CCNP ENARSI 300-410 v6.1 Dumps - ITExamAnswers.net

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CCNA 300-410 Dumps

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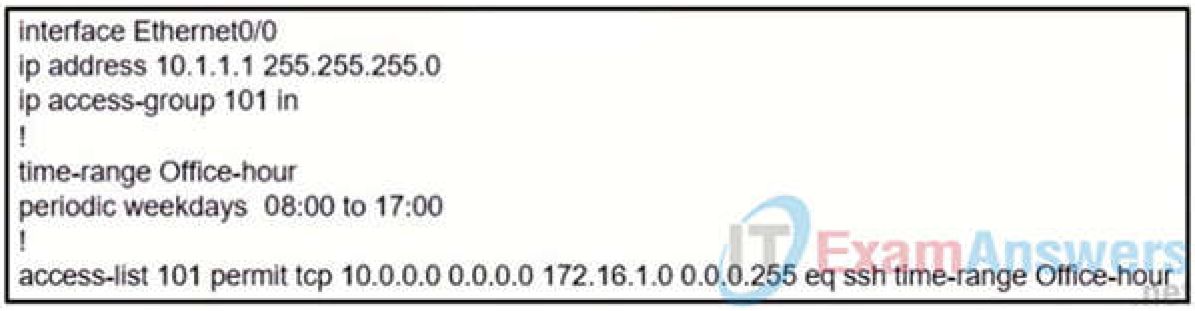
Change/Update logs

- v6.1 (6 Apr 2022): Correct Q191.
- v6.0 (29 Mar 2022): Add new questions 289 --> 325, Correct Q47, 269, 268, 282.
- v5.2 (21 Feb 2022): Add new questions Q279--&gt;Q288, 208, 29, 272, 247; Correct Q186, 189, 201, 212, 223, 231, 236, 245, 275, 277
- v5.1 (5 Feb 2022): Add new questions Q265–>Q278
- v5.0 (3 Feb 2022): Add new questions Q227–>Q264; Q15(D&D). Fix Q62, 139, 158, 174, 180, 226
- v4.1 (6 Jan 2022): Added explanation Q24, Q60, Q166, Q183, Q184, Q185, Q187, Q189, Q195, Q196, Q198.
- v4.0 (5 Nov 2021): Add new questions Q204–>226; Update Q117, Q39, Q182, Q183.
- v3.2.6 (13 Sep 2021): Fix Q7 (D&D).
- v3.2.5 (31 Aug 2021): Fix 45, 185, 189.
- v3.2.4 (22 Aug 2021): Fix 45, 66.
- v3.2.3 (16 Aug 2021): Fix 90,157,162,180,183,187,196,198
- v3.2.1 (10 Aug 2021): Fix Q156
- v3.2 (9 Aug 2021): Add new 203; Add explan Q73,69,152,193; Fix Q90, Q199, Q14D&D
- v3.1 (31 Jul 2021): Fix Q184,195,197,199,201
- v3.0 (30 Jul 2021): Add new questions Q179–>202; Q14 (D&D). Add Explanation Q16,140,143,90,149,163,148,165,152,161,169,168
- v2.3 (12 Jul 2021): Add new questions Q176–>178, Explanation Q20,49,69,13,36,10,93,72
- v2.2 (28 June 2021): Fix/Add new questions
- v2.1 (26 June 2021)
- v2.0 (28 May 2021): Added new questions Q137–> Q176, Q13 (D&D)
- v1.0 (4 May 2021)

Multiple Choice

QUESTION 1
Refer to the exhibit. An IT staff member comes into the office during normal office hours and cannot access devices through SSH Which action should be taken to resolve this issue?



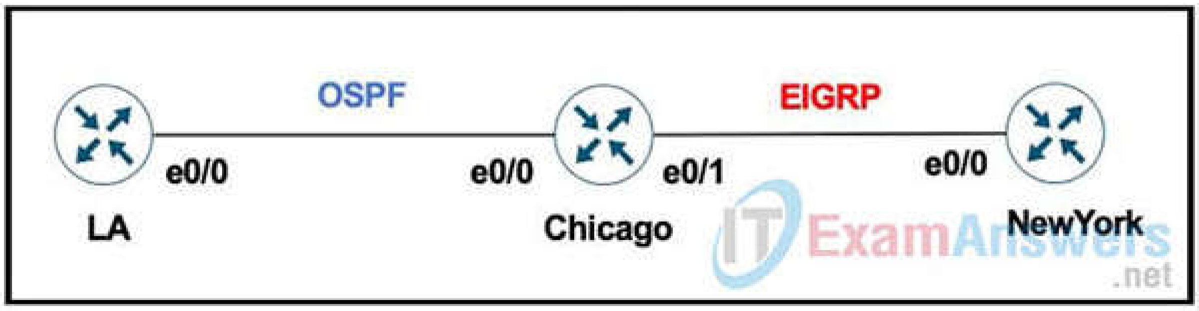
```
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.0
ip access-group 101 in
!
time-range Office-hour
periodic weekdays  08:00 to 17:00
!
access-list 101 permit tcp 10.0.0.0 0.0.0.0 172.16.1.0 0.0.0.255 eq ssh time-range Office-hour
```

A. Modify the access list to use the correct IP address.
B. Configure the correct time range.
C. Modify the access list to correct the subnet mask
D. Configure the access list in the outbound direction.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
To ACL should be permit tcp 101 10.1.1.1 0.0.0.0

QUESTION 2
Refer to The exhibit.



The network administrator must mutually redistribute routes at the Chicago router to the LA and NewYork routers. The configuration of the Chicago router is this:

router ospf 1
 redistribute eigrp 100
router eigrp 100
 redistribute ospf 1

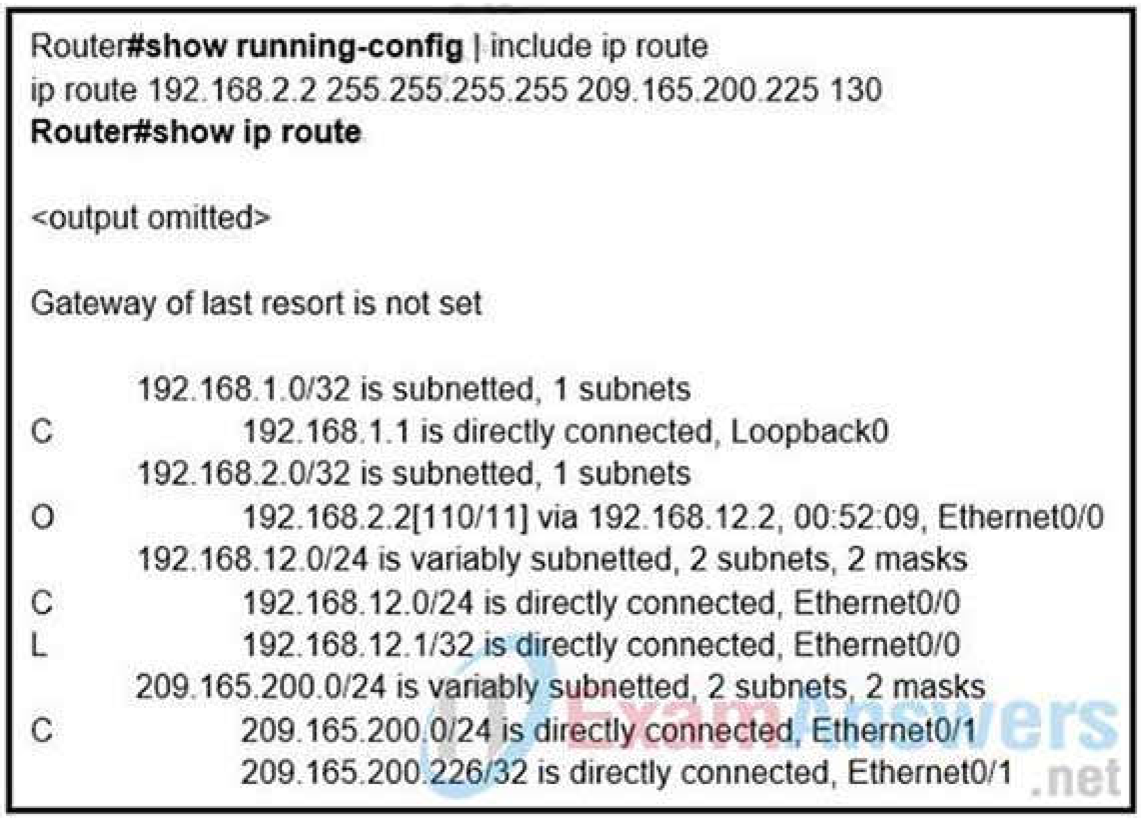
After the configuration, the LA router receives all the NewYork routes, but NewYork router does not receive any LA routes. Which set of configurations fixes the problem on the Chicago router?

A. router ospf 1
   redistribute eigrp 100 metric 20
B. router eigrp 100
   redistribute ospf 1 metric 10 10 10 10 10
C. router eigrp 100
   redistribute ospf 1 subnets
D. router ospf 1
   redistribute eigrp 100 subnets

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
“LA router receives all the NewYork routes but it does not receive any LA routes” because when redistrubuting into EIGRP, we must configure the default metric.

QUESTION 3
Refer to the exhibit. An engineer configures a static route on a router, but when the engineer checks the route to the destination, a different next hop is chosen. What is the reason for this?



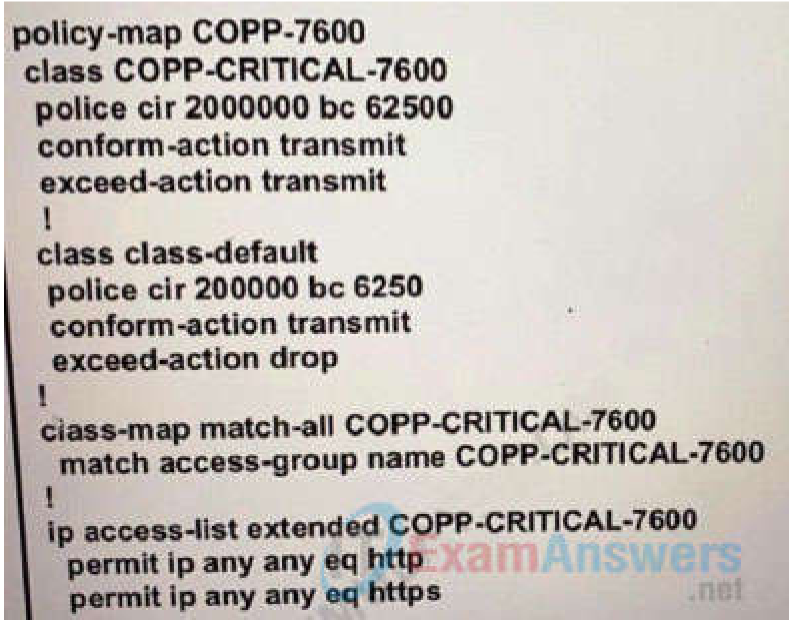
```
Router#show running-config | include ip route
ip route 192.168.2.2 255.255.255.255 209.165.200.225 130
Router#show ip route

<output omitted>

Gateway of last resort is not set

        192.168.1.0/32 is subnetted, 1 subnets
C               192.168.1.1 is directly connected, Loopback0
        192.168.2.0/32 is subnetted, 1 subnets
O               192.168.2.2[110/11] via 192.168.12.2, 00:52:09, Ethernet0/0
        192.168.12.0/24 is variably subnetted, 2 subnets, 2 masks
C               192.168.12.0/24 is directly connected, Ethernet0/0
L               192.168.12.1/32 is directly connected, Ethernet0/0
        209.165.200.0/24 is variably subnetted, 2 subnets, 2 masks
C               209.165.200.0/24 is directly connected, Ethernet0/1
                209.165.200.226/32 is directly connected, Ethernet0/1
```

A. Dynamic routing protocols always have priority over static routes.
B. The metric of the OSPF route is lower than the metric of the static route.
C. The configured AD for the static route is higher than the AD of OSPF.
D. The syntax of the static route is not valid, so the route is not considered.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The AD of static route is manually configured to 130 which is higher than the AD of OSPF router which is 110.

