

# Cisco

## Exam Questions 350-501

Implementing and Operating Cisco Service Provider Network Core Technologies



### NEW QUESTION 1

Refer to the exhibit.

Router 1:	Router 2:
Interface gigabitethernet0/1 ip address 192.168.1.1 255.255.255.0	Interface gigabitethernet0/1 ip address 192.168.1.2 255.255.255.0
router ospf 1 network 192.168.1.0 0.0.0.255 area 1	Interface loopback 0 ip address 192.168.2.1 255.255.255.0
	router ospf 2 network 192.168.1.2 0.0.0.0 area 2 network 192.168.2.1 0.0.0.0 area 1

Router 1 is missing the route for the router 2 loopback 0. What should the engineer change to fix the problem?

- A. the area numbers on Router 1 and Router 2 to be similar
- B. the wildcard mask network statement in OSPF of Router 2
- C. Router 1 to be an ABR
- D. the hello timers on Router 1 and Router 2 to be different

**Answer: A**

### NEW QUESTION 2

Refer to the exhibit.

```
R1#show ip ospf interface gig 2
GigabitEthernet2 is up, line protocol is up
Internet Address 172.20.1.12/31, Area 0.0.1.255, Attached via Interface Enable
Process ID 1, Router ID 10.255.255.1, Network Type POINT_TO_POINT, Cost: 1
Topology-MTID      Cost      Disabled      Shutdown      Topology Name
0                  1          no            no            Base
Enabled by interface config, including secondary ip addresses
Transmit Delay is 1 sec, State POINT_TO_POINT
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

R1#show ip interface gig 2
GigabitEthernet2 is up, line protocol is up
Internet address is 172.20.1.12/31
MTU is 9216 bytes

R2#show ip ospf interface gig 2
GigabitEthernet2 is up, line protocol is up
Internet Address 172.20.1.13/31, Area 511, Attached via Interface Enable
Process ID 1, Router ID 10.255.255.2, Network Type POINT_TO_MULTIPOINT, Cost: 1
Topology-MTID      Cost      Disabled      Shutdown      Topology Name
0                  1          no            no            Base
Enabled by interface config, including secondary ip addresses
Transmit Delay is 1 sec, State POINT_TO_MULTIPOINT
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

R2#show ip interface gig 2
GigabitEthernet2 is up, line protocol is up
Internet address is 172.20.1.13/31
MTU is 1500 bytes
```

While troubleshooting the OSPF adjacency between routers R1 and R2 an engineer noticed that both routers are stuck in the EXCHANGE/EXSTART state. What should the engineer fix to solve the ongoing issue?

- A. match IPv4 addresses
- B. match OSPF areas
- C. match OSPF network types
- D. match MTU values

**Answer: D**

### NEW QUESTION 3

Which OS uses a distributed subsystem architecture?

- A. IOS XE
- B. IOS
- C. IOS XR
- D. CatOS

**Answer: C**

#### NEW QUESTION 4

Refer to the exhibit.

```
Router 1:

router isis
 net 49.0011.0000.0000.0001.00

Router 2:

router isis
 net 49.0001.0000.0000.0001.00

Router 3:

router isis
 net 49.0011.0000.0000.0002.00
```

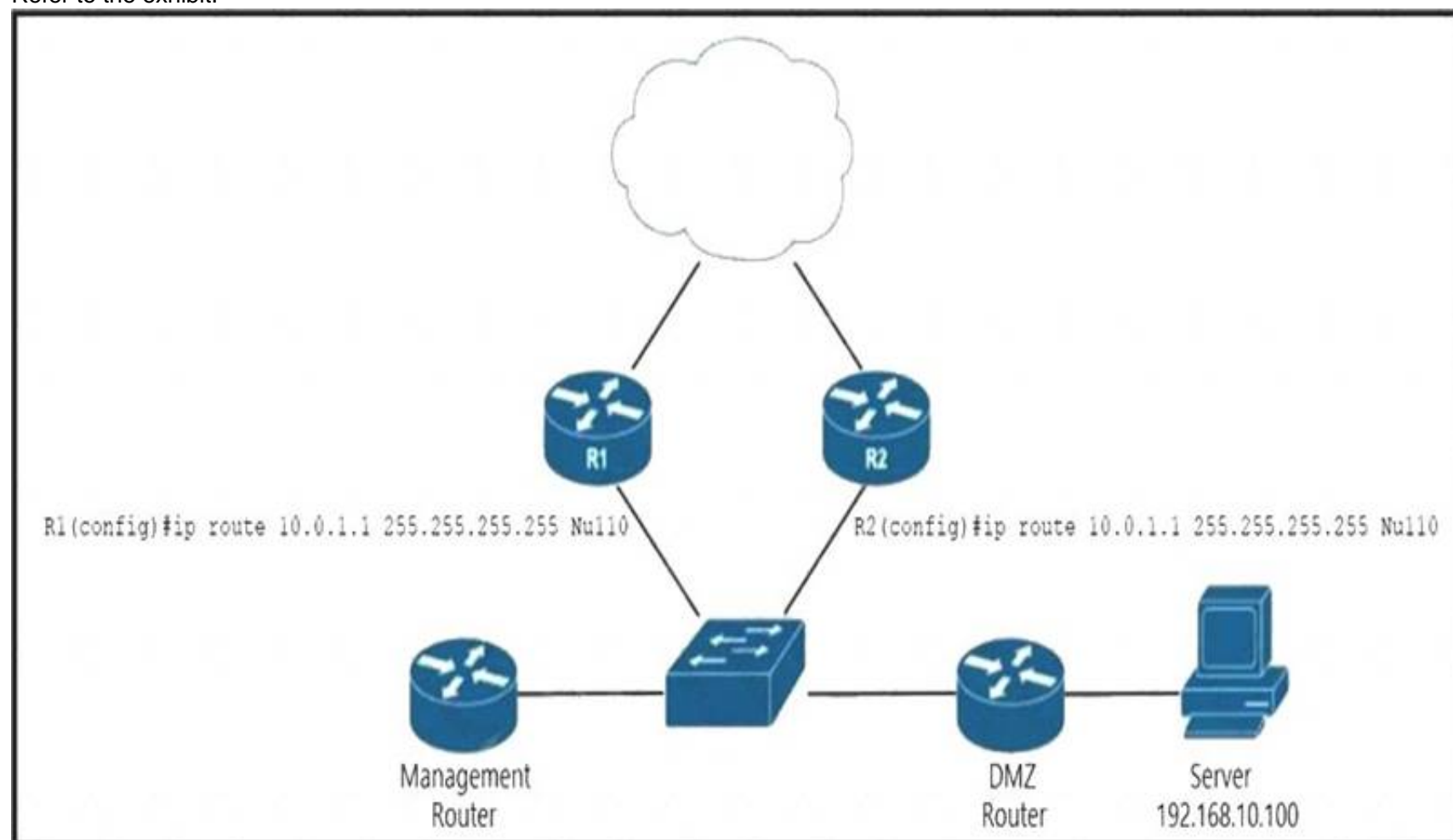
Router 4 is added to the network and must be in the same area as router 1. Which NET should the engineer assign?

- A. 49.0001.0000.0000.0004.00
- B. 49.0111.0000.0000.0001.00
- C. 49.0011.0000.0000.0003.00
- D. 49.0011.0000.0000.0002.00

**Answer: C**

#### NEW QUESTION 5

Refer to the exhibit.



router(config)# route-map blackhole-trigger router(config-route-map)# match tag 777 router(config-route-map)# set ip next-hop 10.0.1.1 router(config-route-map)# set origin igp router(config-route-map)# set community no-export

Refer to the exhibit. EIGRP is running across the core to exchange internal routes, and each router maintains iBGP adjacency with the other routers on the network. An operator has configured static routes on the edge routers R1 and R2 for IP address 10.0.1.1, which is used as a black hole route as shown. Which configuration should the operator implement to the management router to create a route map that will redistribute tagged static routes into BGP and create a static route to blackhole traffic with tag 777 that is destined to the server at 192.168.10.100?

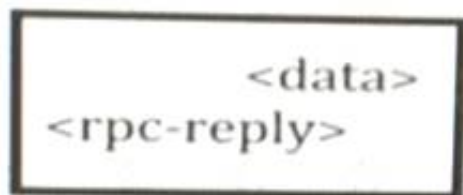
- A. router(config)# router bgp 55100router(config-router)# redistribute static route-map blackhole-trigger router(config)# ip route 10.0.1.1 255.255.255.255 Null0 tag 777
- B. router(config)# router bgp 55100router(config-router)# redistribute static route-map blackhole-trigger router(config)# ip route 192.168.10.100 255.255.255.255 Null0 tag 777

C. router(config)# router bgp 55100 router(config-router)# redistribute connected router(config)# ip route 192.168.10.100 255.255.255.255 tag 777  
D. router(config)# router bgp 55100 router(config-router)# redistribute connected route-map blackhole-trigger router(config)# ip route 192.168.10.100 255.255.255.255 Null0 tag 777

**Answer: B**

#### NEW QUESTION 6

Refer to the exhibit:



This output is included at the end of an output that was provided by a device using NETCONF. What does the code show?

- A. It shows the hostname of the device as rpc-reply
- B. It shows that the running configuration is blank
- C. It shows NETCONF uses remote procedure calls.
- D. It shows that the full configuration is being modeled by VANG

**Answer: C**

#### NEW QUESTION 7

A network engineer is implementing NetFlow to observe traffic patterns on the network. The engineer is planning to review the patterns to help plan future strategies for monitoring and preventing congestion as the network grows. If the captures must include BGP next-hop flows, which configuration must the engineer apply to the router?

- A. ip cefip flow-export version 5 bgp-nexthopip flow-export destination 192.168.1.1 9995 interface gigabitethernet 1/0/1ip flow egress
- B. ip cefip flow-export version 9 bgp-nexthopip flow-export destination 192.168.1.1 9996 interface gigabitethernet 1/0/1ip flow ingress
- C. ip cefip flow-export version 5ip flow-export destination 192.168.1.1 9995 interface gigabitethernet 1/0/1ip flow ingress cdp enable
- D. no ip cefip flow-export version 9ip flow-export destination 192.168.1.1 9996 interface gigabitethernet 1/0/1ip flow ingressip flow egress

**Answer: B**

#### NEW QUESTION 8

Refer to the exhibit.

```
!
router bgp 65001
no synchronization
bgp log-neighbor-changes
neighbor 10.10.10.1 remote-as 4282
neighbor 10.10.10.1 distribute-list 1 out
no auto-summary
!
ip as-path access-list 1 permit ^$
!
```

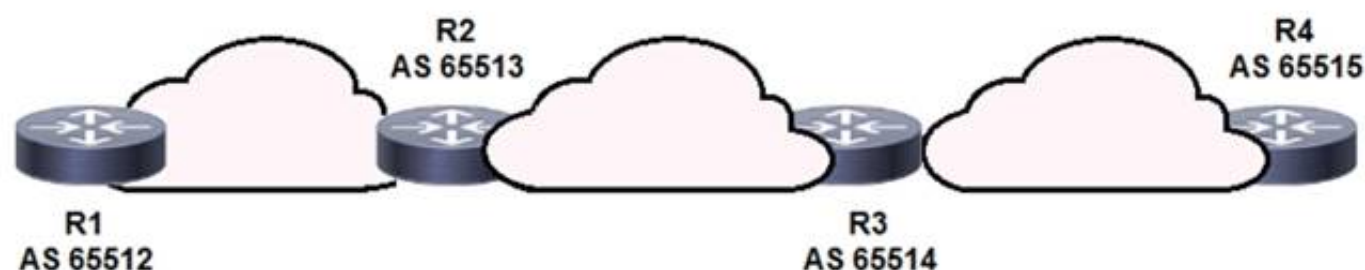
An engineer is reviewing the BGP configuration. Which routes must be advertised to 10.10.10.1

- A. Local routes are permitted, and routes from other ASNs are denied.
- B. All routes whether local or from other ASNs are denied.
- C. Local routes are denied, and routes from other ASNs are permitted.
- D. All routes whether local or from other ASNs are permitted.

**Answer: D**

#### NEW QUESTION 9

Refer to the exhibit:



BGPsec is implemented on R1. R2. R3. and R4 BGP peering is established between neighboring autonomous systems Which statement about implementation is true?

- A. BGP updates from the eBGP peers are appended with an additional AS path value that is statically set by the domain administrator
- B. BGP updates from the iBGP peers are appended with a community of local-as
- C. BGP updates from the all BGP peers are appended with a community of no export
- D. BGP updates from the eBGP peers are appended with a BGPsec attribute sequence that includes a public key hash and digital signature



**Answer:** D

**NEW QUESTION 10**

Which type of attack is a Protocol attack?

- A. HTTP flood
- B. TFTP flood
- C. SYN flood
- D. Slowloris

**Answer:** C

**Explanation:**

Protocol Attacks

Includes SYN floods, fragmented packet attacks, Ping of Death, Smurf DDoS and more. This type of attack consumes actual server resources,

**NEW QUESTION 10**

What is a characteristic of data modeling language?

- A. It provides an interface for state data.
- B. It separates configuration and state data.
- C. It ensures devices are individually configured.
- D. It replaces SNMP.

**Answer:** B

**NEW QUESTION 11**

Refer to the exhibit:

```
R1
router isis
 net 49.0012.1111.1111.1111.00
 is-type level-1
 area-password cisco
R2
router isis
 net 49.0022.1111.1111.1112.00
 is-type level-1-2
 area-password cisco
```

What is the effect of this configuration?

- A. The two routers fail to form a neighbor relationship because their system IDs are different.
- B. The two routers successfully form a neighbor relationship
- C. The two routers fail to form a neighbor relationship because the authentication configuration is missing
- D. The two routers fail to form a neighbor relationship because they have different ISIS area types.

**Answer:** B

**NEW QUESTION 13**

Refer to the exhibit:

```
https://192.168.1.100/api/mo/uni/tn-ciscotest.xml
```

What is the URL used for with REST API?

- A. It is used to contact a URL filter to determine the efficacy of a web address
- B. It is used to send a TACACS+ authentication request to a server
- C. It is used to send a message to the APIC to perform an operation on a managed object or class operator
- D. It is used to initiate an FTP session to save a running configuration of a device.

**Answer:** C

**NEW QUESTION 15**

A network engineer has configured TE tunnels in the MPLS provider core. Which two steps ensure traffic traverse? (Choose two.)

- A. Static routes is the only option for directing traffic into a tunnel.
- B. ECMP between tunnels allows RSVP to function correctly.

- C. Forwarding adjacency features allows a tunnel to be Installed in the IGP table as a link.
- D. The IGP metric of a tunnel is configured to prefer a certain path
- E. A tunnel weight is configured in SPF database the same way as a native link.

**Answer:** CD

#### NEW QUESTION 16

Which condition must be met for TI-LFA to protect LDP traffic?

- A. For single-segment protection, the PQ node must be LDP and SR-capable.
- B. The protected destination must have an associated LDP label and prefix-SID.
- C. The point of local repair must be LDP-capable.
- D. For double-segment protection, the P and Q nodes must be SR-capable.

**Answer:** D

#### NEW QUESTION 20

Drag and drop the LDP features from the left onto the correct usages on the right.

session protection	It prevents valid routes from being overwritten with new ones until labels are assigned.
IGP synchronization	It allows stale label bindings to be used for a period of time while an LDP neighbor is unreachable.
targeted-hello accept	It uses LDP Targeted hellos to protect LDP sessions.
graceful restart	It uses LDP to form neighborhood between non-directly connected routers.

