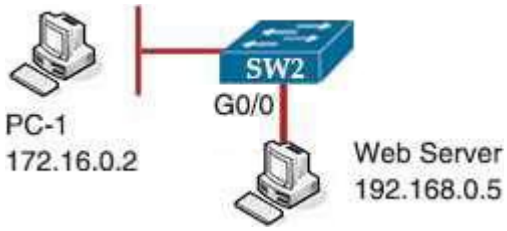
225.Refer to the exhibit.

```
SW1#show monitor session all
Session 1
---------------------
Type                  : Remote Destination Session
Source RSPAN VLAN     : 50

Session 2
---------------------
Type                  : Local Session
Source Ports          :
        Both          : Fa0/14
  Destination Ports   : Fa0/15
  Encapsulation       : Native
  Ingress             : Disabled
```

An engineer configures monitoring on SW1 and enters the show command to verify operation.
What does the output confirm?
A. SPAN session 1 monitors activity on VLAN 50 of a remote switch
B. SPAN session 2 only monitors egress traffic exiting port FastEthernet 0/14.
C. SPAN session 2 monitors all traffic entering and exiting port FastEthernet 0/15.
D. RSPAN session 1 is incompletely configured for monitoring
Answer: A
Explanation:
SW 1 has been configured with the following commands:
SW1 (config)#monitor session 1 source remote vlan 50
SW1 (config)#monitor session 1 destination interface fastethernet 0/14
SW1 (config)#monitor session 2 source interface fa0/14
S W1 (config)#monitor session 2 destination interface fa0/15
The session 1 on SW1 was configured for Remote SPAN (RSPAN) while session 2 was configured for local SPAN and this configuration was enough.
The following configuration will complete RSPAN on the monitored switch:
Switch2(config)# monitor session 1 source interface FastEthernet 0/1
Switch2(config)# monitor session 1 destination remote vlan 50
With this configuration, traffic on FastEthernet0/1 of Switch 2 will be sent to Fa0/14 of SW 1 via VLAN 50.
Of course we have to configure trunking between two switches and set up "remote-vlan" feature on VLAN 50 on both switches with the following commands:
Switch 1, 2(config)#vlan 50
Switch 1, 2(config-vlan)#remote-span
Note: By default, both ingress and egress traffic of the source port are copied to the destination port.

226.Refer to the exhibit.



PC-1 must access the web server on port 8080.
To allow this traffic, which statement must be added to an access control list that is applied on SW2 port G0/0 in the inbound direction?
A. permit host 172.16.0.2 host 192.168.0.5 eq 8080
B. permit host 192.168.0.5 host 172.16.0.2 eq 8080
C. permit host 192.168.0.5 eq 8080 host 172.16.0.2
D. permit host 192.168.0.5 it 8080 host 172.16.0.2
Answer: C
Explanation:
The inbound direction of G0/0 of SW2 only filter traffic from Web Server to PC-1 so the source IP address and port is of the Web Server.

227.Refer to the exhibit.

```
R1
key chain cisco123
 key 1
  key-string Cisco123!

Ethernet0/0 - Group 10
  State is Active
    8 state changes, last state change 00:03:33
  Virutal IP address is 192.168.0.1
  Active virtual MAC address is 0000.0c07.ac0a
```

```
R2
key chain cisco123
 key 1
  key-string Cisco123!

Ethernet0/0 - Group 10
  State is Active
    17 state changes, last state change 00:03:33
  Virutal IP address is 192.168.0.1
  Active virtual MAC address is 0000.0c07.ac0a
```

An engineer is installing a new pair of routers in a redundant configuration.
Which protocol ensures that traffic is not disrupted in the event of a hardware failure?
A. HSRPv2
B. VRRP
C. GLBP
D. HSRPvl
Answer: D
Explanation:
The "virtual MAC address" is 0000.0c07.acXX (XX is the hexadecimal group number) so it is using HSRPv1.
Note: HSRP Version 2 uses a new MAC address which ranges from 0000.0C9F.F000 to 0000.0C9F.FFFF.

228.Refer to the exhibit.

```
aaa new-model
aaa authentication login default local-case enable
aaa authentication login ADMIN local-case
username CCNP secret Str0ngP@ssw0rd!
line 0 4
login authentication ADMIN
```

How can you change this configuration so that when user CCNP logs in, the show run command is executed and the session is terminated?

A. Add the auto command keyword to the aaa authentication command

B. Assign privilege level 15 to the CCNP username

C. Add the access-class keyword to the aaa authentication command

D. Assign privilege level 14 to the CCNP username

E. Add the access-class keyword to the username command

F. Add the auto command keyword to the username command

Answer: F

Explanation:

The "auto command" causes the specified command to be issued automatically after the user logs in. When the command is complete, the session is terminated. Because the command can be any length and can contain embedded spaces, commands using the auto command keyword must be the last option on the line. In this specific question, we have to enter this line "username CCNP auto command show running-config".

229.Refer to the exhibit.

```
<?xml version="1.0" encoding="utf-8"?>
  <data xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"/>
```

What does the error message relay to the administrator who is trying to configure a Cisco IOS device?

A. A NETCONF request was made for a data model that does not exist.

B. The device received a valid NETCONF request and serviced it without error.

C. A NETCONF message with valid content based on the YANG data models was made, but the request failed.

D. The NETCONF running datastore is currently locked.

Answer: A

Explanation:

Missing Data Model RPC Error Reply Message

If a request is made for a data model that doesn't exist on the Catalyst 3850 or a request is made for a leaf that is not implemented in a data model, the Server (Catalyst 3850) responds with an empty data response. This is expected behavior.

Reference:

https://www.cisco.com/c/en/us/support/docs/storage-networking/management/200933-YANG-NETCONF-ConfigurationValidation.html

230.In an SD-WAN deployment, which action in the vSmart controller responsible for?

A. handle, maintain, and gather configuration and status for nodes within the SD-WAN fabric
B. onboard vEdge nodes into the SD-WAN fabric
C. gather telemetry data from vEdge routers
D. distribute policies that govern data forwarding performed within the SD-WAN fabric
Answer: D
Explanation:
Control plane (vSmart) builds and maintains the network topology and make decisions on the traffic flows. The vSmart controller disseminates control plane information between WAN Edge devices, implements control plane policies and distributes data plane policies to network devices for enforcement.

231.What does Call Admission Control require the client to send in order to reserve the bandwidth?
A. SIP flow information
B. Wi-Fi multimedia
C. traffic specification
D. VoIP media session awareness
Answer: D
Explanation:
Comments
1. Ban7
September 17th, 2020
thanks
2. Hans
September 17th, 2020
q1 why not A, B?
q3 C, D looks correct.
3. Joe
September 17th, 2020
Thank you Digital Tut
4. Joe
September 17th, 2020
Are there more Qns too coming our way?
5. AL
September 17th, 2020
Thanks for all the effort and work you put in to this site as it very helpful especially the labs and tutorials offered.
6. Joe
September 18th, 2020
Fully agree @AL. Keep up the work you guys !!!!!
7. Ban7
September 18th, 2020
@Digitaltut, Thanks again for those new questions I am going to give the exam next week, unfortunately I have a dead line, i hope you guys can release more questions even in small amount just to increase the rating chances to pass the exam. Thank you guys for the good work and for the accurate Job you guys do.

8. Hans
September 18th, 2020