QUESTION 4
Refer to the exhibit. BGP is flapping after the Copp policy is applied. What are the two solutions to fix the issue? (Choose two)



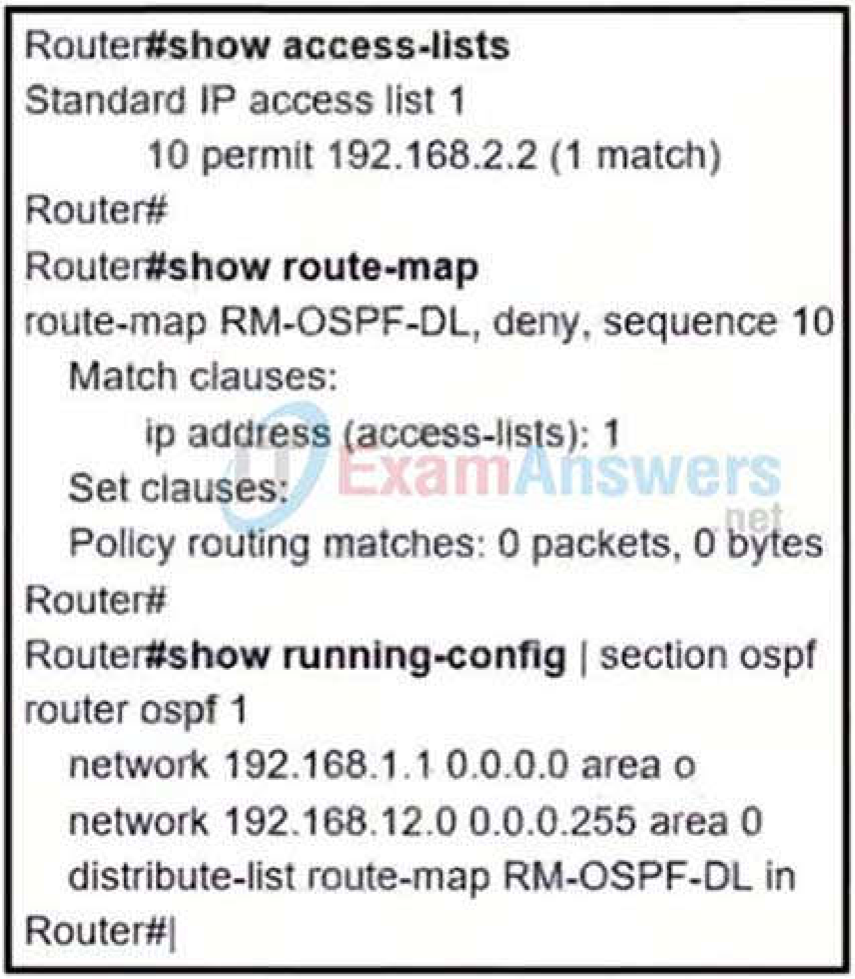
```
policy-map COPP-7600
 class COPP-CRITICAL-7600
  police cir 2000000 bc 62500
   conform-action transmit
   exceed-action transmit
  !
  class class-default
   police cir 200000 bc 6250
    conform-action transmit
    exceed-action drop
  !
 ciass-map match-all COPP-CRITICAL-7600
  match access-group name COPP-CRITICAL-7600
 !
 ip access-list extended COPP-CRITICAL-7600
  permit ip any any eq http
  permit ip any any eq https
```

A. Configure BGP in the COPP-CRITICAL-7600 ACL
B. Configure a higher value for CIR under the default class to allow more packets during peak traffic
C. Configure a higher value for CIR under the class COPP-CRITICAL-7600
D. Configure a three-color policer instead of two-color policer under class COPP-CRITICAL-7600
E. Configure IP CEF to CoPP policy and BGP to work

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
The policy-map COPP-7600 only rate-limit HTTP & HTTPS traffic (based on the ACL conditions) so any BGP packets will be processed in the class “class-default”, which drops exceeded BGP packets.
Therefore we have two ways to solve this problem:
+ Add BGP to the ACL with the statement “permit tcp any any eq bgp”
+ Configure higher value for CIR in default class as 2Mbps is too low for web traffic (http & https)

QUESTION 5
Refer to the exhibit. Which two actions should be taken to access the server? (Choose two.)



```
Router#show access-lists
Standard IP access list 1
        10 permit 192.168.2.2 (1 match)
Router#
Router#show route-map
route-map RM-OSPF-DL, deny, sequence 10
   Match clauses:
        ip address (access-lists): 1
   Set clauses:
   Policy routing matches: 0 packets, 0 bytes
Router#
Router#show running-config | section ospf
router ospf 1
   network 192.168.1.1 0.0.0.0 area o
   network 192.168.12.0 0.0.0.255 area 0
   distribute-list route-map RM-OSPF-DL in
Router#|
```

A. Modify the access list to add a second line of permit ip any
B. Modify the access list to deny the route to 192.168.2.2.
C. Modify distribute list seq 10 to permit the route to 192.168.2.2.
D. Add a sequence 20 in the route map to permit access list 1.
E. Add a floating static route to reach to 192.168.2.2 with administrative distance higher than OSPF

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 6
An engineer configured the wrong default gateway for the Cisco DNA Center enterprise interface during the install. Which command must the engineer run to correct the configuration?

A. sudo maglev-config update
B. sudo maglev install config update
C. sudo maglev reinstall
D. sudo update config install

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

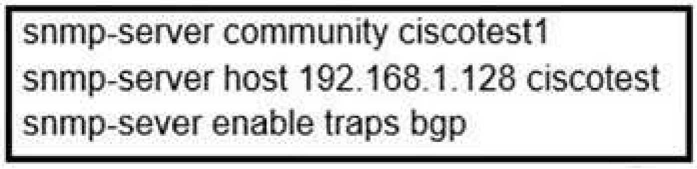
QUESTION 7
Which security feature can protect DMVPN tunnels?

A. IPsec
B. TACACS+
C. RTBH
D. RADIUS

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 8
Refer to the exhibit. Network operations cannot read or write any configuration on the device with this configuration from the operations subnet. Which two configurations fix the issue? (Choose two.)



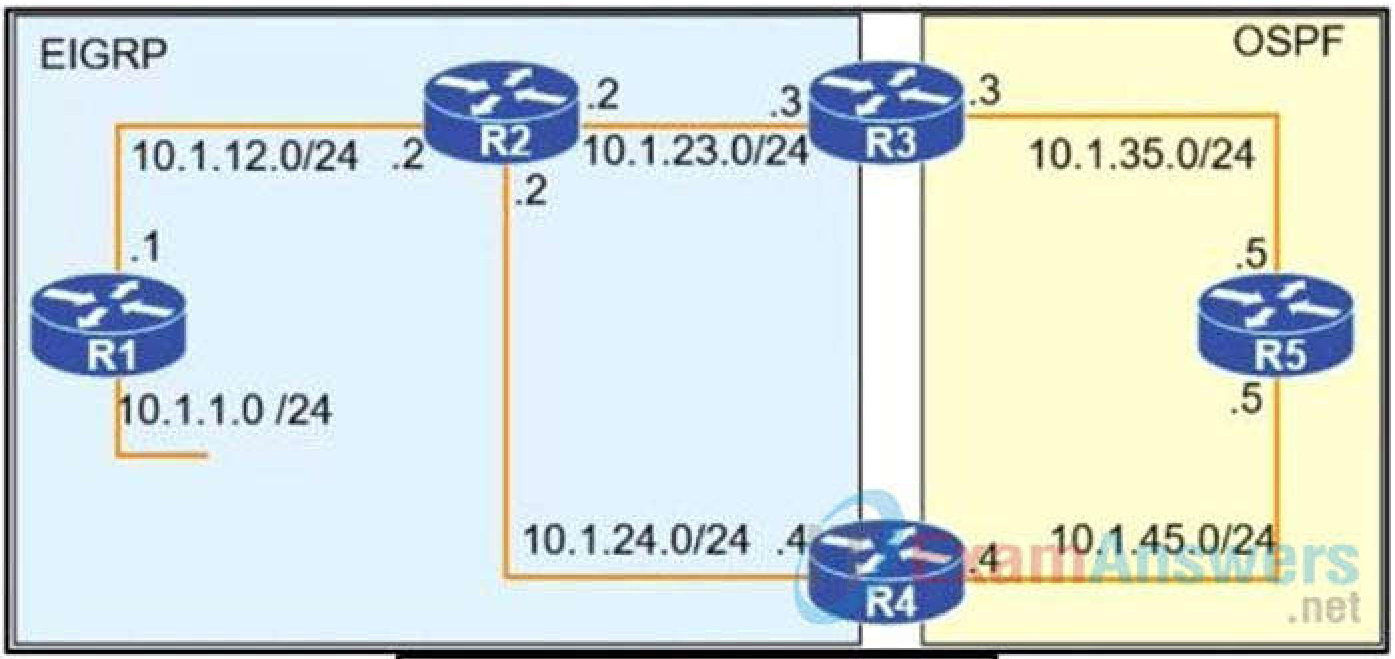
```
snmp-server community ciscotest1
snmp-server host 192.168.1.128 ciscotest
snmp-sever enable traps bgp
```

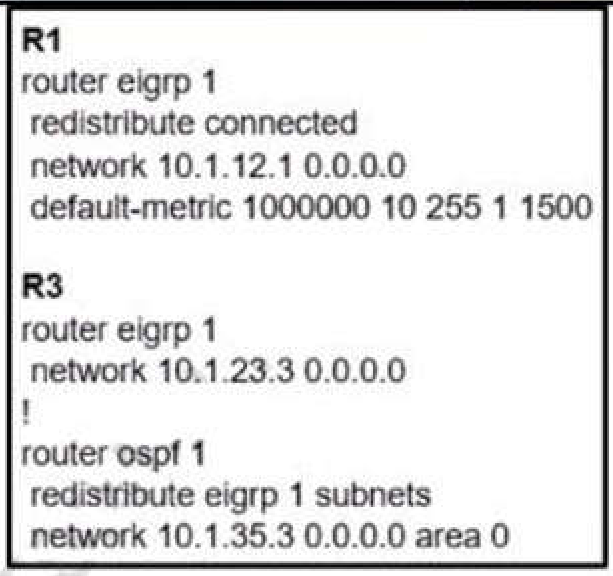
A. Configure SNMP rw permission in addition to community ciscotest.
B. Modify access list 1 and allow operations subnet in the access list.
C. Modify access list 1 and allow SNMP in the access list.
D. Configure SNMP rw permission in addition to version 1.
E. Configure SNMP rw permission in addition to community ciscotest 1.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 9
Refer to the exhibit. To provide reachability to network 10.1.1.0 /24 from R5, the network administrator redistributes EIGRP into OSPF on R3 but notices that R4 is now taking a ……….. path through R5 to reach 10.1.1.0/24 network. Which action fixes the issue while keeping the reachability from R5 to 10.1.1.0/24 network?





```
R1
router eigrp 1
 redistribute connected
 network 10.1.12.1 0.0.0.0
 default-metric 1000000 10 255 1 1500

R3
router eigrp 1
 network 10.1.23.3 0.0.0.0
!
router ospf 1
 redistribute eigrp 1 subnets
 network 10.1.35.3 0.0.0.0 area 0
```

A. Change the administrative distance of the external EIGRP to 90.
B. Apply the outbound distribution list on R5 toward R4 in OSPF.
C. Change the administrative distance of OSPF to 200 on R5.
D. Redistribute OSPF into EIGRP on R4.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://www.cisco.com/c/en/us/td/docs/ios/12_0s/feature/guide/fs_bfd.html#wp1043332

QUESTION 10
Which statement about MPLS LDP router ID is true?