- A. Mastered
- B. Not Mastered

**Answer:** A

#### Explanation:

1: graceful restart 2: IGP synchronization 3: session protection 4: targeted-hello accept

#### NEW QUESTION 25

Refer to the exhibit:

```
RP/0/0/CPU0:router# show bgp neighbors 192.168.2.2

BGP neighbor is 192.168.2.2, remote AS 1, local AS 140, external link
Remote router ID 0.0.0.0
BGP state = Idle
Last read 00:00:00, hold time is 180, keepalive interval is 60 seconds
Received 0 messages, 0 notifications, 0 in queue
Sent 0 messages, 0 notifications, 0 in queue
Minimum time between advertisement runs is 15 seconds

For Address Family: IPv4 Unicast
BGP neighbor version 0
Update group: 0.1
eBGP neighbor with no inbound or outbound policy; defaults to 'drop'
Route refresh request: received 0, sent 0
0 accepted prefixes
Prefix advertised 0, suppressed 0, withdrawn 0, maximum limit 524288
Threshold for warning message 75%

Connections established 0; dropped 0
Last reset 00:02:03, due to BGP neighbor initialized
External BGP neighbor not directly connected.
```

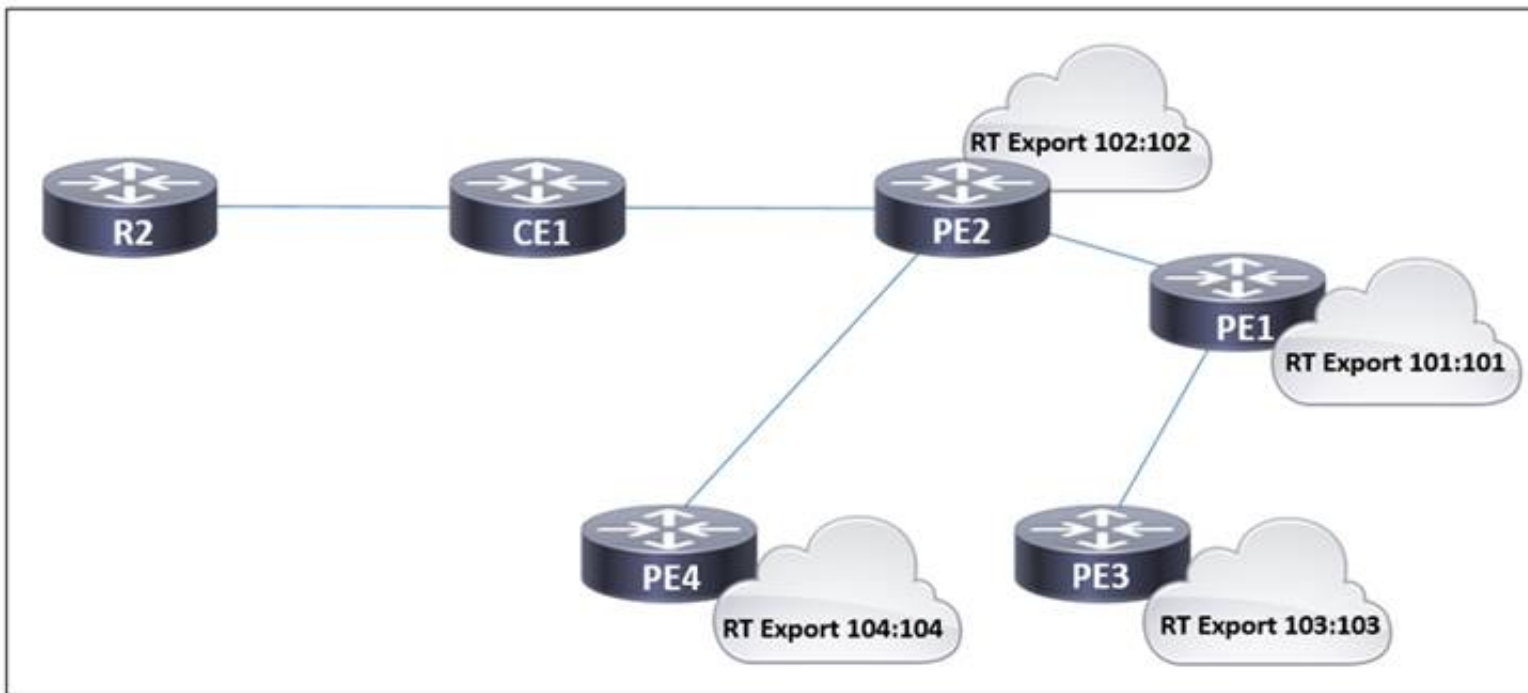
Based on the show/ command output, which result m true after BGP session is established?

- A. The IOS XR router advertises all routes to the neighbor 192.168.2.2, but it does not accept any routes from 192.168.2.2
- B. The IOS XR router advertises and accepts all routes to and from eBGP neighbor 192.168.2.2
- C. Noroutes are accepted from the neighbor 192.168.2.2, nor are any routes advertised to it
- D. The IOS XR router does not advertise any routes to the neighbor 192.168.2.2,but it accepts all routes from 192.168.2.2.

**Answer:** B

### NEW QUESTION 27

Refer to the exhibit.



In the service provider network, routers PE1, PE2, and PE4 have access to the internet and provide access to customer networks. Router PE3 is used for access to other customer systems. In accordance with a new SLA, an engineer is updating settings on this network so that router CE1 accesses the internet via PE1 instead of PE2. Which two tasks must the engineer perform to complete the process? (Choose two.)

- A. On PE1, configure the internet VRF with import route target 102:102.
- B. On PE1 and PE4, configure the internet VRF with import route targets 102:102 and 104:104.
- C. On PE2, configure the internet VRF with import route target 102:102.
- D. On PE2 and PE3, configure the internet VRF with import route target 101:101.
- E. On PE2, configure the CE1 VRF with import route target 101:101.

**Answer:** AE

#### Explanation:

<https://www.cisco.com/c/en/us/support/docs/mps-vpns/multiprotocol-label-switching-mpls/23986-mpls-v> [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp\\_l3\\_vpns/configuration/15-mt/mp-l3-vpns-15-mt-b](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_l3_vpns/configuration/15-mt/mp-l3-vpns-15-mt-b)

### NEW QUESTION 30

Refer to the exhibit:

```
class-map WEB
match protocol http
```

Which statement describes the effect of this configuration?

- A. It applies a service policy to all interfaces remarking HTTP traffic
- B. It creates an ACL named WEB that filters HTTP traffic.
- C. It matches HTTP traffic for use in a policy map
- D. It modifies the default policy map to allow all HTTP traffic through the router

**Answer:** C

### NEW QUESTION 34

You are configuring MPLS traffic-engineering tunnels in the core. Which two ways exist for the tunnel path across the core? (Choose two )

- A. Tunnel links inherit IGP metrics by default unless overridden
- B. Tunnels can be configured with dynamic path or explicitly defined path
- C. A zero bandwidth tunnel is not a valid option
- D. The bandwidth statement creates a "hard" reservation on the link-The dynamic path option is supported only with IS-IS

**Answer:** AB

### NEW QUESTION 37

Egress PE NAT is being used via a single centralized router to provide Internet access to L3VPN customers. Which description of the NAT operation is true?

- A. Users in different VRFs cannot share the same outside global IP address
- B. The NAT table contains a field to identify the inside VRF of a translation
- C. Multiple address pools are needed for the same L3VPN because each site has a separate NAT
- D. The different L3VPNs using the Internet access must not have IP overlaps internally

**Answer:** B

### NEW QUESTION 39

Which two features describe TI-LFA? (Choose two.)

- A. TI-LFA uses PQ or P and Q nodes on the post-convergence path to compute the backup path.
- B. Post-convergence, TI-LFA considers the next-hop neighbor to calculate the backup repair path.

- C. TI-LFA works with point of local repair when the PQ node supports only LDP capability.
- D. Unlike RLFA, TI-LFA works without the PQ node and provides double segment failure protection.
- E. TI-LFA leverages the post-convergence path that carries data traffic after a failure.

**Answer:** AE

**NEW QUESTION 41**

You are testing the capabilities of MPLS OAM ping. Which statement is true?

- A. MPLS OAM ping works solely with Cisco MPLS TE
- B. MPLS OAM ping works solely with P2P LSPs
- C. An LSP breakage results in the ingress MPLS router never receiving any reply
- D. An LSP is not required for the reply to reach the ingress MPLS router

**Answer:** D

**NEW QUESTION 42**

Refer to the exhibit.

```
router ospf 1
segment-routing mpls
segment-routing forwarding mpls
```

AN engineer is configuring segment routing on an ISP to simplify traffic engineering and management across network domains. What should the engineer do to complete the implementation of segment routing?

- A. OSPF must be configured with wide area metrics to support routing.
- B. The segment will run without any further configuration.
- C. Area authentication must be enable before segment routing will run.
- D. Area Authentication must be enable before segment routing will run.

**Answer:** C

**NEW QUESTION 43**

Drag and drop the OSPF and IS-IS Cisco MPLS TE extensions from the left to their functional descriptions on the right.

TLV Type 2	includes an 8-bit default metric
TLV Type 22	supports a 32-bit metric and an up/down bit
TLV Type 134	carries a 32-bit router ID for traffic engineering
TLV Type 135	advertisements are flooded throughout the entire area network
Type 10 Opaque LSA	contains information about the link and includes other sub-TLVs

- A. Mastered
- B. Not Mastered

**Answer:** A

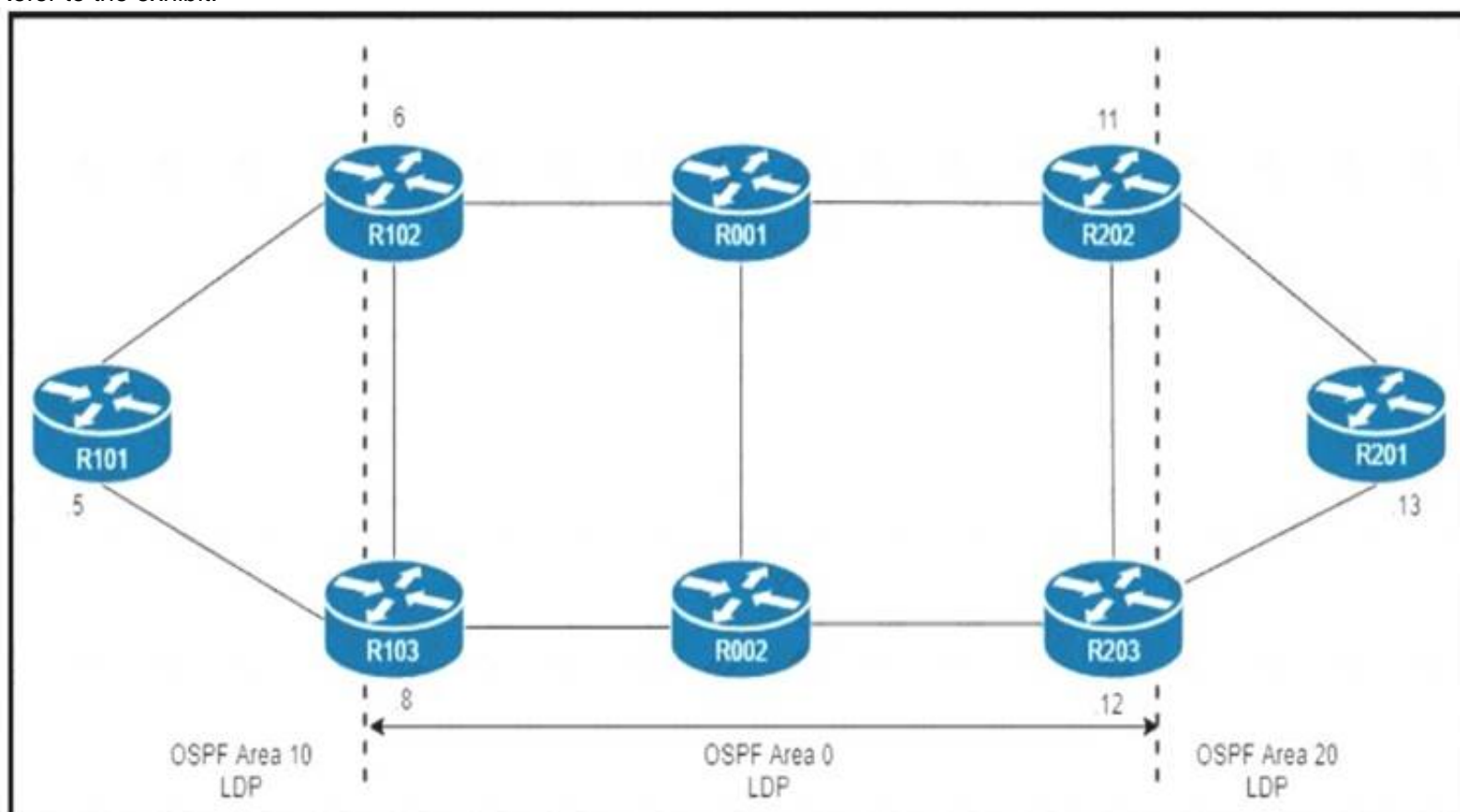
**Explanation:**





#### NEW QUESTION 45

Refer to the exhibit.



R101 is peering with R102 and R103, and R201 is peering with R202 and R203 using iBGP Labeled Unicast address families. The OSPF area 0 border routers are in a full iBGP Labeled Unicast mesh, and VPNv4 routes are exchanged directly between PE routers R101 and R201 through iBGP. Which address family-level configuration must be applied on ABR R102 to support a Unified MPLS routing architecture with partitioned IGP domains?