A. If not configured, the operational physical interface is chosen as the router ID even if a loopback is configured.
B. The loopback with the highest IP address is selected as the router ID.
C. The MPLS LDP router ID must match the IGP router ID.
D. The force keyword changes the router ID to the specified address without causing any impact.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_ldp/configuration/12-4m/mp-ldp-12-4m-book.pdf

QUESTION 11
Which configuration enabled the VRF that is labeled “Inet” on FastEthernet0/0?

A. R1(config)# ip vrf Inet

R1(config-vrf)#interface FastEthernet0/0
R1(config-if)#ip vrf forwarding Inet

B. R1(config)#router ospf 1 vrf Inet
R1(config-router)#ip vrf forwarding FastEthernet0/0

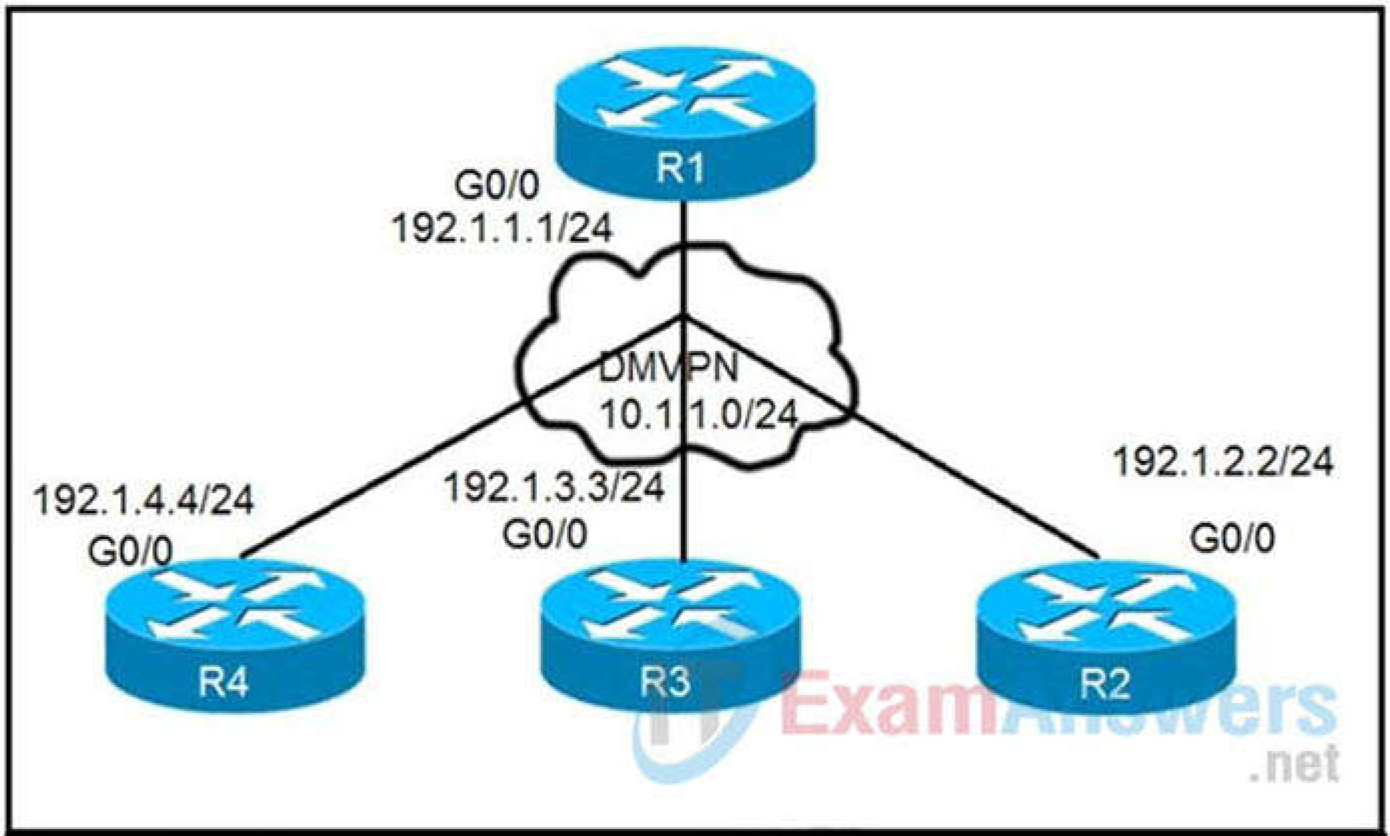
C. R1(config)#ip vrf Inet FastEthernet0/0

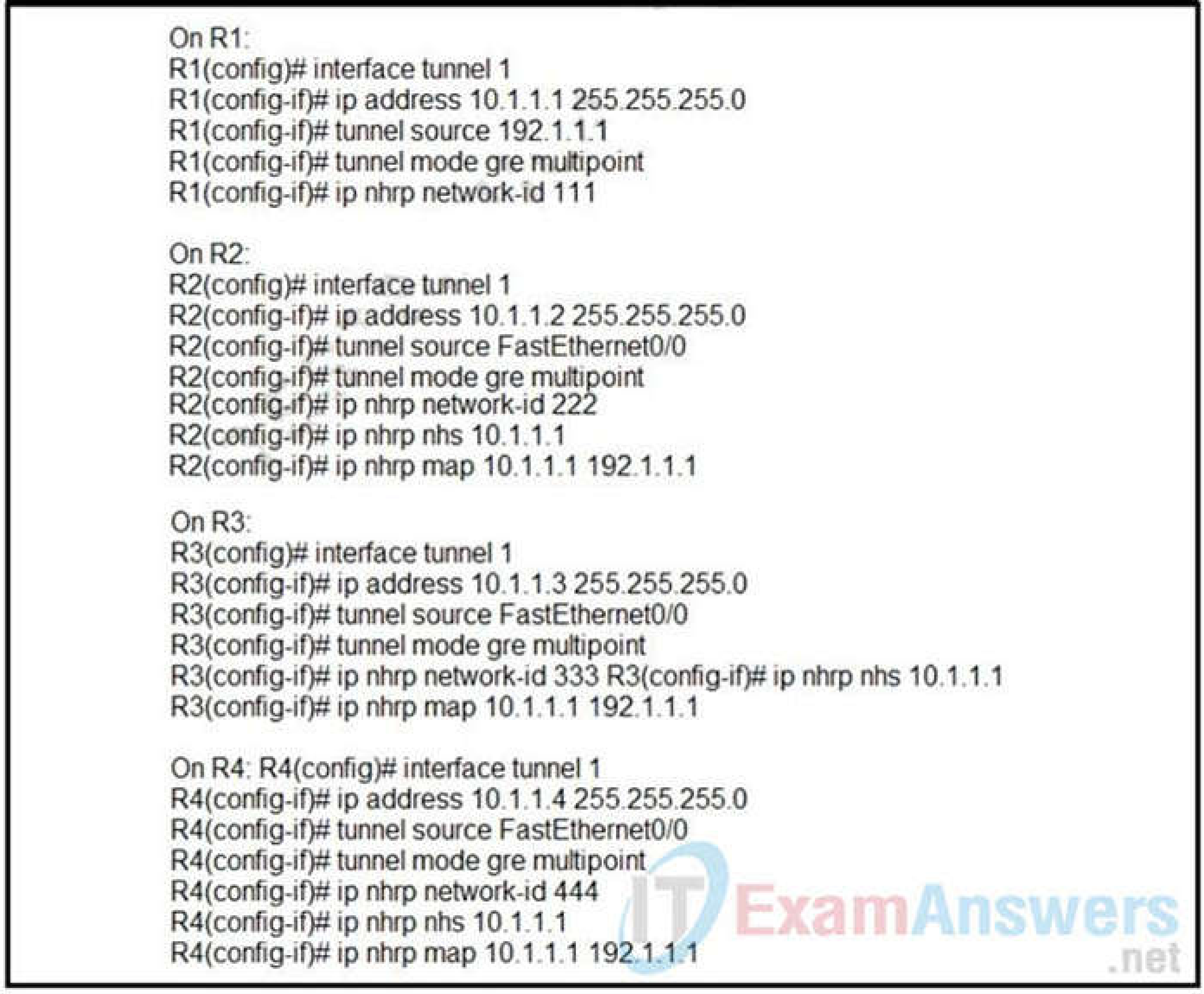
D. R1(config)# ip vrf Inet
R1(config-vrf)#ip vrf FastEthernet0/0

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 12
Refer to the exhibits. Phase-3 tunnels cannot be established between spoke-to-spoke in DMVPN. Which two commands are missing? (Choose two.)





```
On R1:
R1(config)# interface tunnel 1
R1(config-if)# ip address 10.1.1.1 255.255.255.0
R1(config-if)# tunnel source 192.1.1.1
R1(config-if)# tunnel mode gre multipoint
R1(config-if)# ip nhrp network-id 111

On R2:
R2(config)# interface tunnel 1
R2(config-if)# ip address 10.1.1.2 255.255.255.0
R2(config-if)# tunnel source FastEthernet0/0
R2(config-if)# tunnel mode gre multipoint
R2(config-if)# ip nhrp network-id 222
R2(config-if)# ip nhrp nhs 10.1.1.1
R2(config-if)# ip nhrp map 10.1.1.1 192.1.1.1

On R3:
R3(config)# interface tunnel 1
R3(config-if)# ip address 10.1.1.3 255.255.255.0
R3(config-if)# tunnel source FastEthernet0/0
R3(config-if)# tunnel mode gre multipoint
R3(config-if)# ip nhrp network-id 333 R3(config-if)# ip nhrp nhs 10.1.1.1
R3(config-if)# ip nhrp map 10.1.1.1 192.1.1.1

On R4: R4(config)# interface tunnel 1
R4(config-if)# ip address 10.1.1.4 255.255.255.0
R4(config-if)# tunnel source FastEthernet0/0
R4(config-if)# tunnel mode gre multipoint
R4(config-if)# ip nhrp network-id 444
R4(config-if)# ip nhrp nhs 10.1.1.1
R4(config-if)# ip nhrp map 10.1.1.1 192.1.1.1
```

A. The ip nhrp redirect command is missing on the spoke routers.
B. The ip nhrp shortcut command is missing on the spoke routers.
C. The ip nhrp redirect commands is missing on the hub router.
D. The ip nhrp shortcut commands is missing on the hub router.
E. The ip nhrp map command is missing on the hub router.