A)

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 send-label
neighbor 172.16.0.11 route-reflector-client
neighbor 172.16.0.11 send-label
neighbor 172.16.0.12 route-reflector-client
```

B)

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 next-hop-self all
neighbor 172.16.0.5 send-label
neighbor 172.16.0.11 next-hop-self all
neighbor 172.16.0.11 send-label
neighbor 172.16.0.12 next-hop-self all
neighbor 172.16.0.12 send-label
```

C)

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 next-hop-self all
neighbor 172.16.0.11 next-hop-self all
neighbor 172.16.0.12 next-hop-self all
```

D)

```
router bgp 65512
address-family ipv4
neighbor 172.16.0.5 route-reflector-client
neighbor 172.16.0.5 next-hop-self
neighbor 172.16.0.5 send-label
neighbor 172.16.0.11 next-hop-self
neighbor 172.16.0.11 send-label
neighbor 172.16.0.12 next-hop-self
neighbor 172.16.0.12 send-label
```

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

**Answer:** B

#### NEW QUESTION 46

Which benefit is provided by FRR?

- A. It provides fast forwarding path failure detection times for all media.
- B. It provides rapid failure detection between forwarding engines.
- C. It provides performance data for the service provider network.
- D. It protects Cisco MPLS TE LSPs from link and node failures.

**Answer:** D

#### NEW QUESTION 51

Refer to the exhibit.

Router 1:	Router 2:
Interface gigabitethernet0/1 ip address 192.168.1.1 255.255.255.0 ip ospf hello-interval 1	Interface gigabitethernet0/1 ip address 192.168.1.2 255.255.255.0 ip ospf hello-interval 2
router ospf 1 network 192.168.1.0 0.0.0.255 area 1	router ospf 2 network 192.168.1.2 0.0.0.0 area 1

What reestablishes the OSPF neighbor relationship between Router 1 and Router 2?

- A. authentication is added to the configuration
- B. correct wildcard mask is used on Router 2
- C. OSPF process IDs match
- D. hello intervals match

**Answer:** D

#### NEW QUESTION 53

After a possible security breach, the network administrator of an ISP must verify the times that several different users logged into the network. Which command must the administrator enter to display the login time of each user that activated a session?

- A. show netconf-yang sessions detail
- B. show netconf-yang datastores
- C. show platform software yang-management process
- D. show netconf-yang sessions

**Answer:** A

#### Explanation:

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/167/b\\_167\\_programmability\\_cg/configur](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/prog/configuration/167/b_167_programmability_cg/configur)

```
Device# show netconf-yang sessions detail
```

```
R: Global-lock on running datastore
```

```
C: Global-lock on candidate datastore
```

```
S: Global-lock on startup datastore
```

```
Number of sessions      : 1
```

```
session-id              : 19
```

```
transport               : netconf-ssh
```

```
username                : admin
```

```
source-host             : 2001:db8::1
```

```
login-time              : 2018-10-26T12:37:22+00:00
```

```
in-rpcs                 : 0
```

```
in-bad-rpcs             : 0
```

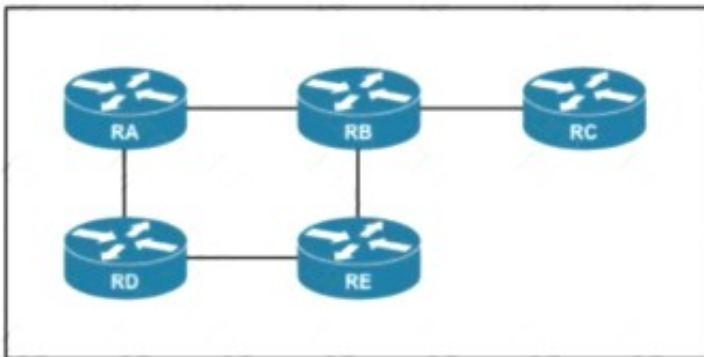
```
out-rpc-errors          : 0
```

```
out-notifications       : 0
```

```
global-lock             : None
```

#### NEW QUESTION 55

Refer to the exhibit.



If RC is a stub router, which entry must be injected so that it will send traffic outside the OSPF domain?

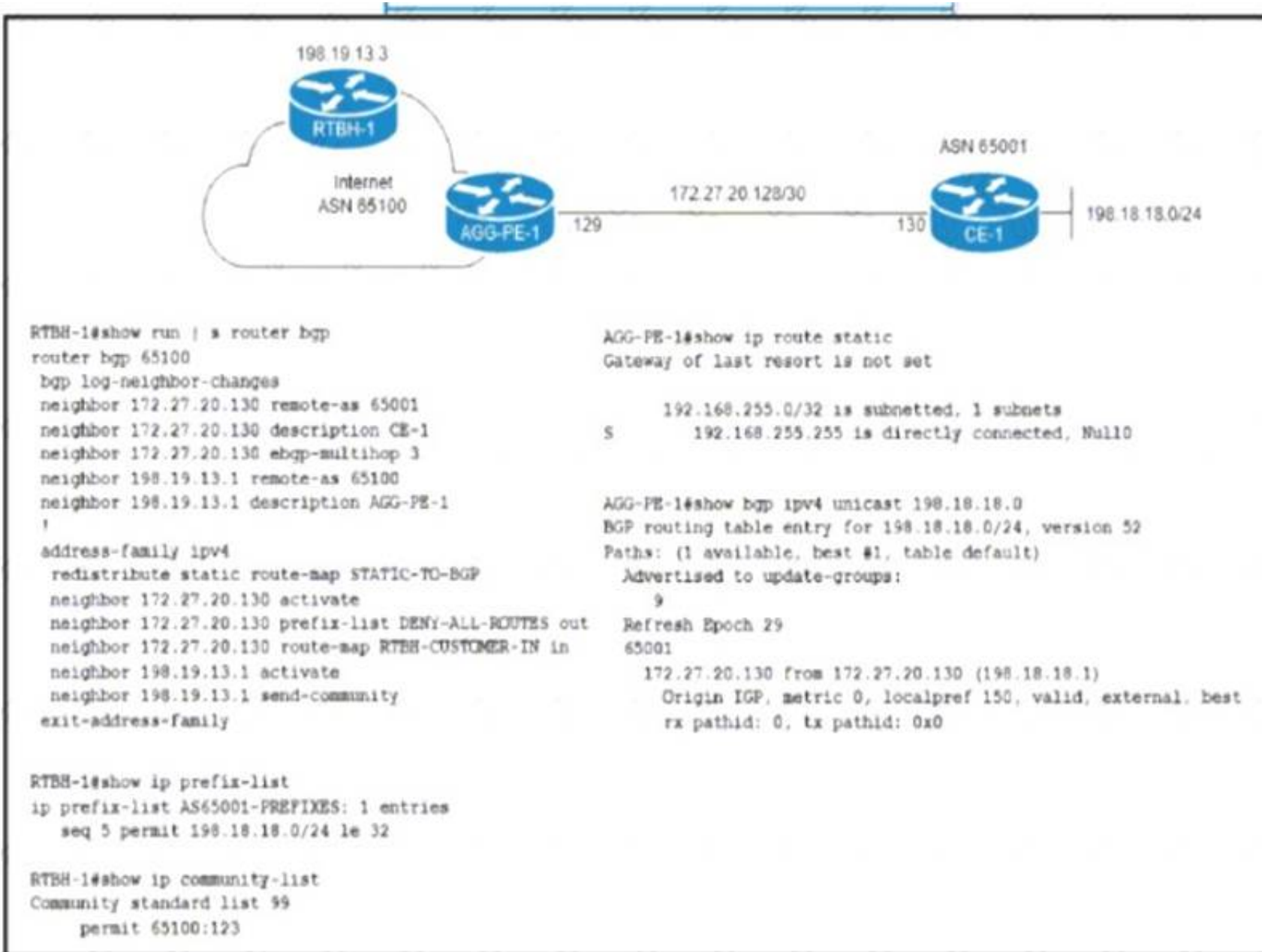
- A. virtual link between RB and RC
- B. sham link
- C. more specific route
- D. default route

**Answer: C**

#### NEW QUESTION 60

Refer to the exhibit.





ISP ASN 65100 provides Internet services to router CE-1 and receives customer prefix 198.18.18.0/24 via eBGP. An administrator for the ISP is now provisioning RTBH services to provide on-demand data-plane security for the customer's IP space. Which route-map configuration must the administrator apply to router RTBH-1 to complete the implementation of RTBH services to CE-1?

- A. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefix-list AS65001-PREFIXES match community 99 set local-preference 200 set community no-export additive set ip next-hop 192.168.255.255 route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY
- B. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefix-list AS65001-PREFIXES match community 99 set local-preference 200 set community local-as additive set ip next-hop 192.168.255.255 route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY
- C. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefixlist AS65001-PREFIXES match community 99 set local-preference 200 set community no-advertise additive set ip next-hop local-address route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY
- D. route-map RTBH-CUSTOMER-IN permit 10 description AS65001 match ip address prefix-list AS65001-PREFIXES match community 99 set local-preference 200 set community no-advertise additive set ip next-hop 192.168.255.255 route-map RTBH-CUSTOMER-IN deny 65535 description DEFAULT DENY

**Answer: A**

#### NEW QUESTION 63

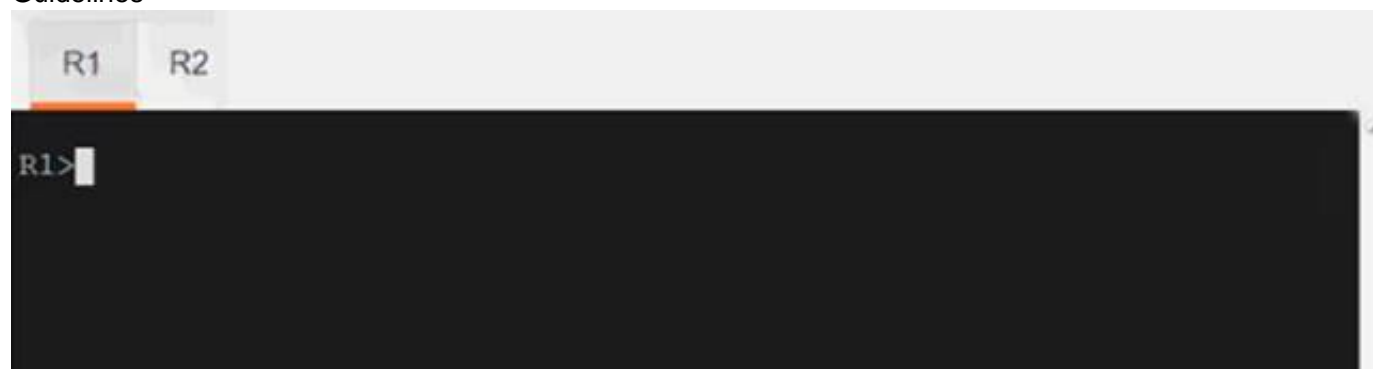
After you analyze your network environment, you decide to implement a full separation model for Internet access and MPLS L3VPN services For which reason do you make this decision?

- A. It enables you to choose whether to separate or centralize each individual service.
- B. It is easier to manage a system in which services are mixed
- C. It requires only one edge router
- D. It enables EGP and IGP to operate independently

**Answer: D**

#### NEW QUESTION 68

Guidelines

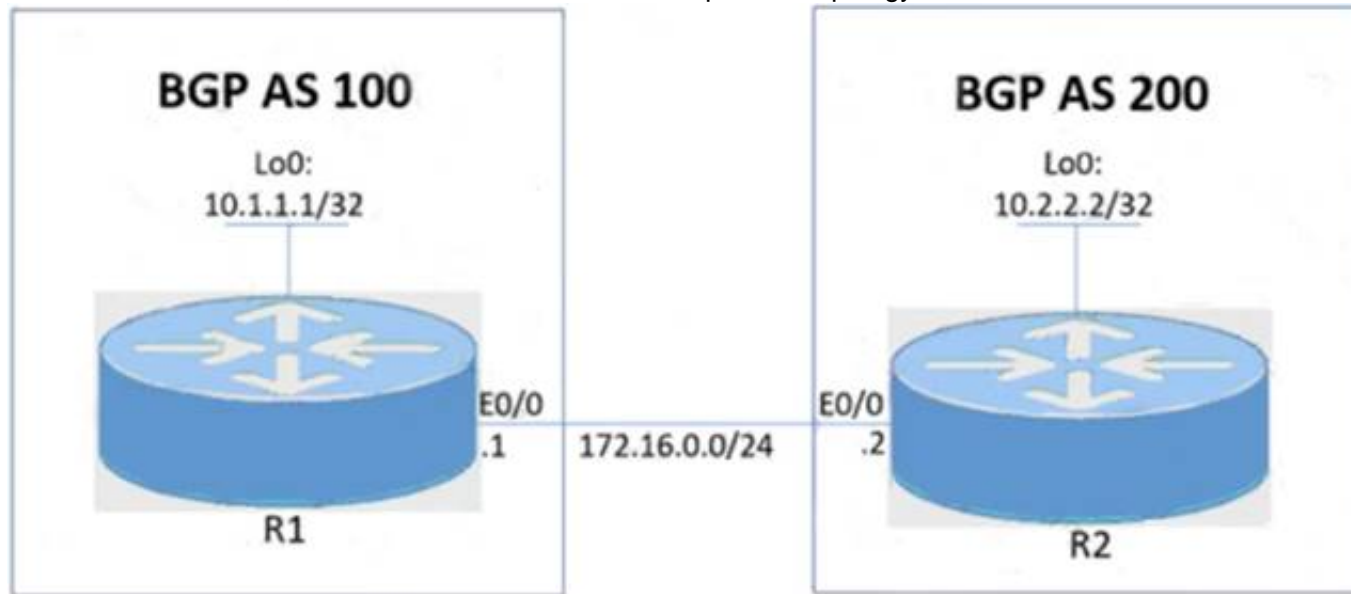


This is a lab item in which tasks will be performed on virtual devices.

- Refer to the Tasks tab to view the tasks for this lab item.
- Refer to the Topology tab to access the device console(s) and perform the tasks.
- Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.



- All necessary preconfigurations have been applied.
- Do not change the enable password or hostname for any device.
- Save your configurations to NVRAM before moving to the next item.
- Click Next at the bottom of the screen to submit this lab and move to the next question.
- When Next is clicked, the lab closes and cannot be reopened. Topology



#### Tasks

R1 and R2 are having issues forming an eBGP neighbor relationship. Troubleshoot and resolve the issue to achieve these goals:

- \* 1. Configure R1 and R2 to form a BGP neighborship using their Loopback interfaces.
- \* 2. Form the neighbor relationship using a BGP multihop mechanism. Use minimal values to solve the issue.

- A. Mastered
- B. Not Mastered

**Answer: A**

#### Explanation:

Here is the solution:

Text Description automatically generated

R1:

conf t

```
ip route 10.2.2.2 255.255.255.255 172.16.0.2
```

```
router bgp 100
```

```
neighbor 10.2.2.2 remote-as 200
```

```
neighbor 10.2.2.2 update-source lo0
```

```
neighbor 10.2.2.2 disable-connected-check
```

```
neighbor 10.2.2.2 ebgp-multihop 2
```

```
address-family ipv4 unicast
```

```
neighbor 10.2.2.2 activate
```

```
do copy running-config startup-config
```

R2:

conf t

```
ip route 10.1.1.1 255.255.255.255 172.16.0.1
```

```
router bgp 200
```

```
neighbor 10.1.1.1 remote-as 100
```

```
neighbor 10.1.1.1 update-source lo0
```

```
neighbor 10.1.1.1 disable-connected-check
```

```
neighbor 10.1.1.1 ebgp-multihop 2
```

```
address-family ipv4 unicast
```

```
neighbor 10.1.1.1 activate
```

```
do copy running-config startup-config
```

#### NEW QUESTION 72

A network architect decides to expand the scope of the multicast deployment within the company network the network is already using PIM-SM with a static RP that supports a high-bandwidth. video-based training application that s heavily used by the employees, but excessive bandwidth usage is a concern How must the

engineer update the network to provide a more efficient multicast implementation'?

- A. Configure IGMP to manage the multicast hosts on each LAN
- B. implement BSR to support dynamic RP notification.
- C. Deploy ICMP to Improve multicast reachability across the network using static RP.
- D. Implement STP to improve switching performance for multicast data.

**Answer:** B

#### NEW QUESTION 75

A network engineer must configure a router for Flexible NetFlow IPFIX export. The IP address of the destination server is 172.17.12.1. The source address must be set to the Loopback0 IPv4 address and exported packets must be set to DSCP CS3. The TTL must be 64 and the transport protocol must be set to UDP with destination port 4739. Which configuration must the engineer apply to the router?

- A. configure terminalflow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0dscp 3ttl 64export-protocol netflow-v9 transport udp 4739end
- B. configure terminalflow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0dscp 24ttl 64export-protocol ipfix end
- C. configure terminalflow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0dscp 24ttl 64export-protocol netflow-v9 transport udp 4739end
- D. configure terminalflow exporter EXPORTER-1 destination 172.17.12.1 source Loopback0dscp 3ttl 64export-protocol ipfix end

**Answer:** B

#### Explanation:

<https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/fnetflow/configuration/xr-3s/fnf-xr-3s-book/fnf-ipfix-export>

#### NEW QUESTION 77

A regional MPLS VPN provider operates in two regions and wants to provide MPLS L3VPN service for a customer with two sites in these separate locations. The VPN provider approaches another organization to provide backbone carrier services so that the provider can connect to these two locations. Which statement about this scenario is true?

- A. When edge routers at different regional sites are connected over the global carrier backbone, MP-eBGP must run between the routers to exchange the customer VPNv4 routes
- B. When eBGP is used for label exchange using the send label option, MPLS-BGP forwarding is configured under the global ABC CSC PE-to CE interface
- C. When IGP is used for route exchange and LDP for label exchange, MPLS is enabled only on the VRF interface on the backbone-earner PE side.
- D. When BGP is used for both route and label exchange, the neighbor a.b.c.d send-label command is used under the address family VPNv4 command mode.

**Answer:** B

#### NEW QUESTION 79

What is a characteristic of MVPN?

- A. It bypasses the use of MPLS in the service provider core and transmits packets using IP only.
- B. It uses pseudowires to route unicast and broadcast traffic over either a service provider MPLS or IP core.
- C. It allows VRF traffic to use the service provider MPLS VPN to route multicast traffic.
- D. It creates GRE tunnels to route multicast traffic over a service provider IP core.

**Answer:** C

#### NEW QUESTION 81

Refer to the exhibit.