Correct Answer: BC

Section: (none)
Explanation

Explanation/Reference:

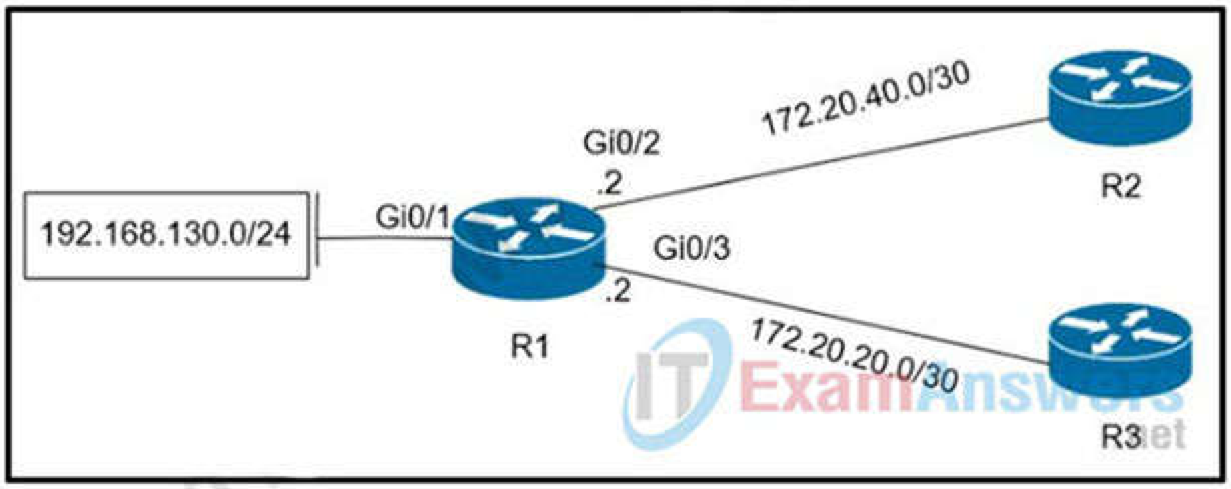
QUESTION 13
Which command allows traffic to load-balance in an MPLS Layer 3 VPN configuration?

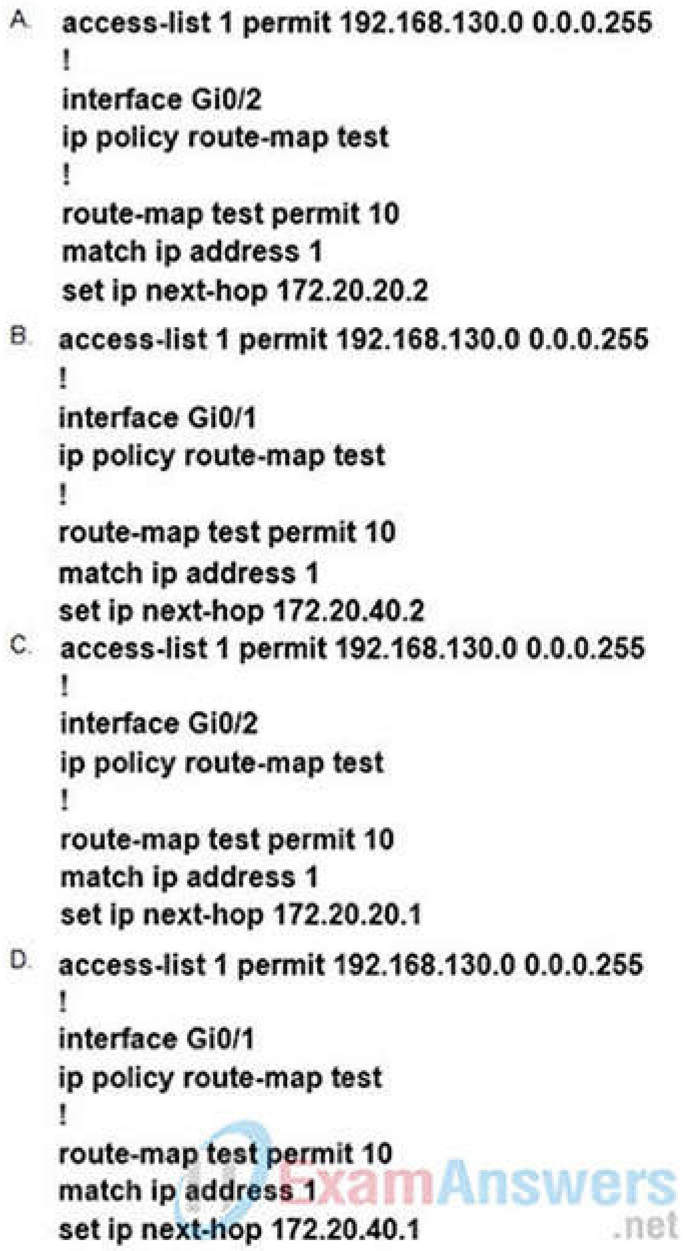
A. multi-paths eibgp 2
B. maximum-paths 2
C. Maximum-paths ibgp 2
D. multi-paths 2

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx-os/mpls/configuration/guide/mpls_cg/mp_vpn_multipath.html

QUESTION 14
Refer to the exhibit. Which configuration configures a policy on R1 to forward any traffic that is sourced from the 192.168.130.0/24 network to R2?





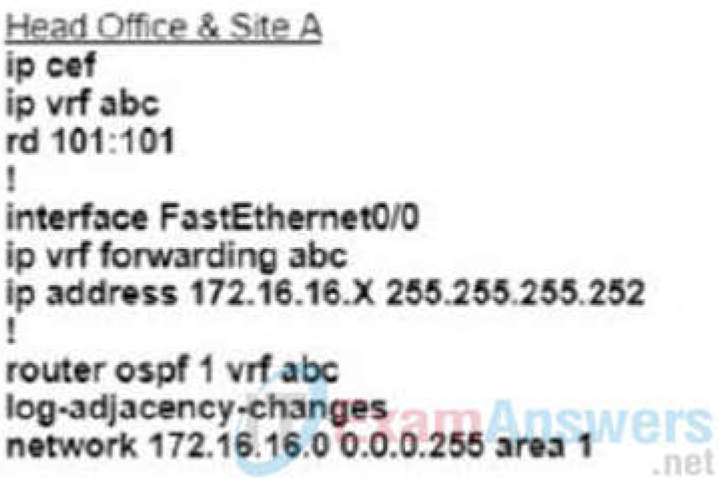
```
A. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/2
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.20.2
B. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/1
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.40.2
C. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/2
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.20.1
D. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/1
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.40.1
```

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 15
An engineer configured a company’s multiple area OSPF head office router and Site A cisco routers with VRF lite. Each site router is connected to a PE router of an MPLS backbone.



```
Head Office & Site A
ip cef
ip vrf abc
rd 101:101
!
interface FastEthernet0/0
ip vrf forwarding abc
ip address 172.16.16.X 255.255.255.252
!
router ospf 1 vrf abc
log-adjacency-changes
network 172.16.16.0 0.0.0.255 area 1
```

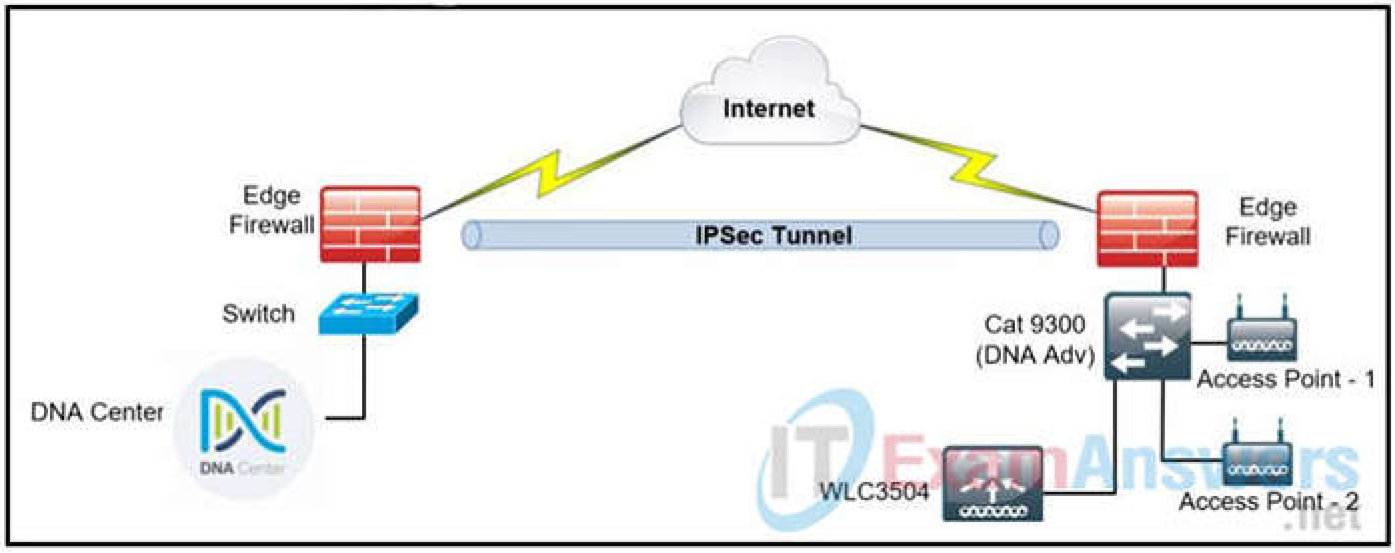
After finishing both site router configurations, none of the LSA 3,4 5, and 7 are installed at Site A router. Which configuration resolves this issue?

A. configure capability vrf-lite on Site A and its connected PE router under router ospf 1 vrf abc
B. configure capability vrf-lite on Head Office and its connected PE router under router ospf 1 vrf abc
C. configure capability vrf-lite on both PE routers connected to Head Office and Site A routers under router ospf 1 vrf abc
D. configure capability vrf-lite on Head Office and Site A routers under router ospf 1 vrf abc

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 16
Refer to the exhibit. A network administrator is discovering a Cisco Catalyst 9300 and a Cisco WLC 3504 in Cisco DNA Center. The Catalyst 9300 is added successfully However the WLC is showing [error “uncontactable” when the administrator tries to add it in Cisco DNA Center. Which action discovers WLC in Cisco DNA Center successfully?