```
POST http://192.168.1.1 api/changeSelfPassword.json

{
  "aaaChangePassword" : {
    "attributes" : {
      "userName" : "ciscotest",
      "oldPassword" : "s@nfr@nc1sc0",
      "newPassword" : "s@nfr@nc1sco"
    }
  }
}
```

What is the purpose of this JSON script?

- A. It changes the existing password.
- B. It updates a user authentication record.
- C. It deletes a user's authentication record.
- D. It confirms a user's login credentials.

**Answer:** A

#### NEW QUESTION 84

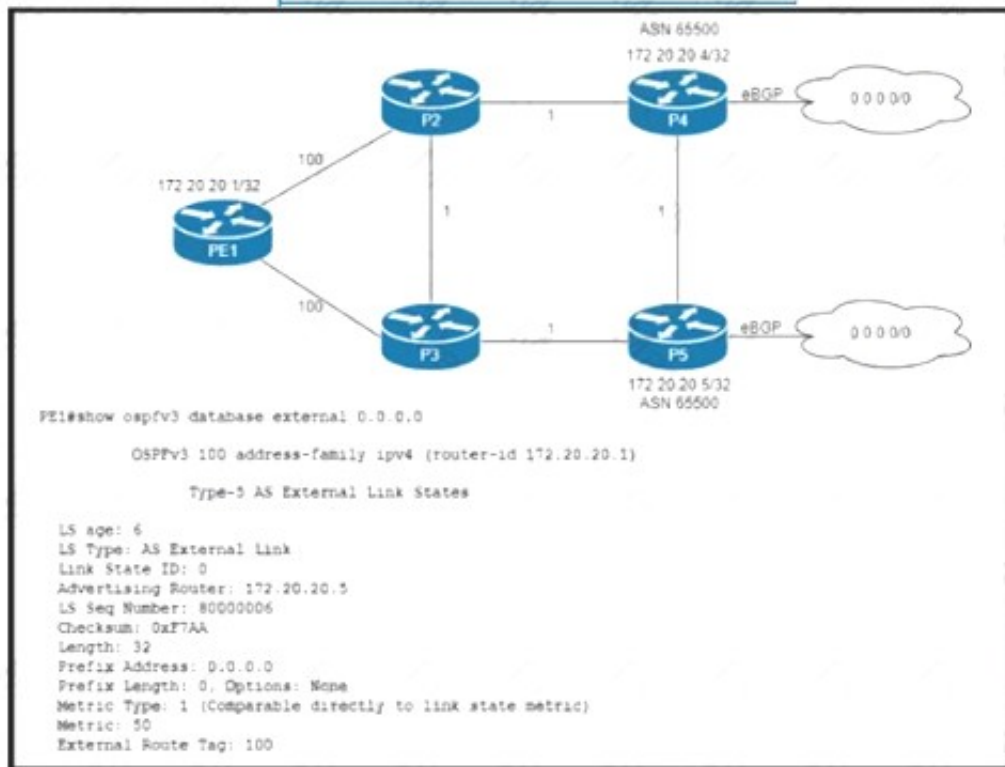
What is the difference between SNMP and model-driven telemetry?

- A. Telemetry allows for modeled network data to be pushed to the network administrator on an as-needed basis
- B. Telemetry uses traps and inform messages to deliver data to a network administrator on a polling basis
- C. SNMP uses the YANG data modeling language
- D. SNMP pushes network data to the network administrator whenever it is queried

**Answer: A**

#### NEW QUESTION 85

Refer to the exhibit.



Router P4 and P5 receive the 0.0.0.0/0 route from the ISP via eBGP peering P4 is the primary Internet gateway router, and P5 is its Backup. P5 is already advertising a default route into OSPF domain. Which configuration must be applied to P4 so that advertises a default route into OSPF and becomes the primary internet gateway for the network?

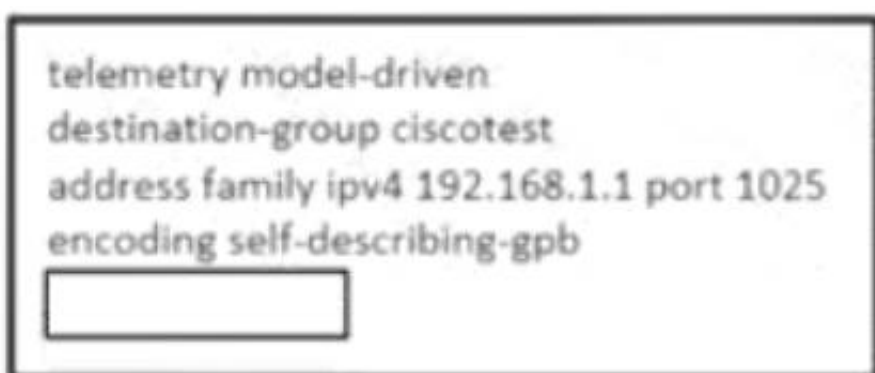
- ☐ configure terminal  
router ospfv3 100  
address-family ipv4 unicast  
default-information originate always metric 40 metric-type 1  
end
- ☐ configure terminal  
router ospfv3 100  
address-family ipv4 unicast  
default-information originate metric 40 metric-type 2  
end
- ☐ configure terminal  
router ospfv3 100  
address-family ipv4 unicast  
default-information originate metric 40 metric-type 1  
end
- ☐ configure terminal  
router ospfv3 100  
address-family ipv4 unicast  
redistribute bgp 65500 metric 40 metric-type 1  
end

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

**Answer: C**

#### NEW QUESTION 89

Refer to the exhibit.



A Cisco engineer is implementing gRPC dial-out on an ASR. Receiver 192.168.1.1 will be assigned one of the subscriptions, and it will manage the ASR. Which command is needed to complete the router configuration?

- A. protocol grpc
- B. protocol all
- C. protocol tcp
- D. protocol any

**Answer:** C

**Explanation:**

- **Transmission Control Protocol (TCP):** used for only dial-out mode.
- **User Datagram Protocol (UDP):** used for only dial-out mode.

#### NEW QUESTION 94

Refer to the exhibit.

```
R1(config)# ipv6 unicast-routing
R1(config)# ipv6 router ospf 100
R1(config-rtr)# router-id 1.1.1.1
```

An engineer is configuring router R1 for OSPFv3 as shown. Which additional configuration must be performed so that the three active interfaces on the router will advertise routes and participate in OSPF IPv6 processes?

A)

```
R1(config)# interface Ethernet1/1
R1(config-if)# ipv6 ospf 100 area 0
```

```
R1(config)# interface Ethernet1/2
R1(config-if)# ipv6 ospf 100 area 10
```

```
R1(config)# interface Ethernet1/3
R1(config-if)# ipv6 ospf 100 area 20
```

B)

```
R1(config)# interface Ethernet1/1
R1(config-if)# ip ospf hello-interval 1
R1(config-if)# ip ospf 1 area 0
```

```
R1(config)# interface Ethernet1/2
R1(config-if)# ip ospf hello-interval 1
R1(config-if)# ip ospf 1 area 10
```

```
R1(config)# interface Ethernet1/3
R1(config-if)# ip ospf hello-interval 1
R1(config-if)# ip ospf 1 area 20
```

C)

```
R1(config)# interface Ethernet1/1
R1(config-if)# ip ospf 1 area 0
```

```
R1(config)# interface Ethernet1/2
R1(config-if)# ip ospf 1 area 10
```

```
R1(config)# interface Ethernet1/3
R1(config-if)# ip ospf 1 area 20
```

A.

**Answer:** A

#### NEW QUESTION 99

Refer to the exhibit.



```
!
telemetry model-driven
destination-group DGroup2
address family ipv4
172.10.10.10 port 57500
encoding self-describing-gpb
protocol grpc
commit
!
```

A network engineer at a large ISP is configuring telemetry streams to monitor the health status of PE routers on the network using gRPC dial-out. The PE routers are located at several data centers in different physical locations, and they are using IS-IS and BGP for routing. Which additional configuration must the engineer implement on the PE routers to meet the goal?

- A. Text, letter Description automatically generated

```
sensor-group SGroup2
sensor-path openconfig-interfaces:interfaces/interface
!
subscription Sub3
sensor-group-id SGroup3 sample-interval 30000
```
- B. Text Description automatically generated

```
sensor-group SGroup2
sensor-path Cisco-IOS-XR-plat-chas-invmgr-oper:platform-inventory/racks/rack
!
subscription Sub1
sensor-group-id SGroup1 sample-interval 30000
destination-id DGroup1
```
- C. Graphical user interface, text Description automatically generated

```
sensor-group SGroup2
sensor-path Cisco-IOS-XR-infra-statsd-oper:infra-statistics/interfaces/interface/latest/generic-cou
!
subscription Sub1
sensor-group-id SGroup1 sample-interval 30000
destination-id DGroup1
```
- D. Text, letter Description automatically generated

```
sensor-group SGroup2
sensor-path Cisco-IOS-XR-nto-misc-oper:memory-summary/nodes/node/summ
!
subscription Sub2
sensor-group-id SGroup2 sample-interval 30000
destination-id DGroup2
```

Answer: D

NEW QUESTION 100

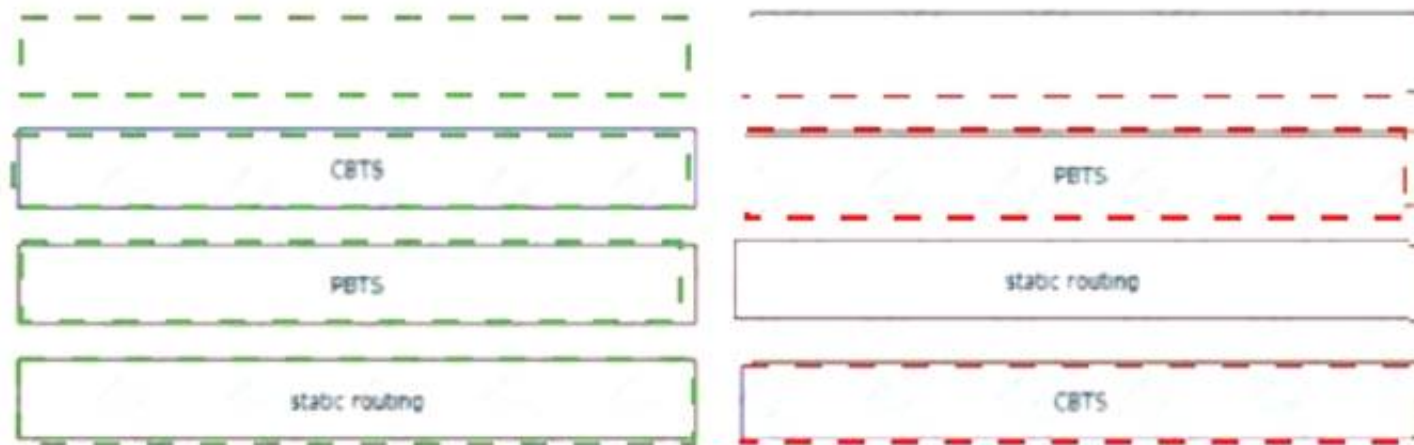
Drag and drop the methods of Cisco MPLS TE tunnel traffic assignment from the left onto their characteristics on the right.

	autoroute
CRTS	It optimizes streaming services.
PETS	It requires the administrator to manually assign traffic to the tunnel.
static routing	It uses CoS values to assign traffic to the tunnel.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



#### NEW QUESTION 104

An engineer must extend Layer 2 Between two campus sites connected through an MPLS backbone that encapsulates Layer 2 and Layer 3 data Which action must the engineer perform on the routers to accomplish this task?

- A. Configure a EtherChannel for E-LAN.
- B. Configure a pseudowire for E-LINE.
- C. Configure Cisco MPLS TE for use with E-TREE.
- D. Configure QoS for MPLS and E-ACCESS

**Answer: B**

#### NEW QUESTION 107

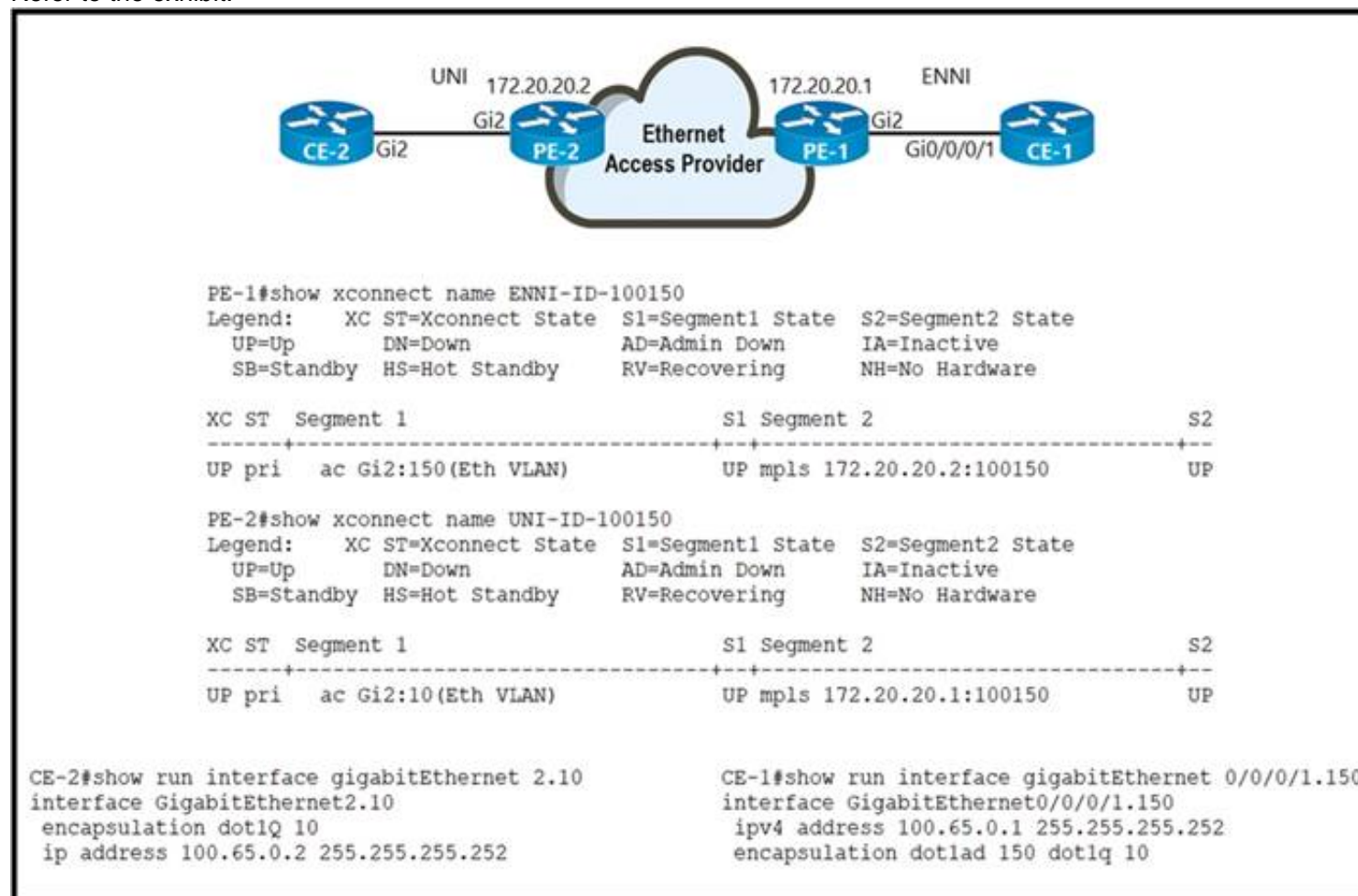
Which CLI mode must be used to configure the BGP keychain in Cisco IOS XR software?

- A. global configuration mode
- B. routing configuration mode
- C. BGP neighbor configuration
- D. mode BGP address-family configuration mode

**Answer: A**

#### NEW QUESTION 110

Refer to the exhibit.



An Ethernet access provider is configuring routers PE-1 and PE-2 to provide E-Access EVPL service between UNI and ENNI. ENNI service multiplexing is based on 802.1ad tag 150, and service-multiplexed UNI is based on 802.1q tag 10. Which EFP configurations must the provider implement on PE-1 and PE-2 to establish end-to-end connectivity between CE-1 and CE-2?

- A. On PE-1:interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1ad 150rewrite ingress tag pop 1 symmetric On PE-2:interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10
- B. On PE-1:interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1q 150rewrite ingress tag pop 1 symmetric On PE-2:interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10
- C. On PE-1:interface GigabitEthernet2 service instance 100 ethernetencapsulation dot1ad 150 dot1q 10 rewrite ingress tag pop 2 symmetric On PE-2:interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10
- D. On PE-1:interface GigabitEthernet2 service instance 100 ethernet encapsulation dot1ad 150rewrite ingress tag pop 1 symmetric On PE-2:interface GigabitEthernet2 service instance 2 ethernet encapsulation dot1q 10rewrite ingress tag pop 1 symmetric

Answer: C

#### NEW QUESTION 114

Refer to the exhibit.

```
R5#show run | s router ospf
router ospf 1
router-id 172.16.0.5
network 192.168.0.0 0.0.63.255 area 0

R5#show run int GigabitEthernet1.58
Building configuration...
Current configuration : 245 bytes
interface GigabitEthernet1.58
description LINK TO R8 G11.58
encapsulation dot1Q 58
ip address 192.168.58.5 255.255.255.0
ip mtu 1600
ip ospf network point-to-point
ip ospf 1 area 0.0.0.2
end
```

Which configuration must be implemented on router R8 so that it will establish OSPF adjacency with R5?

A)

```
router ospf 1
network 192.168.58.0 0.0.0.255 area 0.0.0.2
interface GigabitEthernet 1.58
ip mtu 1600
ip ospf network point-to-multipoint
```

B)

```
router ospf 1
network 192.168.58.0 0.0.0.255 area 2
interface GigabitEthernet 1.58
ip mtu 1600
```

C)

```
router ospf 1
network 192.168.58.0 0.0.0.255 area 0.0.0.2
interface GigabitEthernet 1.58
ip ospf network point-to-point
```

D)

```
router ospf 1
network 192.168.58.0 0.0.0.255 area 0.0.0.2
interface GigabitEthernet 1.58
ip mtu 1600
ip ospf network point-to-point
ip ospf 1 area 0
```

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

Answer: A

#### NEW QUESTION 118

A network engineer must enable the helper router to terminate the OSPF graceful restart process if it detects any changes in the LSA. Which command enables this feature?

- A. nsf ietf helper disable
- B. nsf cisco enforce global
- C. nsf ietf helper strict-lsa-checking
- D. nsf Cisco helper disable

Answer: C

#### NEW QUESTION 122

Which control plane protocol is used between Cisco SD-WAN routers and vSmart controllers?

- A. OTCP
- B. OMP



- C. UDP
- D. BGP

**Answer:** B

#### NEW QUESTION 126

Refer to the exhibit:

```
R1:
!
interface FastEthernet0/0
  ip address 10.1.12.1 255.255.255.0
  duplex full
!
router ospf 1
  network 0.0.0.0 255.255.255.255 area 0
R2:
!
interface FastEthernet0/0
  ip address 10.1.12.2 255.255.255.252
  duplex full
!
router ospf 1
  network 0.0.0.0 255.255.255.255 area 0
```

R1 and R2 are directly connected with Fast Ethernet interfaces and have the above configuration applied OSPF adjacency is not formed. When the debug ip ospf hello command is issued on R1. these log messages are seen.

```
*Mar 6 21:57:33.051: OSPF-1 HELLO Fa0/0: Mismatched hello parameters from 10.1.12.2
*Mar 6 21:57:33.051: OSPF-1 HELLO Fa0/0: Dead R 40 C 40, Hello R 10 C 10 Mask R
255.255.255.252 C 255.255.255.0
```

Which command can be configured on routers R1 and R2 on f0/0 interfaces to form OSPF adjacency?

- A. ip ospf network non-broadcast
- B. ip ospf network point-to- multipoint non-broadcast
- C. ip ospf network point-to-point
- D. ip ospf network broadcast

**Answer:** C

#### NEW QUESTION 131

Refer to the exhibit.

```
router bgp 65515
  aggregate-address 192.168.0.0 255.255.0.0 summary-only as-set
```

An engineer configured BGP summarization on a customer's network. Which route is advertised to BGP peers?

- A. 192.0.0.0/16
- B. 192168.0.0/16
- C. 192.168.1.0/24
- D. 192168.0.5/30

**Answer:** B

#### NEW QUESTION 134

Which statement about segment routing prefix segments is true?

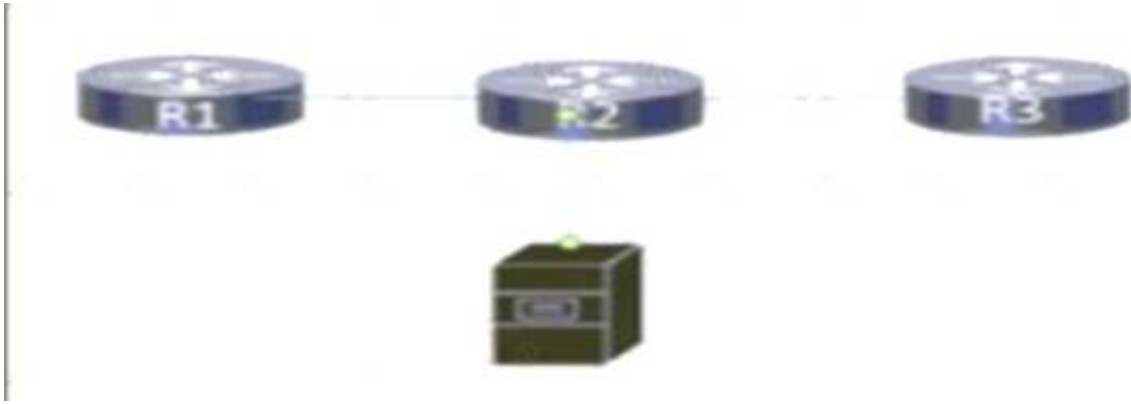
- A. It is linked to a prefix SID that is globally unique within segment routing domain.
- B. It is the longest path to a node.
- C. It is linked to an adjacency SID that is globally unique within the router.
- D. It requires using EIGRP to operate.

**Answer:** A

#### NEW QUESTION 135

Refer the exhibit.





Users on a network connected to router R3 report slow speeds when they connect to the server connected to R2. After analyzing traffic on the network, a network engineer identified congestion on the link between R2 and R3 as the cause. Which QoS service must the engineer implement to drop traffic on the link when it exceeds a configured threshold?

- A. first-in, first-out
- B. traffic shaping
- C. class-based weighted fair queueing
- D. traffic policing

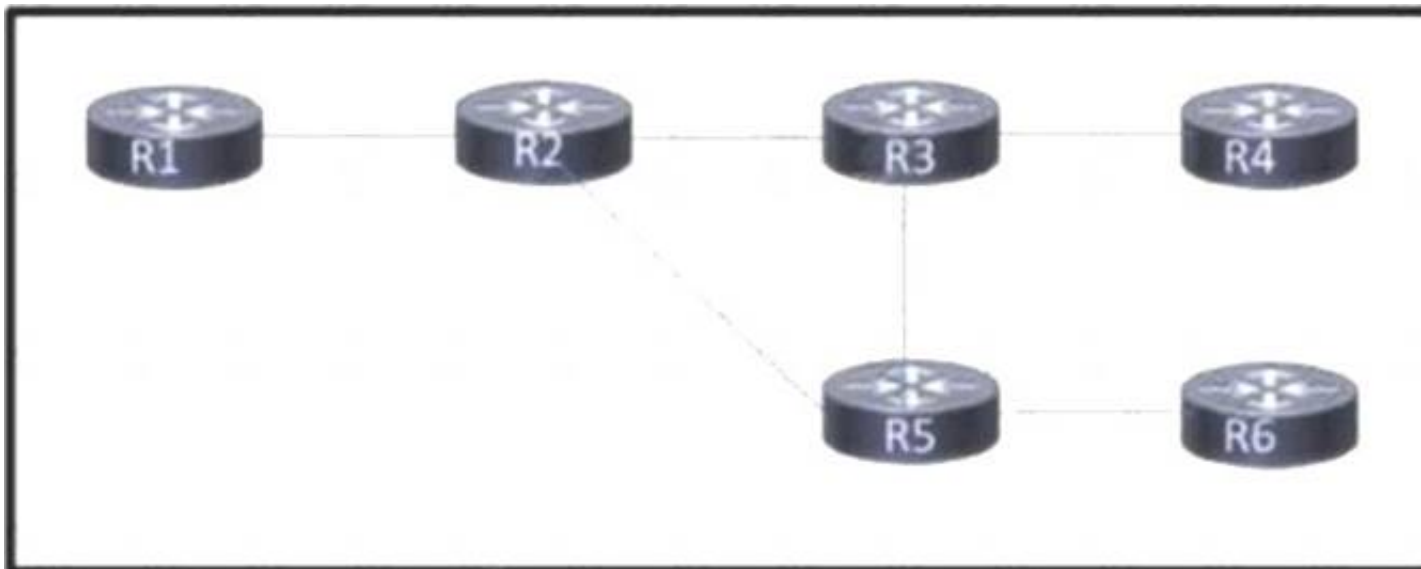
**Answer: D**

**Explanation:**

<https://www.cisco.com/c/en/us/support/docs/quality-of-service-qos/qos-policing/19645-policevsshape.html>

#### NEW QUESTION 140

Refer to the exhibit.



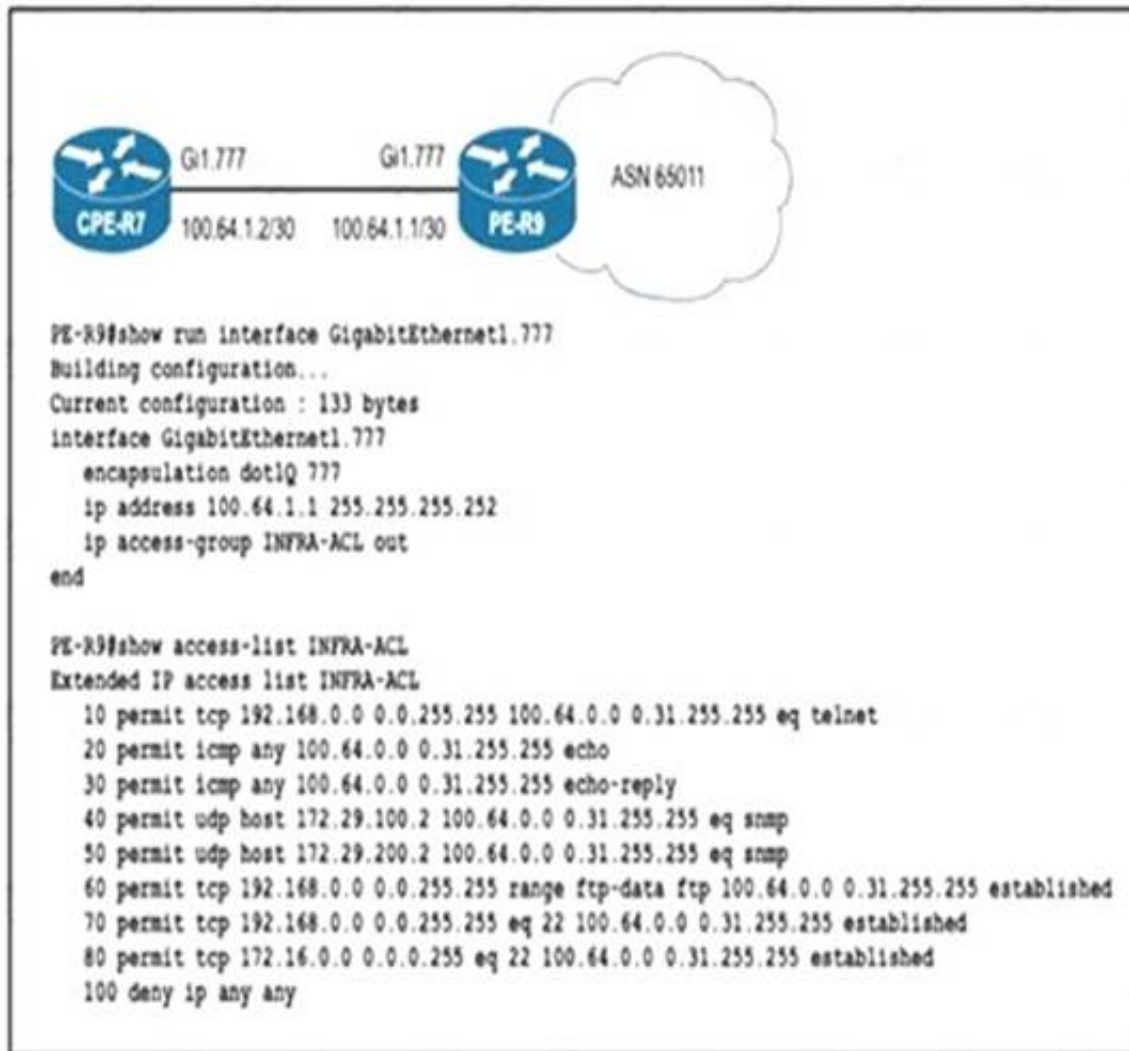
Customers report occasional forwarding issues from hosts connected to R6 to hosts connected to R1. A network engineer has just updated the MPLS configuration on the network, and a targeted LDP session has been established between R1 and R5. Which additional task must the engineer perform so that the team can identify the path from R6 to R1 in case the forwarding issues continue?

- A. Configure an MPLS TE from R4 to R1 that routes through R5.
- B. Implement MPLS OAM within the network.
- C. Implement MPLS VPLS within the network.
- D. Configure MPLS LDP Sync on each router.

**Answer: B**

#### NEW QUESTION 141

Refer to the exhibit.



To protect in-band management access to CPE-R7, an engineer wants to allow only SSH management and provisioning traffic from management network 192.168.0.0/16. Which infrastructure ACL change must be applied to router PE-R9 to complete this task?

A)

```

ip access-list extended INFRA-ACL
15 permit tcp 192.168.0.0 0.0.255.255 range 49152 65535 100.64.0.0 0.31.255.255 eq 443
  
```

B)

```

ip access-list extended INFRA-ACL
no 10
15 permit tcp 192.168.0.0 0.0.255.255 eq 22 100.64.0.0 0.31.255.255 eq 22
  
```

C)

```

ip access-list extended INFRA-ACL
15 permit tcp 192.168.0.0 0.0.255.255 range 49152 65535 100.64.0.0 0.31.255.255 eq 22
  
```

D)

```

ip access-list extended INFRA-ACL
no 10
15 permit tcp 192.168.0.0 0.0.255.255 range 49152 65535 100.64.0.0 0.31.255.255 eq 22
  
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer: B**

#### NEW QUESTION 143

Refer to the exhibit:

```

route-policy ciscotest
  if destination in acl10 then
    pass
  else
    set local-preference 300
  endif
end-policy end
  
```

A network engineer is implementing a BGP routing policy. Which effect of this configuration is true?