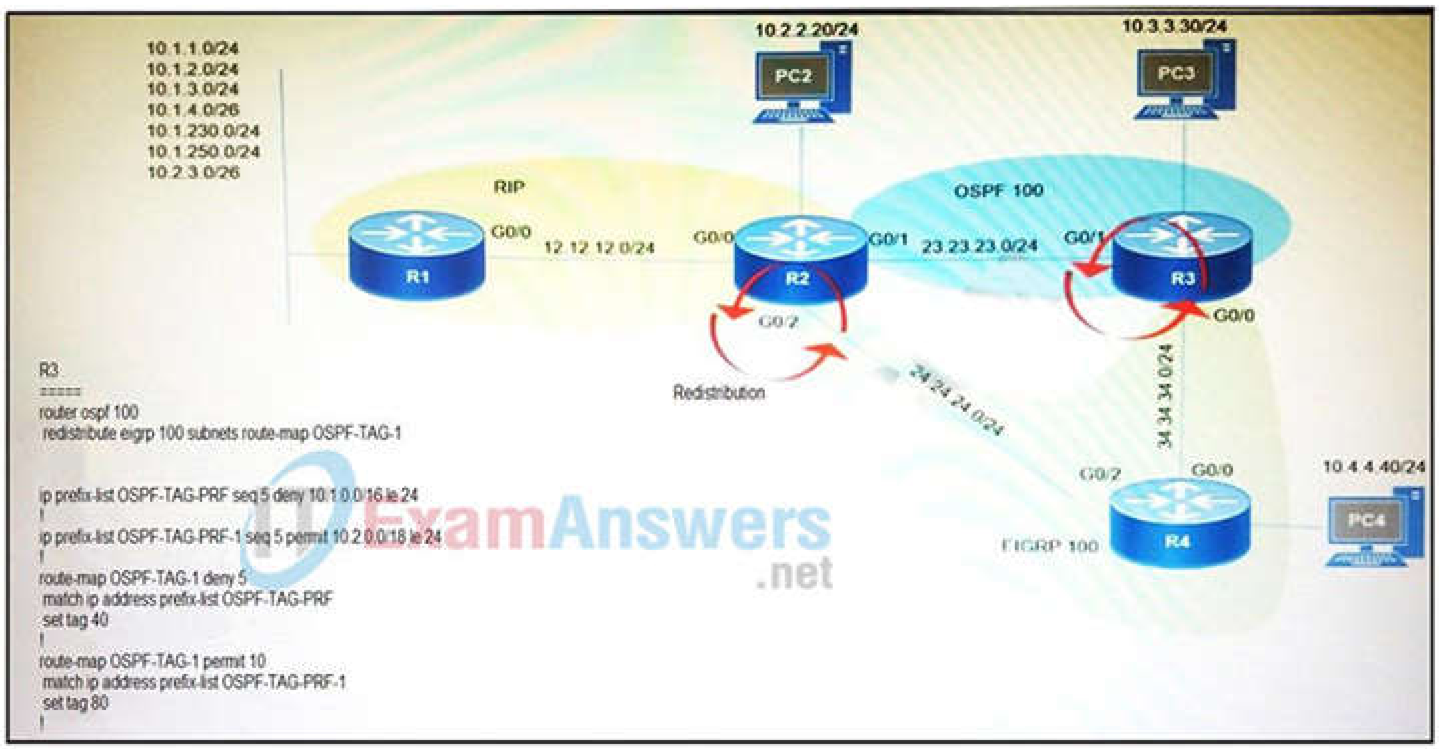


A. Copy the .cert file from the Cisco DNA Center on the USB and upload it to the WLC 3504.
B. Delete the WLC 3504 from Cisco DNA Center and add it to Cisco DNA Center again.
C. Add the WLC 3504 under the hierarchy of the Catalyst 9300 connected devices.
D. Copy the .pern file from the Cisco DNA Center on the USB and upload it to the WLC 3504.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/wireless/4400-series-wireless-lan-controllers/109597-csr-chained-certificates-wlc-00.html#anc12

QUESTION 17
Refer to the exhibit. Which subnet is redistributed from EIGRP to OSPF routing protocols?



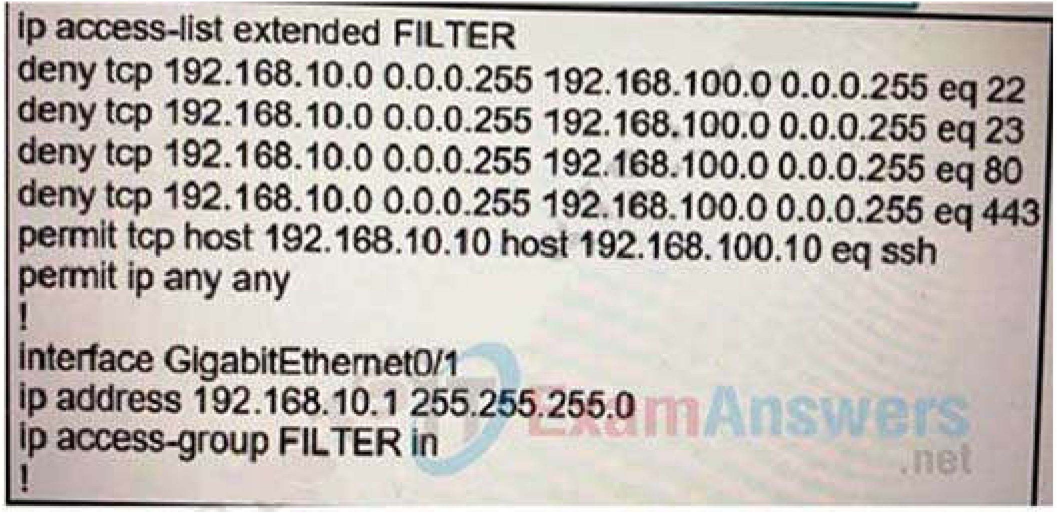
```
R3
=====
router ospf 100
 redistribute eigrp 100 subnets route-map OSPF-TAG-1

ip prefix-list OSPF-TAG-PRF seq 5 deny 10.1.0.0/16 le 24
!
ip prefix-list OSPF-TAG-PRF-1 seq 5 permit 10.2.0.0/18 le 24
!
route-map OSPF-TAG-1 deny 5
 match ip address prefix-list OSPF-TAG-PRF
 set tag 40
!
route-map OSPF-TAG-1 permit 10
 match ip address prefix-list OSPF-TAG-PRF-1
 set tag 80
!
```

A. 10.2.2.0/24
B. 10.1.4.0/26
C. 10.1.2.0/24
D. 10.2.3.0/26

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
Refer to the exhibit. The ACL is placed on the inbound Gigabit 0/1 interface of the router. Host 192.168.10.10cannot SSH to host 192.168.100.10 even though the flow is permitted. Which action resolves the issue without opening full access to this router?



```
ip access-list extended FILTER
deny tcp 192.168.10.0 0.0.0.255 192.168.100.0 0.0.0.255 eq 22
deny tcp 192.168.10.0 0.0.0.255 192.168.100.0 0.0.0.255 eq 23
deny tcp 192.168.10.0 0.0.0.255 192.168.100.0 0.0.0.255 eq 80
deny tcp 192.168.10.0 0.0.0.255 192.168.100.0 0.0.0.255 eq 443
permit tcp host 192.168.10.10 host 192.168.100.10 eq ssh
permit ip any any
!
interface GigabitEthernet0/1
ip address 192.168.10.1 255.255.255.0
ip access-group FILTER in
!
```

A. Move the SSH entry to the beginning of the ACL
B. Temporarily move the permit ip any any line to the beginning of the ACL to see if the flow works
C. Temporarily remove the ACL from the interface to see if the flow works
D. Run the show access-list FILTER command to view if the SSH entry has any hit statistic associated with it

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19
Refer to the following output:

```
Router#show ip nhrp detail
10.1.1.2/8 via 10.2.1.2, Tunnel1 created 00:00:12, expire 01:59:47
TypE. dynamic, Flags: authoritative unique nat registered used
NBMA address: 10.12.1.2
```

What does the authoritative flag mean in regards to the NHRP information?

A. It was obtained directly from the next-hop server.
B. Data packets are process switches for this mapping entry.
C. NHRP mapping is for networks that are local to this router.
D. The mapping entry was created in response to an NHRP registration request.
E. The NHRP mapping entry cannot be overwritten.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 20
What is a prerequisite for configuring BFD?

A. Jumbo frame support must be configured on the router that is using BFD.
B. All routers in the path between two BFD endpoints must have BFD enabled.
C. Cisco Express Forwarding must be enabled on all participating BFD endpoints.
D. To use BFD with BGP, the timers 3 9 command must first be configured in the BGP routing process.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

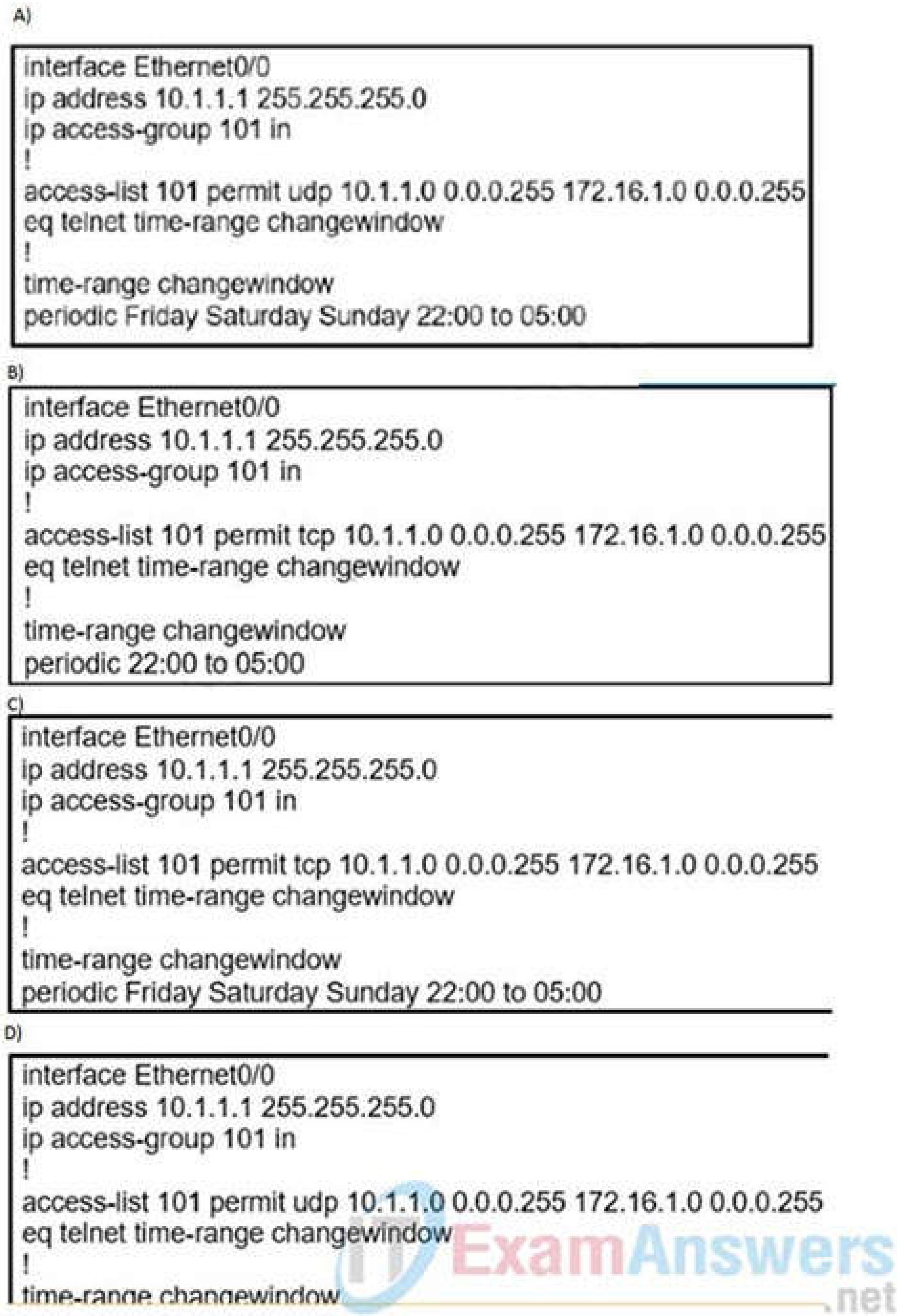
QUESTION 21
A network engineer needs to verify IP SLA operations on an interface that shows on indication of excessive traffic. Which command should the engineer use to complete this action?

A. show frequency
B. show track
C. show reachability
D. show threshold

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 22
During the maintenance window, an administrator accidentally deleted the telnet-related configuration that permits a Telnet connection from the inside network (Eth 0/0) to the outside of the network between Friday-Sunday night hours only. Which configuration resolves the issue?



A)

```
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.0
ip access-group 101 in
!
access-list 101 permit udp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255
eq telnet time-range changewindow
!
time-range changewindow
periodic Friday Saturday Sunday 22:00 to 05:00
```

B)

```
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.0
ip access-group 101 in
!
access-list 101 permit tcp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255
eq telnet time-range changewindow
!
time-range changewindow
periodic 22:00 to 05:00
```

C)

```
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.0
ip access-group 101 in
!
access-list 101 permit tcp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255
eq telnet time-range changewindow
!
time-range changewindow
periodic Friday Saturday Sunday 22:00 to 05:00
```

D)

```
interface Ethernet0/0
ip address 10.1.1.1 255.255.255.0
ip access-group 101 in
!
access-list 101 permit udp 10.1.1.0 0.0.0.255 172.16.1.0 0.0.0.255
eq telnet time-range changewindow
!
time-range changewindow
```

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 23
While troubleshooting connectivity issues to a router, these details are noticed:
Standard pings to all router interfaces, including loopbacks, are successful.
Data traffic is unaffected.
SNMP connectivity is intermittent.
SSH is either slow or disconnects frequently.
Which command must be configured first to troubleshoot this issue?

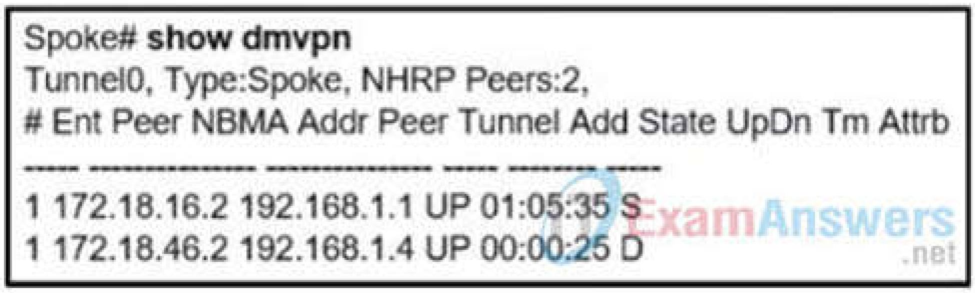
A. show policy-map control-plane
B. show policy-map
C. show interface | inc drop
D. show ip route

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 24
Refer to the exhibit. An engineer has configured DMVPN on a spoke router. What is the WAN IP address of another spoke router within the DMVPN network?

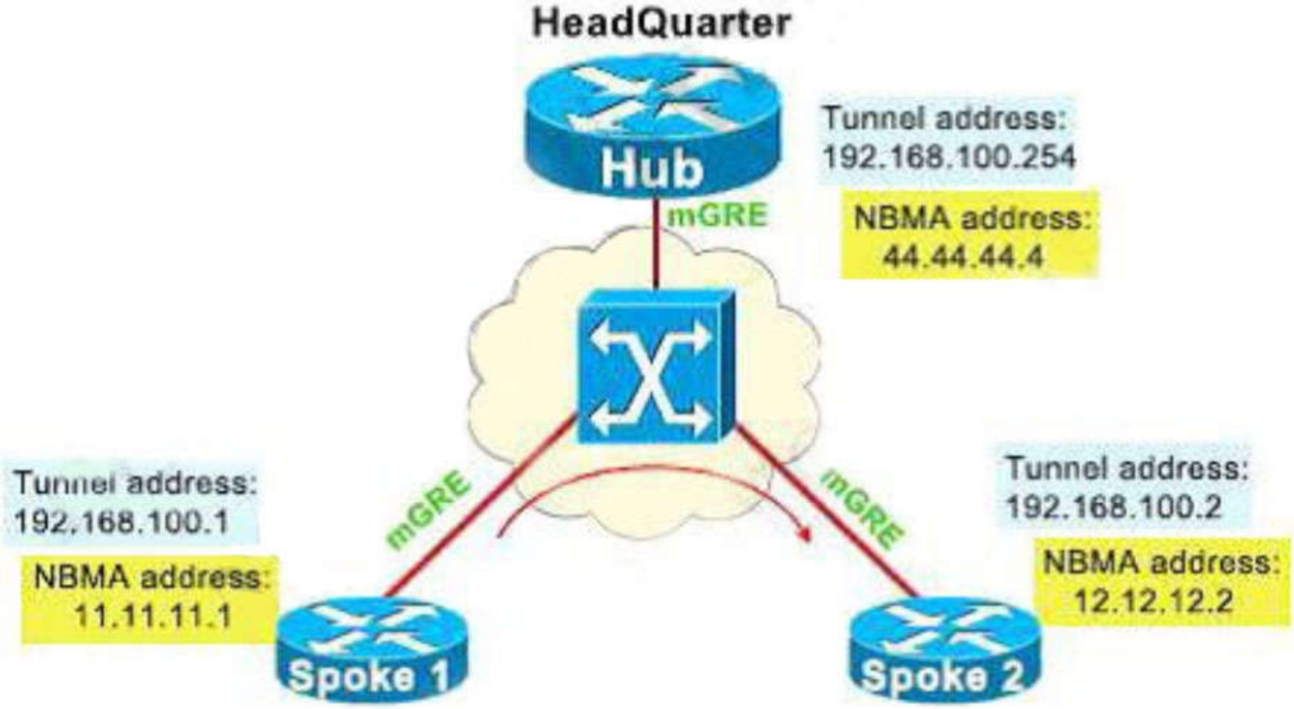


```
Spoke# show dmvpn
Tunnel0, Type:Spoke, NHRP Peers:2,
# Ent Peer NBMA Addr Peer Tunnel Add State UpDn Tm Attrb
----- --------------- --------------- ----- -------- -----
1 172.18.16.2 192.168.1.1 UP 01:05:35 S
1 172.18.46.2 192.168.1.4 UP 00:00:25 D
```

A. 172.18.46.2
B. 192.168.1.4
C. 172.18.16.2
D. 192.168.1.1

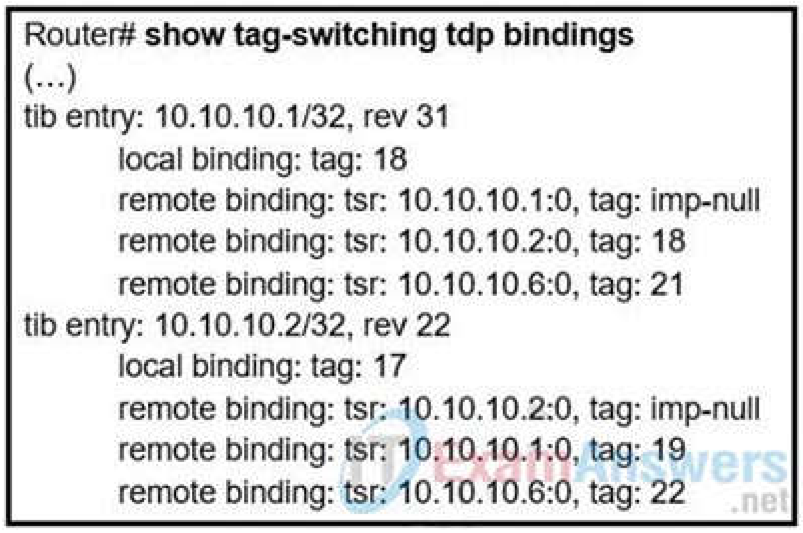
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
From the output we can see there are 2 NHRP Peers. The first one with the NBMA Address of 172.18.16.2 and the "Attribute" (Attrb) of Static (S) so we can deduce it is the Hub device.
Therefore the second one must be the remaining Spoke device with the attribute of Dynamic (D).



--> S - Static, D - Dynamic, I - Incomplete
N - NATed, L - Local, X - No Socket
# Ent --> Number of NHRP entries with same NBMA peer
NHS Status: E --> Expecting Replies, R --> Responding, W --> Waiting
UpDn Time --> Up or Down Time for a Tunnel
==
Interface: Tunnel1, IPv4 NHRP Details
Type:Spoke, NHRP Peers:2,
Ent Peer NBMA Addr Peer Tunnel Add State UpDn Tm Attrb
----- --------------- --------------- ----- -------- -----
1 44.44.44.4 192.168.100.254 UP 00:03:40 S
1 12.12.12.2 192.168.100.2 UP 00:03:20 D

QUESTION 25
Refer to the exhibit. What does the imp-null tag represent in the MPLS VPN cloud?