A. All traffic that matches acl10 is allowed without any change to its local-preference

B. All traffic that matches acl10 is dropped without any change to its local-preference

C. If traffic matches acl10, it is allowed and its local-preference is set to 300

D. All traffic is assigned a local-preference of 300 regardless of its destination

**Answer: A**

# NEW QUESTION 147

Refer to the exhibit.

```
RP/0/RP0/CPU0:XR1#do sh bundle
```

Bundle-Ether11				
Status:	Up			
Local links <active/standby/configured>:	1 / 2 / 3			
Local bandwidth <effective/available>:	1000000 (1000000) kbps			
MAC address (source):	0007.ec14.cc2b (Chassis pool)			
Inter-chassis link:	No			
Minimum active links / bandwidth:	1 / 1 kbps			
Maximum active links:	1			
Wait while timer:	2000 ms			
Load balancing:				
Link order signaling:	Not configured			
Hash type:	Default			
Locality threshold:	None			
LACP:	Operational			
Flap suppression timer:	Off			
Cisco extensions:	Disabled			
Non-revertive:	Disabled			
mLACP:	Not configured			
IPv4 BFD:	Not configured			
IPv6 BFD:	Not configured			

Port	Device	State	Port ID	B/W, kbps
Gi0/0/0/0	Local	Standby	0x8000, 0x0003	1000000
Link is Standby due to maximum-active links configuration				
Gi0/0/0/1	Local	Standby	0x8000, 0x0002	1000000
Link is Standby due to maximum-active links configuration				
Gi0/0/0/2	Local	Active	0x8000, 0x0001	1000000
Link is Active				

A network operator needs to shut down interface Gi0/0/0/2 for maintenance. What occurs to the interface states of Gi0/0/0/0 and Gi0/0/0/1?

- A. Gi0/0/0/1 and Gi0/0/0/0 become active
- B. Gi0/0/0/1 and Gi0/0/0 remains standby
- C. Gi0/0/0/0 becomes activ
- D. Gi0/00/1 remains standby
- E. Gi0/0/0/1 becomes active Gi0/0/0/0 remains standby

Answer: D

# NEW QUESTION 151

What are two features of 6RD IPv6 transition mechanism? (Choose two.)

- A. It inserts IPv4 bits into an IPv6 delegated prefix.
- B. It uses a native IPv6-routed network between CE routers and the BR router.
- C. It allows dynamic 1:N translation of IPv6 address.
- D. It uses stateful automatic 6to4 tunnels between CE routers and the BR router.
- E. It uses stateless automatic 6to4 tunnels between CE routers and the BR router.

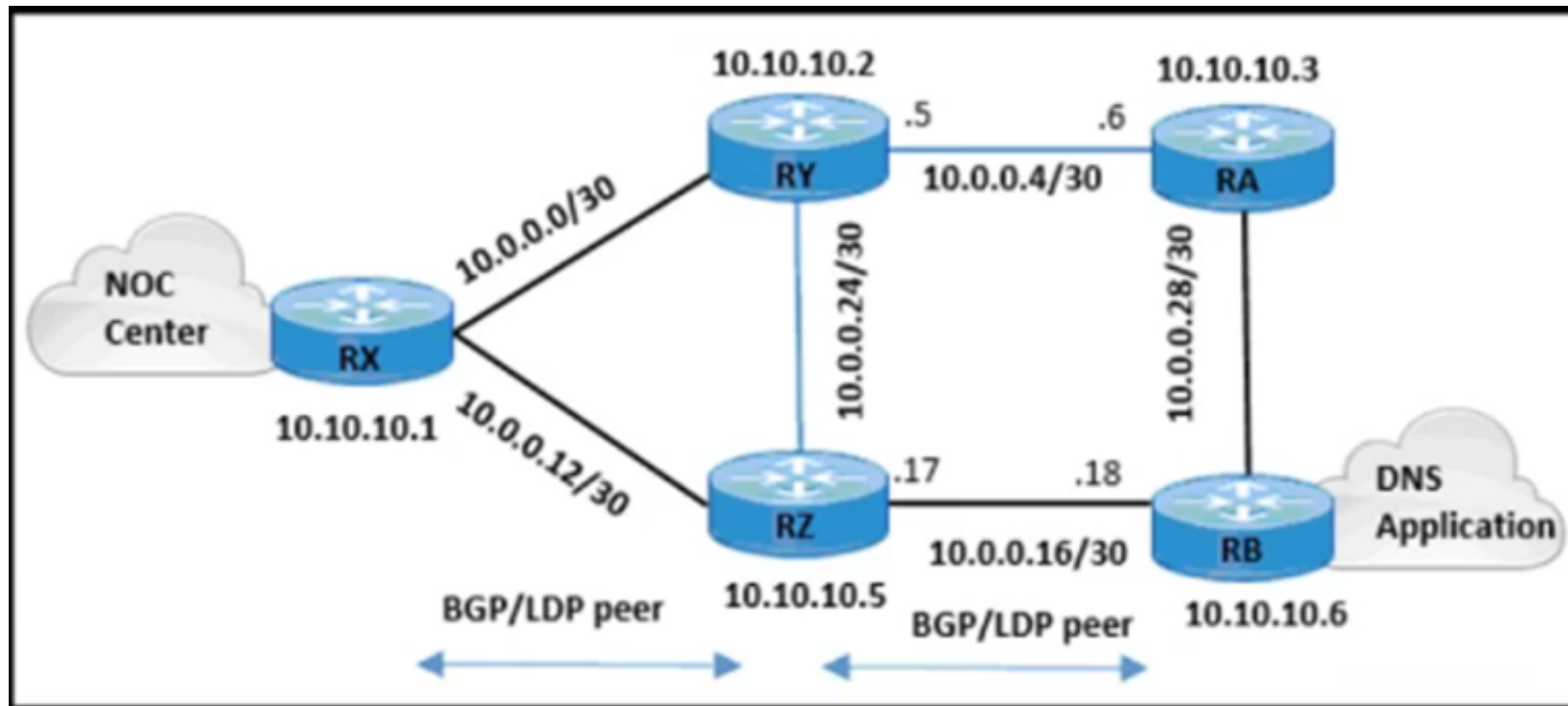
Answer: AE

# NEW QUESTION 156

Refer to the exhibit.

```
RX#
class-map match-all Routing
match access-group 150
class-map match-all Management
match access-group 151
!
policy-map RTR_CoPP
class Routing
police 1000000 50000 50000 conform-action transmit exceed-action transmit
class Management
police 100000 20000 20000 conform-action transmit exceed-action drop
!
access-list 150 permit tcp any gt 1024 10.0.0.0 0.0.0.255 eq bgp
access-list 150 permit tcp any eq bgp 10.0.0.0 0.0.0.255 gt 1024 established
access-list 151 permit tcp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq telnet
access-list 151 permit tcp 192.168.10.0 0.0.0.255 eq telnet 10.0.1.0 0.0.0.255 established
access-list 151 permit tcp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq 22
access-list 151 permit tcp 192.168.10.0 0.0.0.255 eq 22 10.0.1.0 0.0.0.255 established
access-list 151 permit udp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq snmp
access-list 151 permit tcp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq www
access-list 151 permit udp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq 443
access-list 151 permit tcp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq ftp
access-list 151 permit tcp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq ftp-data
access-list 151 permit udp 192.168.10.0 0.0.0.255 10.0.1.0 0.0.0.255 eq syslog
access-list 151 permit udp 172.16.10.0 0.0.0.255 eq domain 10.0.1.0 0.0.0.255
```





The engineering team wants to limit control traffic on router RX with the following IP address assignments:

- Accepted traffic for router: 10.0.0.0/24
- NOC users IP allocation: 192.168.10.0/24

Which additional configuration must be applied to RX to apply the policy for MSDP?

- A. RX(config)#access-list 151 permit tcp any gt 1024 10.10.0.0 0.0.0.255 eq 639RX(config)#access-list 151 permit tcp any eq 639 10.10.0.0 0.0.0.255 gt 1024 established
- B. RX(config)#access-list 150 permit tcp any gt 1024 10.0.0.0 0.0.0.255 eq 639RX(config)#access-list 150 permit tcp any eq 639 10.0.0.0 0.0.0.255 gt 1024 established
- C. RX(config)#access-list 151 permit tcp any 10.0.0.0 0.0.0.255 eq 639RX(config)#access-list 151 permit udp any 10.0.0.0 0.0.0.255 eq 639
- D. RX(config)#access-list 150 permit tcp any 10.0.0.0 0.0.0.255 eq 639RX(config)#access-list 150 permit udp any 10.0.0.0 0.0.0.255 eq 639

**Answer: B**

#### NEW QUESTION 160

The administrator of a small company network notices that intermittent network issues occasionally cause inbound notifications to its SNMP servers to be lost. Which configuration must the administrator apply so that the SNMP servers acknowledge the notifications that they receive?

- A. snmp-server community ciscotest rw 10
- B. snmp-server host tests.cisco.com public snmp-server community ciscotest rw 10
- C. snmp-server enable traps bgpsnmp-server host 192.169.2.1 Informs
- D. snmp-server enable traps snmp

**Answer: C**

#### NEW QUESTION 164

Which additional feature does MPLS DiffServ tunneling support?

- A. matching EXP and DSCP values
- B. interaction between MPLS and IGP
- C. using GRE tunnels to hide markings
- D. PHB layer management

**Answer: D**

#### Explanation:

[https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp\\_te\\_diffserv/configuration/15-mt/mp-te-diffserv-15-mt-bo](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_te_diffserv/configuration/15-mt/mp-te-diffserv-15-mt-bo)

#### NEW QUESTION 169

A router is configured to perform MPLS LDP graceful restart.

Which three steps are included when the RP sends an LDP initialization to a neighbor to establish an LDP session? (Choose three)

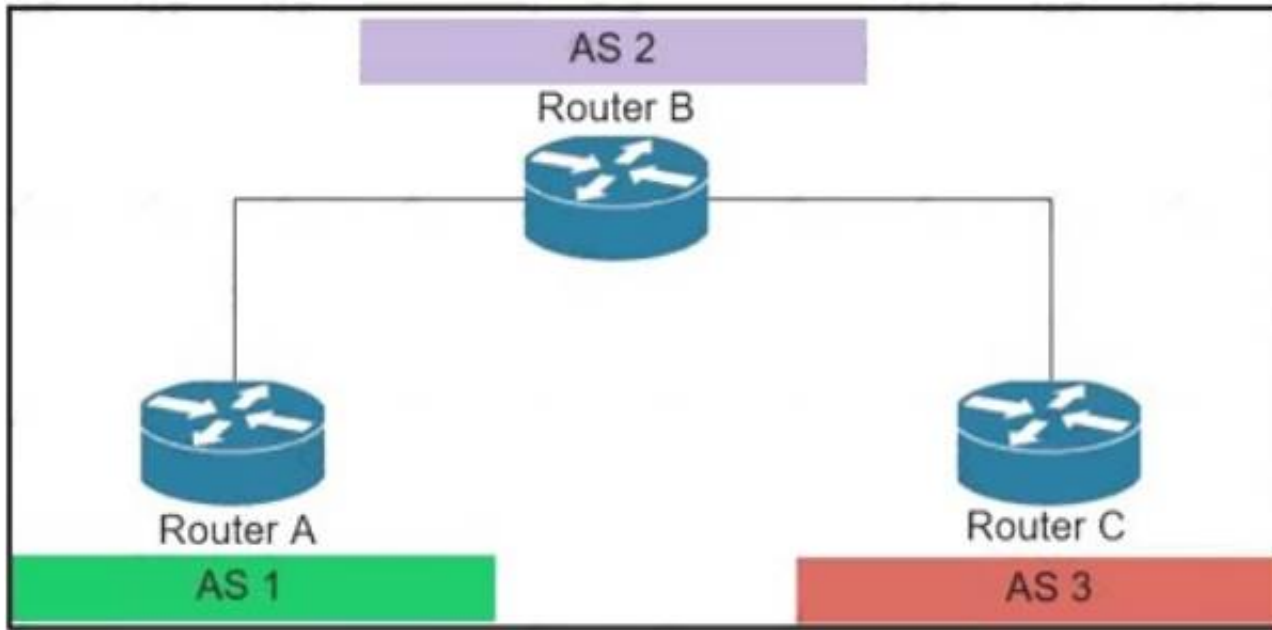
- A. Reconnect Timeout field
- B. Learn from Neighbor (N) flag, set to 1
- C. Graceful restart capability in OPEN message
- D. Recovery Time field
- E. Learn from Network (L.) flage, set to 1
- F. Type-9 LSA

**Answer: ADE**

#### NEW QUESTION 172

Refer to the exhibit.





An engineer working for private Service Provider with employee id: 3948:11:613 is configuring the BGPsec framework. Which two conditions must the engineer take into account? (Choose two.)

- A. BGPsec uses IPsec tunnel for security.
- B. The BGPsec framework secures the AS path.
- C. In BGPsec
- D. all route advertisements are given an expiry time by the originator of the route.
- E. Private keys are part of the router key pair used to sign route updates.
- F. In BGPsec
- G. route advertisements are not given an expiration time by the originator of the route.

**Answer:** BC

**Explanation:**

<https://tools.ietf.org/html/rfc8374#section-3.2>

#### NEW QUESTION 175

Refer to the exhibit.

```

R1(config)# router isis area1
R1(config-router)# net 49.0001.0000.0000.000b.00

R1(config-router)# interface loopback 0
R1(config-if)# ipv6 address 2001:0000:1001:1000::1/128
R1(config-if)# exit

R1(config)# interface Ethernet 1/2
R1(config-if)# ipv6 address 2001:0000:1001:100A::1/64
R1(config-if)# ipv6 router isis area1
R1(config-if)# exit
  
```

A network engineer with an employee id: 3812:12:993 has started to configure router R1 for IS-IS as shown. Which additional configuration must be applied to configure the IS-IS instance to advertise only network prefixes associated to passive interfaces?

- ☒ R1(config)# **router isis area1**  
 R1(config-router)# **passive-interface loopback 0**  
 R1(config-router)# **address-family ipv6**  
 R1(config-router-af)# **advertise passive-only**
- ☐ R1(config-router)# **address-family ipv6**  
 R1(config-router-af)# **advertise passive-only**
- ☐ R1(config)# **router isis area1**  
 R1(config-router)# **loopback 0 passive-interface**  
 R1(config-router)# **address-family ipv6**  
 R1(config-router-af)# **prc-interval 20**
- ☒ R1(config)# **router isis area1**  
 R1(config-router)# **passive-interface loopback 0**

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

**Answer:** A

#### NEW QUESTION 180

Refer to the exhibit.

172.16.0.0/16

```
AS 321, med 420, external, rid 10.2.54.12 via 10.2.54.12
AS 51, med 500, external, rid 7.4.5.2 via 7.4.5.2
AS 321, med 300, internal, rid 10.2.34.5 via 10.2.34.5
```

Tier 2 ISP A on AS 653 is connected to two Tier 1 ISPs on AS 321 and AS 51 respectively. The network architect at ISP A is planning traffic flow inside the network to provide predictable network services. Cisco Express Forwarding is disabled on the edge router. How should the architect implement BGP to direct all traffic via the Tier 1 ISP with next-hop 7.4.5.2?