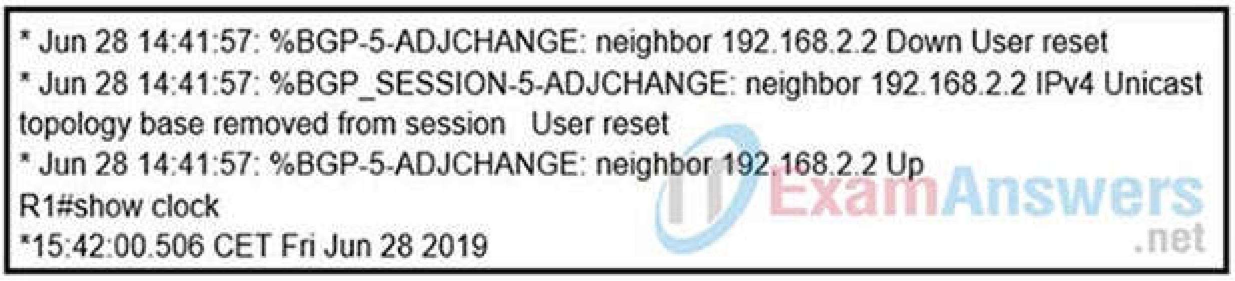
```
Router# show tag-switching tdp bindings
(…)
tib entry: 10.10.10.1/32, rev 31
        local binding: tag: 18
        remote binding: tsr: 10.10.10.1:0, tag: imp-null
        remote binding: tsr: 10.10.10.2:0, tag: 18
        remote binding: tsr: 10.10.10.6:0, tag: 21
tib entry: 10.10.10.2/32, rev 22
        local binding: tag: 17
        remote binding: tsr: 10.10.10.2:0, tag: imp-null
        remote binding: tsr: 10.10.10.1:0, tag: 19
        remote binding: tsr: 10.10.10.6:0, tag: 22
```

A. Pop the label
B. Impose the label
C. Include the EXP bit
D. Exclude the EXP bit

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The -imp-null|| (implicit null) tag instructs the upstream router to pop the tag entry off the tag stack before forwarding the packet.
Note: pop means -remove the top MPLS label||

QUESTION 26
Refer to the exhibit. An engineer is troubleshooting BGP on a device but discovers that the clock on the device does not correspond to the time stamp of the log entries. Which action ensures consistency between the two times?



```
* Jun 28 14:41:57: %BGP-5-ADJCHANGE: neighbor 192.168.2.2 Down User reset
* Jun 28 14:41:57: %BGP_SESSION-5-ADJCHANGE: neighbor 192.168.2.2 IPv4 Unicast
topology base removed from session   User reset
* Jun 28 14:41:57: %BGP-5-ADJCHANGE: neighbor 192.168.2.2 Up
R1#show clock
*15:42:00.506 CET Fri Jun 28 2019
```

A. Configure the service timestamps log uptime command in global configuration mode.
B. Configure the logging clock synchronize command in global configuration mode.
C. Configure the service timestamps log datetime localtime command in global configuration mode.
D. Make sure that the clock on the device is synchronized with an NTP server.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 27
Which statement about IPv6 ND inspection is true?

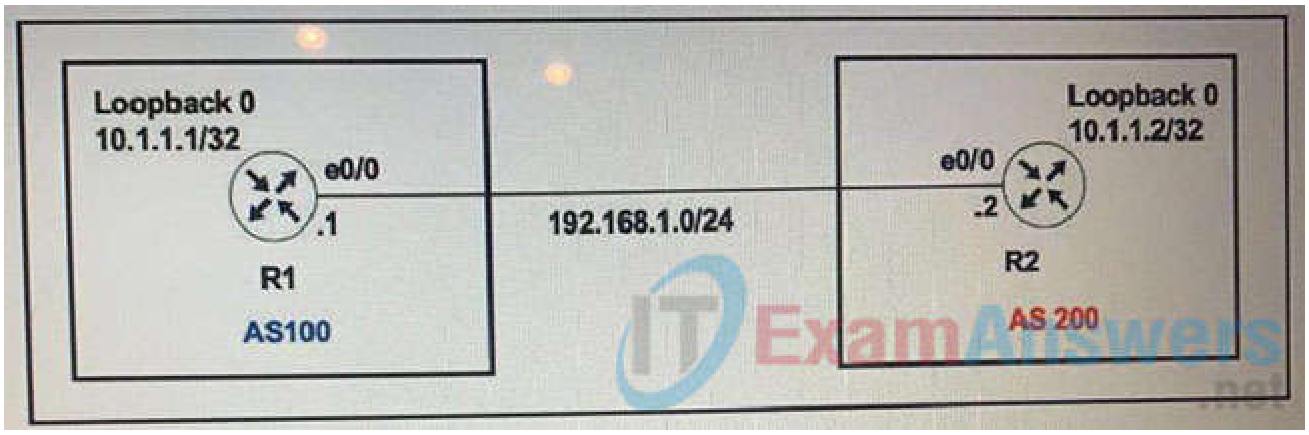
A. It learns and secures bindings for stateless autoconfiguration addresses in Layer 3 neighbor tables.
B. It learns and secures bindings for stateless autoconfiguration addresses in Layer 2 neighbor tables.
C. It learns and secures bindings for stateful autoconfiguration addresses in Layer 3 neighbor tables.
D. It learns and secures bindings for stateful autoconfiguration addresses in Layer 2 neighbor tables.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
IPv6 ND inspection learns and secures bindings for stateless autoconfiguration addresses in Layer 2 neighbor tables. IPv6 ND inspection analyzes neighbor discovery messages in order to build a trusted binding table database, and IPv6 neighbor discovery messages that do not

have valid bindings are dropped. A neighbor discovery message is considered trustworthy if its IPv6-to-MAC mapping is verifiable.
This feature mitigates some of the inherent vulnerabilities for the neighbor discovery mechanism, such as attacks on duplicate address detection (DAD), address resolution, device discovery, and the neighbor cache.

QUESTION 28
Refer to the exhibit.



The R1 and R2 configurations are:

R1
```
router bgp 100
neighbor 10.1.1.2 remote-as 200
```

R2
```
router bgp 200
neighbor 10.1.1.1 remote-as 100
```

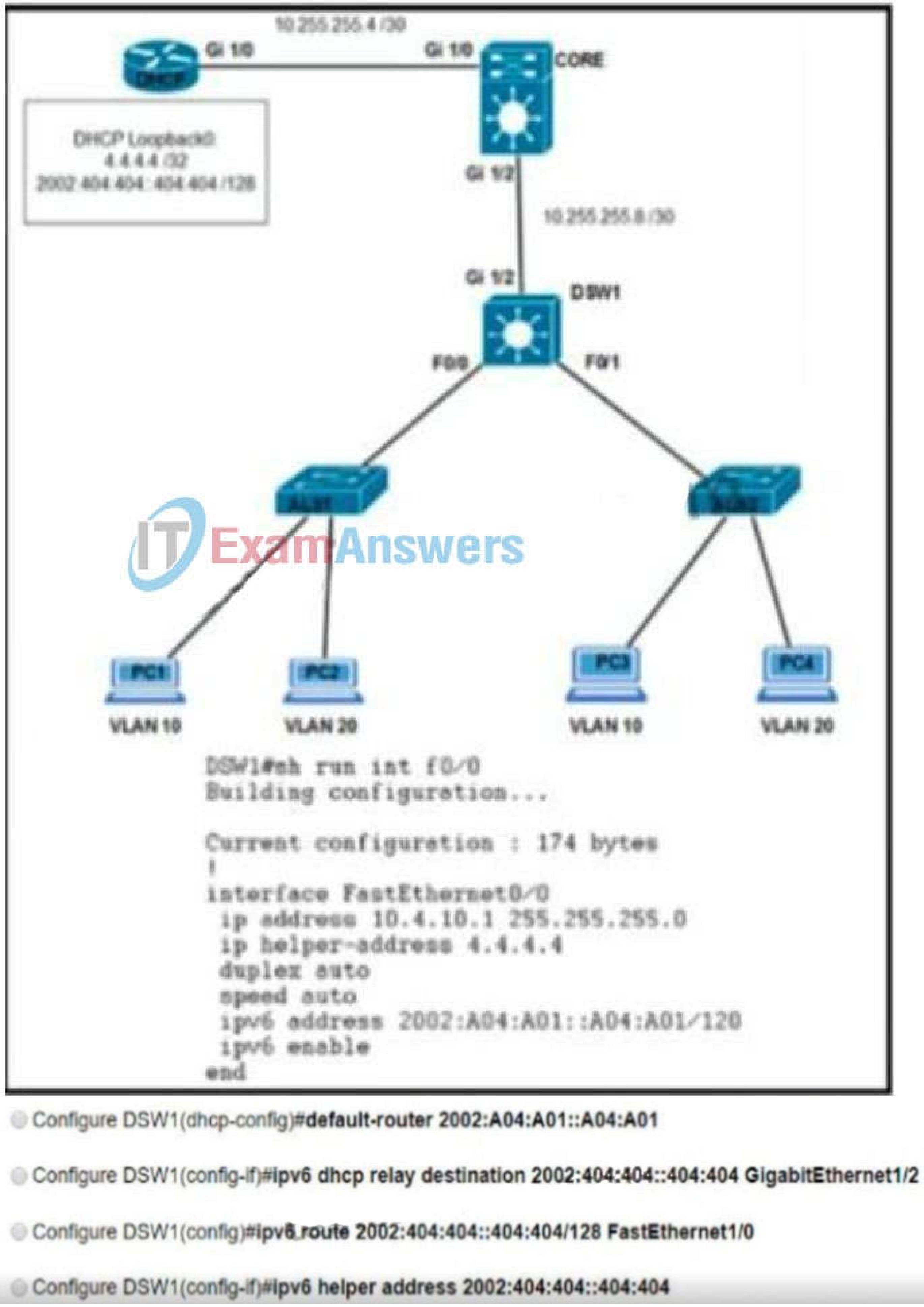
The neighbor is not coming up. Which two sets of configurations bring the neighbors up? (Choose two.)

A. R2
```
ip route 10.1.1.1 255.255.255.255 192.168.1.1
router bgp 200
neighbor 10.1.1.1 disable-connected-check
neighbor 10.1.1.1 update-source loopback 0
```
B. R2
```
ip route 10.1.1.1 255.255.255.255 192.168.1.1
router bgp 200
neighbor 10.1.1.1 tti-security hops 1
neighbor 10.1.1.1 update-source loopback 0
```
C. R1
```
ip route 10.1.1.2 255.255.255.255 192.168.1.2
router bgp 100
neighbor 10.1.1.2 disable-connected-check
neighbor 10.1.1.2 update-source Loopback0
```
D. R1
```
ip route 10.1.1.2 255.255.255.255 192.168.1.2
router bgp 100
neighbor 10.1.1.1 ttl-security hops 1
neighbor 10.1.1.2 update-source loopback 0
```
E. R2
```
ip route 10.1.1.2 255.255.255.255 192.168.1.2
router bgp 100
neighbor 10.1.1.2 ttl-security hops 1
neighbor 10.1.1.2 update-source loopback 0
```

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
The neighbor disable-connected-check command is used to disable the connection verification process for eBGP peering sessions that are reachable by a single hop but are configured on a loopback interface or otherwise configured with a non-directly connected IP address.