- A. Implement the BGP routing protocol and run the bgp deterministic-med command.
- B. Implement MP-BGP with a 4-byte AS number with the bgp best path compare-routerid command.
- C. Implement the BGP routing protocol and the maximum-paths 2 configuration.
- D. Implement BGP route-reflector functionality with the bgp always-compare-med configuration.

**Answer: A**

#### NEW QUESTION 181

An engineer a cisco MPLS tunnel to improve the streaming experience for the clients of a video -on-demand server. Which action must the engineer perform to configure extended discovery to support the MPLS LDP session between the headend and tailend routers?

- ☒ Configure the interface bandwidth to handle TCP and UDP traffic between the LDP peers.
- ☐ Configure a Cisco MPLS TE tunnel on both ends of the session.
- ☐ Configure an access list on the interface to permit TCP and UDP traffic.
- ☐ Configure a targeted neighbor session.

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

**Answer: D**

#### NEW QUESTION 182

What occurs when a high bandwidth multicast stream is sent over an MVPN using Cisco hardware?

- ☒ The traffic uses the default MDT to transmit the data only if it is a (S, G) multicast route entry.
- ☐ A data MDT is created to if it is a (\*, G) multicast route entries.
- ☐ A data and default MDT are created to flood the multicast stream out of all PIM-SM neighbors.
- ☐ A data MDT is created to allow for the best transmission through the core for (S, G) multicast route entries.

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

**Answer: D**

#### NEW QUESTION 187

A network engineer is configuring a newly installed PE router at the regional gateway location. The new PE router must use MPLS core routing protocols with the existing P router, and LDP sessions between the two routers must be protected to provide faster MPLS convergence. Which configuration must the engineer perform on the network so that LDP sessions are established?

- A. Enable communication over TCP port 646 for T-LDP hello messages.
- B. Enable RSVP-TE FRR on the LDP interface to protect the LDP session between routers.
- C. Enable LDP session protection on either one of the routers, which allows them to autonegotiate.
- D. Set the LDP session protection timer on each router to the same value.

**Answer: C**

#### NEW QUESTION 188

Refer to the exhibit:

```
telemetry model-driven
subscription cisco
sensor-group-id ciscotest sample-interval 60000
commit
```

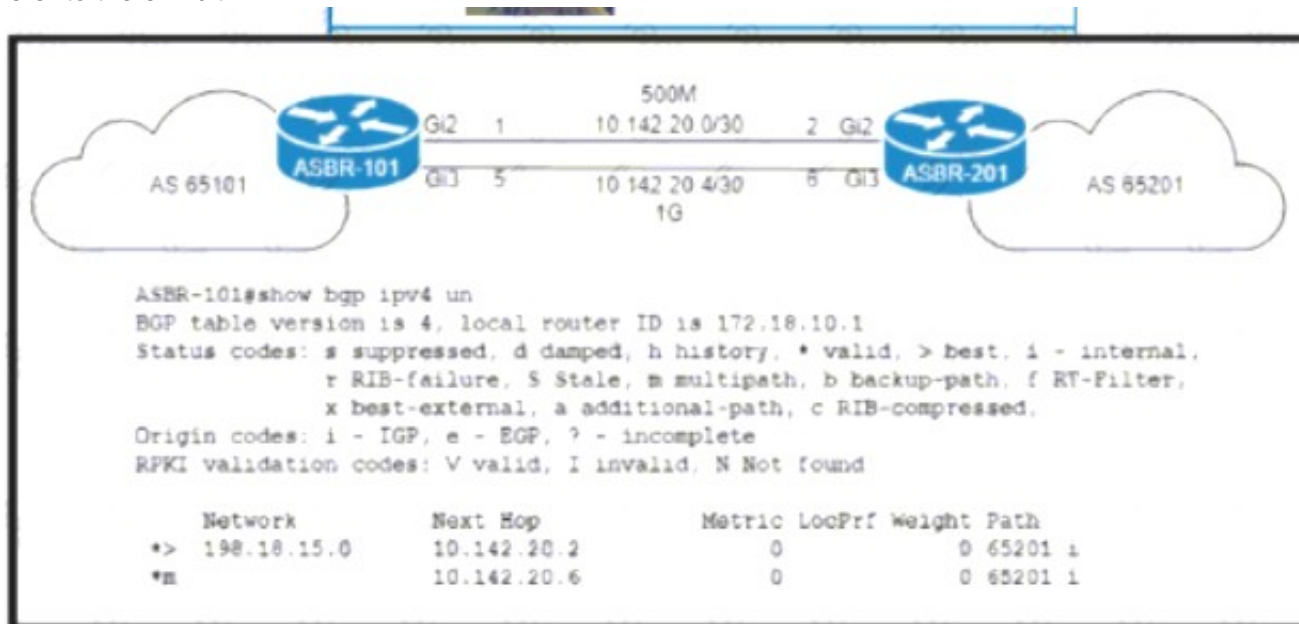
This configuration is being applied on an IOS XR router. Which statement about this configuration is true?

- A. It is used to set up configuration to poll network data
- B. It is used to enable gRPC
- C. It is used to create a streaming subscription with a 60-second interval
- D. It is used to create a streaming subscription with a 600-second interval

**Answer: C**

#### NEW QUESTION 191

Refer to the exhibit



an engineer working for a private telecommunication company with an employee Id: 4065:96:080 upgrades the WAN link between routers ASBR-101 and ASBR-201 to 1Gb by Installing a new physical connection between the Gi3 Interfaces. Which BGP attribute must the engineer configure on ASBR-201 so that the existing WAN link on Gi2 Is maintained as a backup?

☐ configure terminal  
ip prefix-list ALLOWED\_PREFIXES seq 5 permit 198.18.15.0/24

route-map AS65101-OUT permit 10  
match ip address prefix-list ALLOWED\_PREFIXES  
set as-path prepend 65101 65101

router bgp 65201  
address-family ipv4  
neighbor 10.142.20.1 route-map AS65101-OUT out  
end

☐ configure terminal  
ip prefix-list ALLOWED\_PREFIXES seq 5 permit 198.18.15.0/24

route-map AS65101-OUT permit 10  
match ip address prefix-list ALLOWED\_PREFIXES  
set as-path prepend 65101 65101

☒ configure terminal  
ip prefix-list ALLOWED\_PREFIXES seq 5 permit 198.18.15.0/24

route-map AS65101-OUT permit 10  
match ip address prefix-list ALLOWED\_PREFIXES  
set metric 100

router bgp 65201  
address-family ipv4  
neighbor 10.142.20.1 route-map AS65101-OUT out  
end

☐ configure terminal  
ip prefix-list ALLOWED\_PREFIXES seq 5 permit 198.18.15.0/24

route-map AS65101-OUT permit 10  
match ip address prefix-list ALLOWED\_PREFIXES  
set metric 100

router bgp 65201  
address-family ipv4  
neighbor 10.142.20.5 route-map AS65101-OUT out  
end

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

**Answer: C**



#### NEW QUESTION 195

Refer to the exhibit:

```
RP/0/0/CPU0:iosxrv-1#show mpls ldp discovery brief
Sat Apr  2 22:43:11.362 UTC

Local LDP Identifier: 192.168.0.2:0
```

Discovery Source Session	VRF Name	Peer LDP Id	Holdtime	
--				
Gi0/0/1	default	192.168.0.3:0	15	Y
Gi0/0/2	default	192.168.0.4:0	15	Y
Gi0/0/3	default	192.168.0.5:0	15	Y
Tgt:192.168.0.1	default	192.168.0.1:0	90	Y
Tgt:192.168.0.3	default	192.168.0.3:0	90	Y
Tgt:192.168.0.5	default	-	-	N

With which router does IOSXRV-1 have LDP session protection capability enabled but session hold up is not active?

- A. 192.168.0.1
- B. 192.168.0.3
- C. 192.168.0.4
- D. 192.168.0.5

Answer: B

#### NEW QUESTION 198

What Is one of the differences between Ansible and Chef?

- A. Ansible uses YAML and Chef uses Ruby.
- B. Chef requires the use of Windows in the environment and Ansible requires Linux.
- C. Chef is highly scalable and Ansible is highly secure.
- D. Ansible uses Ruby and Chef uses Python.

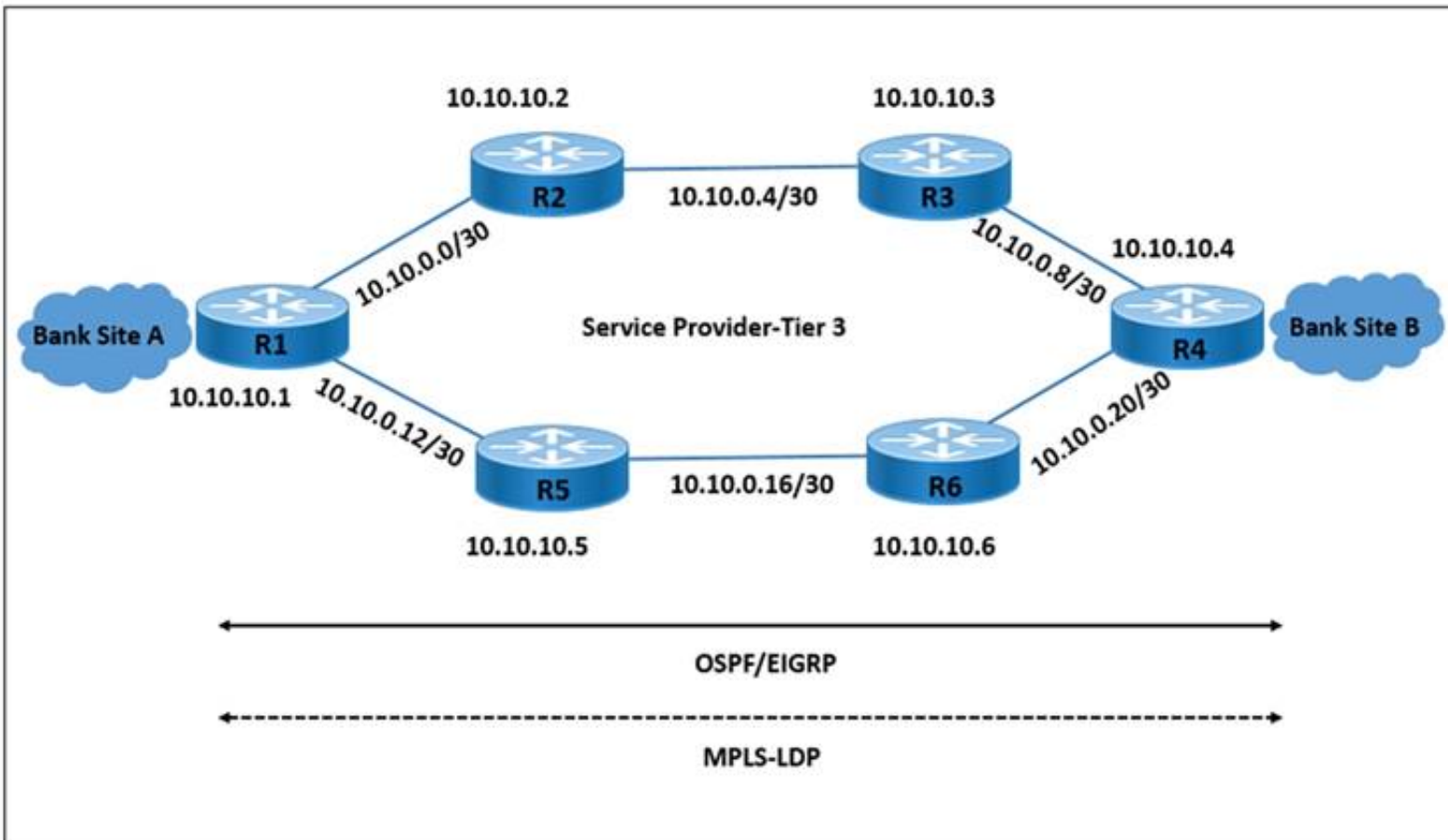
Answer: A

#### NEW QUESTION 199

Refer to the exhibit.

```
R2# show mpls ldp neighbor detail
Peer LDP Ident: 10.10.10.1:0; Local LDP Ident 10.10.10.2:0
TCP connection: 10.10.10.1.646 - 10.10.10.2.56531
Password: not required, none, in use
State: Oper; Msgs sent/rcvd: 18/18; Downstream; Last TIB rev sent 28
Up time: 00:01:08; UID: 3; Peer Id 2;
LDP discovery sources:
  GigabitEthernet2/0; Src IP addr: 10.0.0.1
    holdtime: 15000 ms, hello interval: 5000 ms
Addresses bound to peer LDP Ident:
  10.0.0.13 10.10.10.1 10.0.0.1
Peer holdtime: 180000 ms; KA interval: 60000 ms; Peer state: estab
Clients: Dir Adj Client
LDP Session Protection enabled, state: Incomplete
  duration: 86400 seconds

R1# show mpls ldp neighbor detail
Peer LDP Ident: 10.10.10.2:0; Local LDP Ident 10.10.10.1:0
TCP connection: 10.10.10.2.56531 - 10.10.10.1.646
Password: not required, none, in use
State: Oper; Msgs sent/rcvd: 19/19; Downstream; Last TIB rev sent 30
Up time: 00:02:27; UID: 2; Peer Id 1;
LDP discovery sources:
  GigabitEthernet2/0; Src IP addr: 10.0.0.2
    holdtime: 15000 ms, hello interval: 5000 ms
Addresses bound to peer LDP Ident:
  10.10.10.2 10.0.0.5 10.0.0.2 10.0.0.25
Peer holdtime: 180000 ms; KA interval: 60000 ms; Peer state: estab
```



LDP peering between routers R1 and R2 is dropped when the link between R1 and R2 is taken offline. However, LDP peering between R2 and R3 stays up when the link between R2 and R3 is taken offline. Which action allows MPLS traffic forwarding to continue normally if the link between R1 and R2 goes down?

- A. Enable IGP and LDP Synchronization on R1.
- B. Implement LDP Session Protection on R1.
- C. Enable IGP and LDP Synchronization on R2.
- D. Implement LDP Session Protection on R2.

**Answer: B**

#### NEW QUESTION 200

What is a constraint of Cisco MPLS TE tunnel configurations?

- A. Tunnels cannot span multiple OSPF areas.
- B. With ISIS as an IG
- C. only older-style metrics are used.
- D. Tunnels cannot be configured over IP unnumbered links.
- E. QoS-aware tunneling is not supported.

**Answer: C**

**Explanation:**

### Restrictions for MPLS Traffic Engineering and Enhancements

- MPLS traffic engineering supports only a single IGP process/instance. Multiple IGP processes/instances are not supported and MPLS traffic engineering should not be configured in more than one IGP process/instance.
- MPLS traffic engineering does not support ATM MPLS-controlled subinterfaces.
- The MPLS traffic engineering feature does not support routing and signaling of LSPs over unnumbered IP links. Therefore, do not configure the feature over those links.

#### NEW QUESTION 203

A network engineer is adding 10Gbps link to an existing 2X1Gbps LACP-based LAG to augment its capacity. Network standards require a bundle interface to be take out of service if one of its member links does down, and the new link must be added with minimal impact to the production network. Drag and drop the tasks that the engineer must perform from the left into the sequence on the right. Not all options are used.

Execute the channel-group number mode active command to add the 10Gbps link to the existing bundle.	step 1
Execute the channel-group number mode on command to add the 10Gbps link to the existing bundle.	step 2
Execute the lacp min-bundle 3 command to set the minimum number of ports threshold.	step 3
Validate the network layer of the 10Gbps link.	step 4
Execute the channel-group number mode auto command to add the 10Gbps link to the existing bundle.	
Validate the physical and data link layers of the 10Gbps link.	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:  
Application, table Description automatically generated with medium confidence

NEW QUESTION 206  
Drag and drop the characteristics from the left onto the automation tool on the right.

Answer Area

It is the standard transport protocol for communicating with network devices.	NETCONF
It is a standard data modeling language.	
It retrieves operational data.	
It develops data models.	
It shapes state data.	
It sets and reads configuration data.	

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:



## Answer Area

It is the standard transport protocol for communicating with network devices.

It is a standard data modeling language.

It retrieves operational data.

It develops data models.

It shapes state data.

It sets and reads configuration data.

## NETCONF

It is a standard data modeling language.

It retrieves operational data.

It sets and reads configuration data.

### NEW QUESTION 208

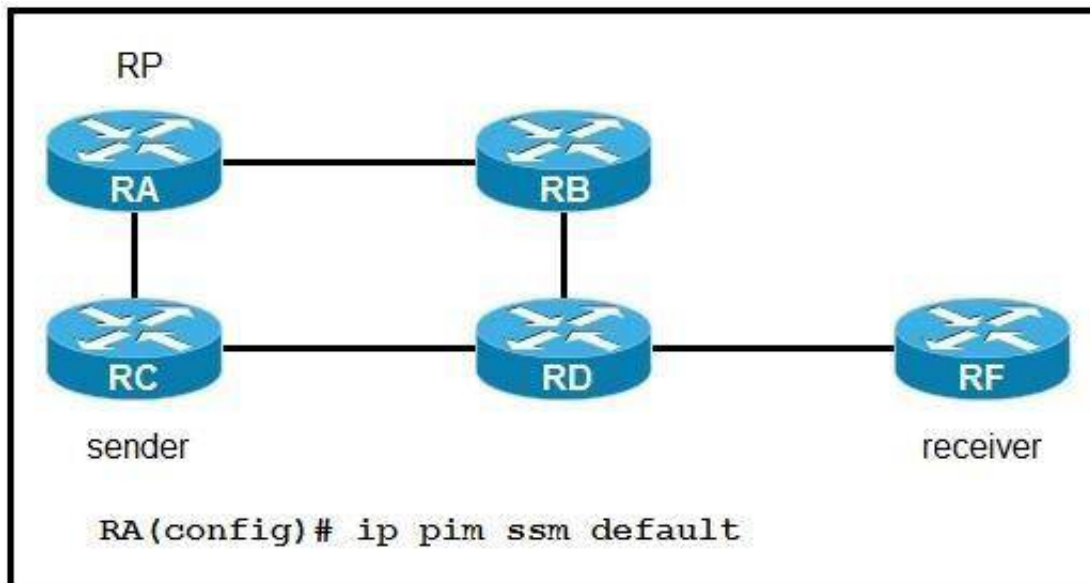
A network engineer is implementing BFD configuration changes on a customer's equipment. How is the bfd interval configuration on the interface disconnected?

- A. The status of the interface changes.
- B. The IPv4 or IPv6 address configuration on the interface changes.
- C. It is automatically disconnected when the BFD-configured subinterface is removed.
- D. It is automatically disconnected when the BFD main interface is removed.

**Answer: D**

### NEW QUESTION 210

Refer to the exhibit:



If router RA is configured as shown, which IPv4 multicast address space does it use?

- A. 224.0. 0.0/8
- B. 225.0. 0.0/8
- C. 232.0. 0.0/8
- D. 239.0. 0.0/8

**Answer: C**

### NEW QUESTION 214

Why do Cisco MPLS TE tunnels require a link-state routing protocol?

- A. Link-state routing protocols use SPF calculations that the tunnel endpoints leverage to implement the tunnel
- B. The link-state database provides a data repository from which the tunnel endpoints can dynamicallyselect a source ID
- C. The tunnel endpoints can use the link-state database to evaluate the entire topology and determine the best path
- D. The link state database provides segmentation by area, which improves the path-selection process

**Answer: C**

### NEW QUESTION 215

Refer to the exhibit:

```
R1:
interface FastEthernet0/0
ip address 10.1.12.1 255.255.255.0
duplex full
end
!
!
!
R1(config)#interface FastEthernet0/0
R1(config-if)#ospfv3 1 area 1 ipv4
% IPv6 routing not enabled
```

A network engineer is implementing an OSPF configuration Based on the output, which statement is true?

- A. In the ospfv3 1 area 1 ipv4 command, area 0 must be configured instead of area 1.
- B. OSPFv3 does not run for IPv4 on FastEthernet0/0 until IPv6 routing is enabled on the router and IPv6 is enabled on interface FastEthernet0/0
- C. OSPFv3 cannot be configured for IPv4; OSPFv3 works only for IPv6.
- D. "IPv6 routing not enabled" is just an informational message and OSPFv3 runs for IPv4 on interface FastEthernet0/0 anyway

**Answer: B**

#### NEW QUESTION 218

An engineer working for telecommunication company with an employee id: 3715 15 021 needs to secure the LAN network using a prefix list Which best practice should the engineer follow when he implements a prefix list?

- A. An engineer must use non sequential sequence numbers in the prefix list so that he can insert additional entries later.
- B. The final entry in a prefix list must be /32
- C. An engineer must identify the prefix list with a number only
- D. An engineer must include only the prefixes for which he needs to log activity.

**Answer: A**

#### NEW QUESTION 222

The network team is planning to implement IPv6 on the company's existing IPv4 network infrastructure. The network currently uses IS-IS to share routes between peers. Which task must the team perform so that IS-IS will run in multitopology mode on the updated IPv6 network?

- A. Configure the links between the network routers as point-to-point.
- B. Configure the network routers to use metric-style wide.
- C. Configure the network routers as Level 2 routers.
- D. Configure the IS-IS IPv6 metric on the dual-stack links.

**Answer: D**

#### NEW QUESTION 225

A service provider requires continuous real-time network monitoring to provide reliable SLAs to its customers. To satisfy this requirement, a network administrator is implementing gRPC dial out on an ASR with TLS. Receiver 192.168.10.2 will be assigned one of the subscriptions, and it will manage the ASR. Which configuration must the engineer apply to the router as part of the configuration process?

- A. snmp-server community public snmp-server enable trapssnmp-server host 192.168.10.2 version 2c public.
- B. telemetry model-driven destination-group DGroup1address family ipv4 192.168.10.2 1 port 10 encoding self-describing-gpb
- C. snmp-server community public snmp-server enable trapssnmp-server enable traps snmp authentication snmp-server managersnmp-server manager session-timeout 1000
- D. telemetry model-driven destination-group ciscotestaddress family ipv4 192.168.10.2 port 10 encoding self-describing-gpbprotocol grpc tis-hostname ciscotest.com

**Answer: D**

#### NEW QUESTION 226

Refer to the exhibit:

```
R1
ip cef distributed
mpls ldp graceful-restart
interface GigabitEthernet 0/0/1
 mpls ip
 mpls label protocol ldp
```

Which effect of this configuration is true?

- A. R1 can support a peer that is configured for LDP SSO/NSF as the peer recovers from an outage
- B. R1 can failover only to a peer that is configured for LDP SSO/NSF
- C. R1 can failover to any peer
- D. R1 can support a graceful restart operation on the peer, even if graceful restart is disabled on the peer

Answer: B

NEW QUESTION 230

Drag and drop the functionalities from the left onto the correct target fields on the right.

MAP-T	Can translate RFC1918 IPv4 to Public IPv4
NAT 64	Can be Stateless or stateful
NAT 44	Provides reachability of IPv6 host over IPv4 domains
DS Lite	Provides reachability of IPv4 host over IPv6 domains
6RD	Requires IPv6 access network.

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

MAP-T	NAT 44
NAT 64	NAT 64
NAT 44	6RD
DS Lite	DS Lite
6RD	MAP-T

NEW QUESTION 234

Which protocol does a Cisco MPLS TE tunnel use to maintain paths within the core?

- A. RSVP
- B. VTP
- C. STP
- D. RPF

Answer: A

NEW QUESTION 238

Refer to the exhibit.

```
R1
ip cef distributed
mpls ldp graceful-restart
interface GigabitEthernet 0/0/1
 mpls ip
 mpls label protocol ldp
```

What is the effect of this configuration?

- A. R1 supports a graceful restart operation on the peer, even if graceful restart is disabled on the peer.
- B. R1 supports a peer that is configured for LDP SSO/NSF as the peer recovers from an outage.



- C. R1 failovers only to a peer that is configured for LDP SSO/NSF.
- D. R1 failovers to any peer.

**Answer: B**

#### NEW QUESTION 242

Which three OSPF parameters must match before two devices can establish an OSPF adjacency? (Choose three.)

- A. IP address
- B. interface cost
- C. subnet mask
- D. process ID
- E. hello timer setting
- F. area number

**Answer: CEF**

#### NEW QUESTION 244

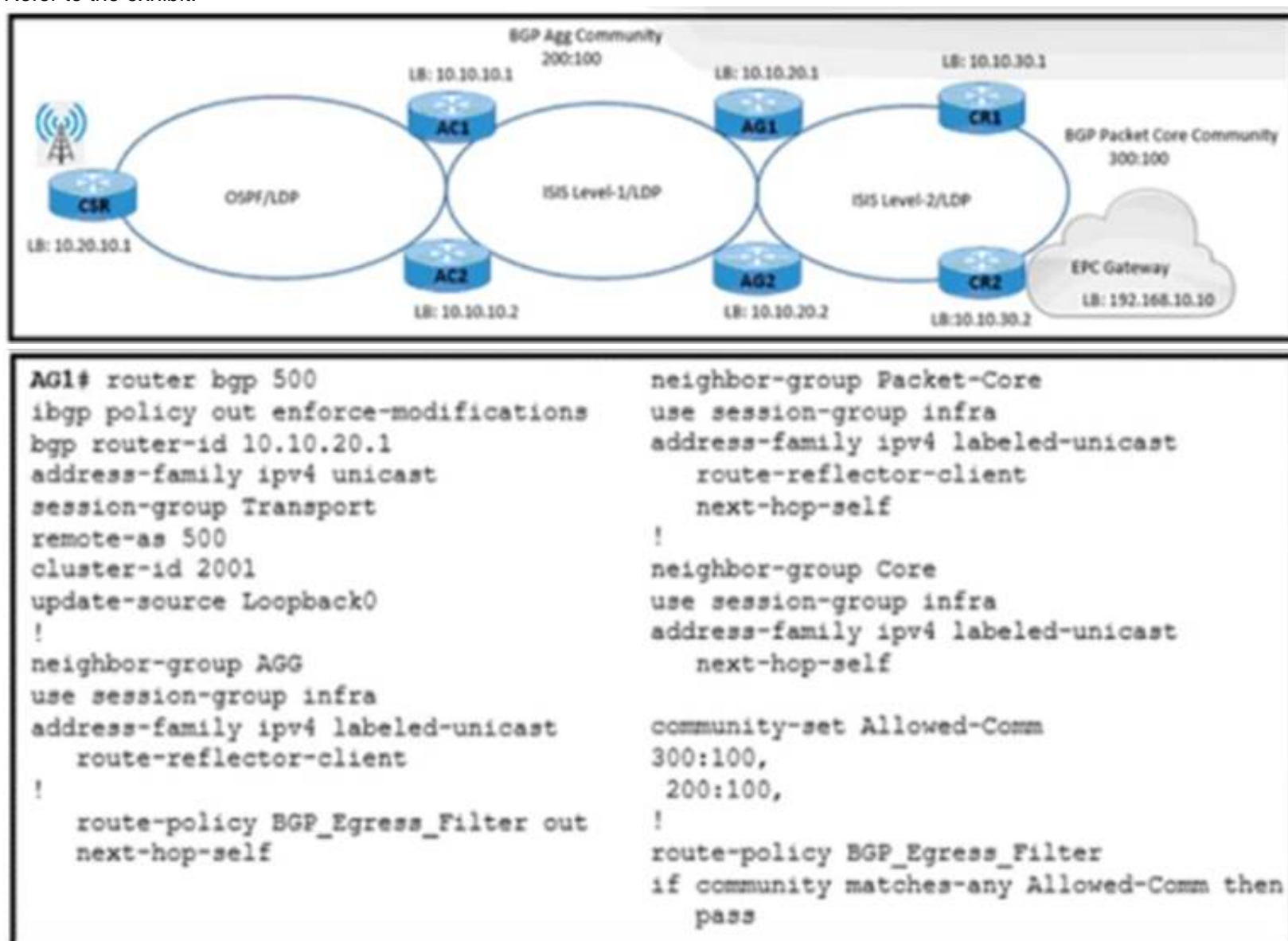
An engineer is implementing NSR with OSPF on a large campus that requires high availability. Which task must an engineer perform to complete the process with minimal disruption to traffic?

- A. Reset OSPF neighbor sessions to maintain state information during router switchover
- B. Configure the device to repopulate state information using routing updates received from the BDR
- C. increase the keepalive interval on the OSPF neighbors so that traffic continues to pass during the switchover.
- D. Ensure that the dual RP has synchronized their state information before performing the switchover operation.

**Answer: D**

#### NEW QUESTION 246

Refer to the exhibit.



A NOC engineer is configuring label-based forwarding from CSR to the EPC gateway. Cell-site operation and maintenance for IPv4 traffic between 10.20.10.1 and 192.168.10.10 is already up. CR1 and CR2 are configured as route reflectors for AG1 and AG2. Which action completes the configuration?

- A. Remove address-family labeled-unicast from the BGP session-group infra on AG1 for neighbor-group core.
- B. Apply the BGP\_Egress\_Filter route policy to the BGP neighbor-group packet core on AG1.
- C. Configure AG1 to allocate a label to the BGP routes that are received in the BGP session group transport.
- D. Configure AG1 to allow the 300:100 and 200:100 communities in the BGP\_Egress\_Filter route policy.

**Answer: B**

#### NEW QUESTION 249

How much must the MTU be increased when configuring the 802.1q VLAN tag?

- A. 2 bytes

- B. 4 bytes
- C. 8 bytes
- D. 12 bytes

Answer: B

NEW QUESTION 251

Drag and drop the functions from the left onto the correct Path Computation Element Protocol roles on the right

calculates paths through the network

keeps TE topology database information

sends path calculation request

sends path creation request

sends path status updates

Path Computation Element

Path Computation Client

- A. Mastered
- B. Not Mastered

Answer: A

Explanation:

Path Computation Element (Calculates paths through the network, keeps TE topology database information, sends path status updates)  
Path computation Client (sends path calculation request, sends path creation request)  
Path Computation Element (PCE)  
Represents a software module (which can be a component or application) that enables the router to compute paths applying a set of constraints between any pair of nodes within the router's TE topology database. PCEs are discovered through IGP.  
Path Computation Client (PCC)  
Represents a software module running on a router that is capable of sending and receiving path computation requests and responses to and from PCEs. The PCC is typically an LSR (Label Switching Router).  
[https://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs\\_r5-3/mpls/configuration/guide/b-mpls-cg53x-crs](https://www.cisco.com/c/en/us/td/docs/routers/crs/software/crs_r5-3/mpls/configuration/guide/b-mpls-cg53x-crs)

NEW QUESTION 256

You are writing an RPL script to accept routes only from certain autonomous systems. Consider this code.

```
RP/0/RP0/CPU0:router(config-rpl)# if as-path in (ios-regex '.*77$')
RP/0/RP0/CPU0:router(config-rpl-if)# pass
RP/0/RP0/CPU0:router(config-rpl-if)# endif
```

If you apply this code to BGP filters, which effect does the code have on your router?

- A. denies routes from AS 7070
- B. allows routes from AS 7077
- C. denies routes from AS 7007
- D. allows routes from AS 770

Answer: B

NEW QUESTION 258

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