QUESTION 29
Clients on ALS2 receive IPv4 and IPv6 addresses but clients on ALS1 receive only IPv4 addresses and not IPv6 addresses. Which action on DSW1 allows clients on ALS1 to receive IPv6 addresses?



```
DSW1#sh run int f0/0
Building configuration...

Current configuration : 174 bytes
!
interface FastEthernet0/0
 ip address 10.4.10.1 255.255.255.0
 ip helper-address 4.4.4.4
 duplex auto
 speed auto
 ipv6 address 2002:A04:A01::A04:A01/120
 ipv6 enable
end
```

○ Configure DSW1(dhcp-config)#**default-router 2002:A04:A01::A04:A01**

○ Configure DSW1(config-if)#**ipv6 dhcp relay destination 2002:404:404::404:404 GigabitEthernet1/2**

○ Configure DSW1(config)#**ipv6 route 2002:404:404::404:404/128 FastEthernet1/0**

○ Configure DSW1(config-if)#**ipv6 helper address 2002:404:404::404:404**

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Here (from cisco)Here (from cisco)

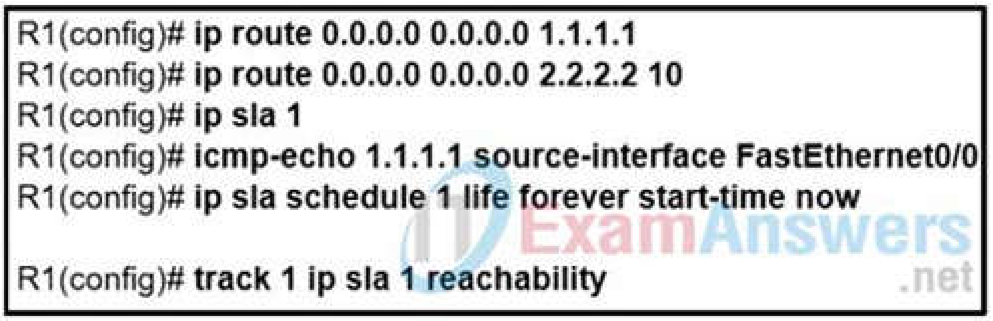
QUESTION 30
Users were moved from the local DHCP server to the remote corporate DHCP server. After the move, none of the users were able to use the network. Which two issues will prevent this setup from working properly? (Choose two)

A. Auto-QoS is blocking DHCP traffic.
B. The DHCP server IP address configuration is missing locally
C. 802.1X is blocking DHCP traffic
D. The broadcast domain is too large for proper DHCP propagation
E. The route to the new DHCP server is missing

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 31
Refer to the exhibit. An IP SLA is configured to use the backup default route when the primary is down, but it is not working as desired. Which command fixes the issue?



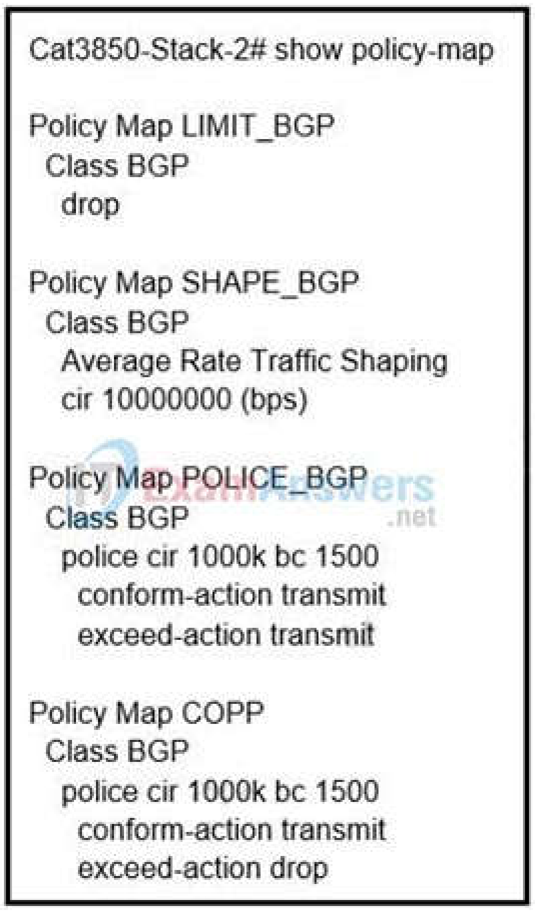
```
R1(config)# ip route 0.0.0.0 0.0.0.0 1.1.1.1
R1(config)# ip route 0.0.0.0 0.0.0.0 2.2.2.2 10
R1(config)# ip sla 1
R1(config)# icmp-echo 1.1.1.1 source-interface FastEthernet0/0
R1(config)# ip sla schedule 1 life forever start-time now

R1(config)# track 1 ip sla 1 reachability
```

A. R1(config)# ip route 0.0.0.0.0.0.0.0.2.2.2.2 10 track 1
B. R1(config)# ip route 0.0.0.0.0.0.0.0.2.2.2.2
C. R1(config)#ip sla track 1
D. R1(config)# ip route 0.0.0.0.0.0.0.0.1.1.1.1 track 1

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
By default Static Router AD value-1 hence ip route 0.0.0.0. 0.0.0.0. 1.1.1.1 track 1 means AD-1 which must be less than of back up route AD. Define the backup route to use when the tracked object is unavailable. !— The administrative distance of the backup route must be greater than !— the administrative distance of the tracked route. !— If the primary gateway is unreachable, that route is removed !— and the backup route is installed in the routing table !— instead of the tracked route.
https://www.cisco.com/c/en/us/support/docs/ip/ip-routing/200785-ISP-Failover-with-default-routes-using-I.html
https://www.cisco.com/c/en/us/support/docs/security/asa-5500-x-series-next-generation-firewalls/118962-configure-asa-00.html

QUESTION 32
Refer to the exhibit. Which control plane policy limits BGP traffic that is destined to the CPU to 1 Mbps and ignores BGP traffic that is sent at higher rate?



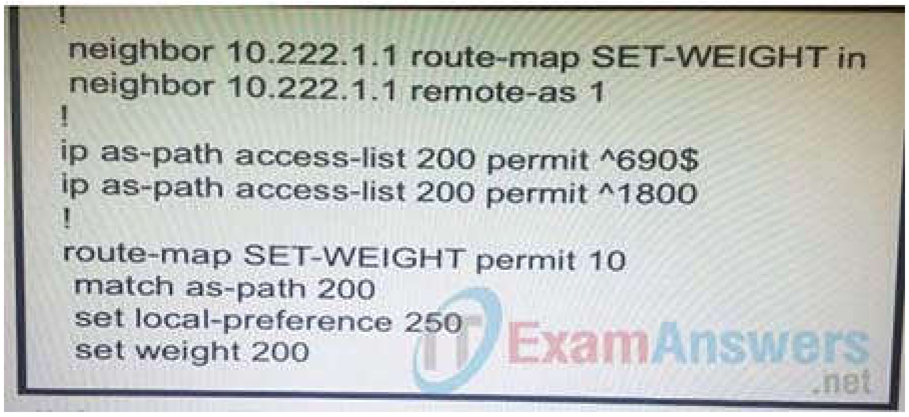
```
Cat3850-Stack-2# show policy-map

Policy Map LIMIT_BGP
  Class BGP
    drop

Policy Map SHAPE_BGP
  Class BGP
    Average Rate Traffic Shaping
    cir 10000000 (bps)

Policy Map POLICE_BGP
  Class BGP
    police cir 1000k bc 1500
      conform-action transmit
      exceed-action transmit

Policy Map COPP
  Class BGP
    police cir 1000k bc 1500
      conform-action transmit
      exceed-action drop
```

A. policy-map COPP
B. policy-map SHAPE_BGP
C. policy-map POLICE_BGP
D. policy-map LIMIT_BGP

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 33
Refer to the exhibit. A router receiving BGP routing updates from multiple neighbors for routers in AS 690. What is the reason that the router still sends traffic that is destined to AS 690 to a neighbor other than 10.222.1.1?



```
!
 neighbor 10.222.1.1 route-map SET-WEIGHT in
 neighbor 10.222.1.1 remote-as 1
!
ip as-path access-list 200 permit ^690$
ip as-path access-list 200 permit ^1800
!
route-map SET-WEIGHT permit 10
 match as-path 200
 set local-preference 250
 set weight 200
```

A. The local preference value in another neighbor statement is higher than 250.
B. The local preference value should be set to the same value as the weight in the route map.
C. The route map is applied in the wrong direction.
D. The weight value in another neighbor statement is higher than 200.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 34
What are two functions of IPv6 Source Guard? (Choose two.)

A. It uses the populated binding table for allowing legitimate traffic.
B. It works independent from IPv6 neighbor discovery.
C. It denies traffic from unknown sources or unallocated addresses.
D. It denies traffic by inspecting neighbor discovery packets for specific pattern.
E. It blocks certain traffic by inspecting DHCP packets for specific sources.

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:
IPv6 source guard is an interface feature between the populated binding table and data traffic filtering. IPv6 source guard can deny traffic from unknown sources or unallocated addresses.

QUESTION 35
What is the output of the following command:
show ip vrf

A. Show's default RD values
B. Displays IP routing table information associated with a VRF
C. Show's routing protocol information associated with a VRF.
D. Displays the ARP table (static and dynamic entries) in the specified VRF

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

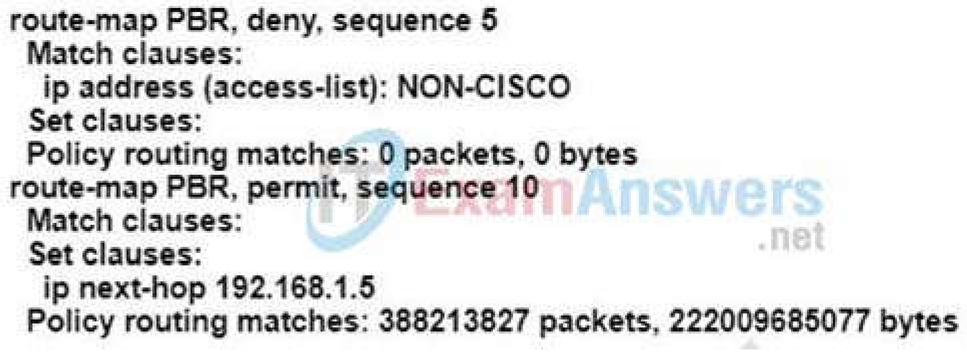
QUESTION 36
Which configuration adds an IPv4 interface to an OSPFv3 process in OSPFv3 address family configuration?

A. Router ospf3 1 address-family ipv4
B. Router(config-router)#ospfv3 1 ipv4 area 0
C. Router(config-if)#ospfv3 1 ipv4 area 0
D. Router ospfv3 1 address-family ipv4 unicast

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_ospf/configuration/xe-3s/iro-xe-3s-book/ip6-route-ospfv3-add-fam-xe.html

QUESTION 37
An engineer configured access list NON-CISCO in a policy to influence routes. What are the two effects of this route map configuration? (Choose two.)



```
route-map PBR, deny, sequence 5
  Match clauses:
    ip address (access-list): NON-CISCO
  Set clauses:
  Policy routing matches: 0 packets, 0 bytes
route-map PBR, permit, sequence 10
  Match clauses:
  Set clauses:
    ip next-hop 192.168.1.5
  Policy routing matches: 388213827 packets, 222009685077 bytes
```

A. Packets are not evaluated by sequence 10.
B. Packets are evaluated by sequence 10.
C. Packets are forwarded to the default gateway.
D. Packets are forwarded using normal route lookup.
E. Packets are dropped by the access list.

Correct Answer: BC

Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/ip-routed-protocols/47121-pbr-cmds-ce.html

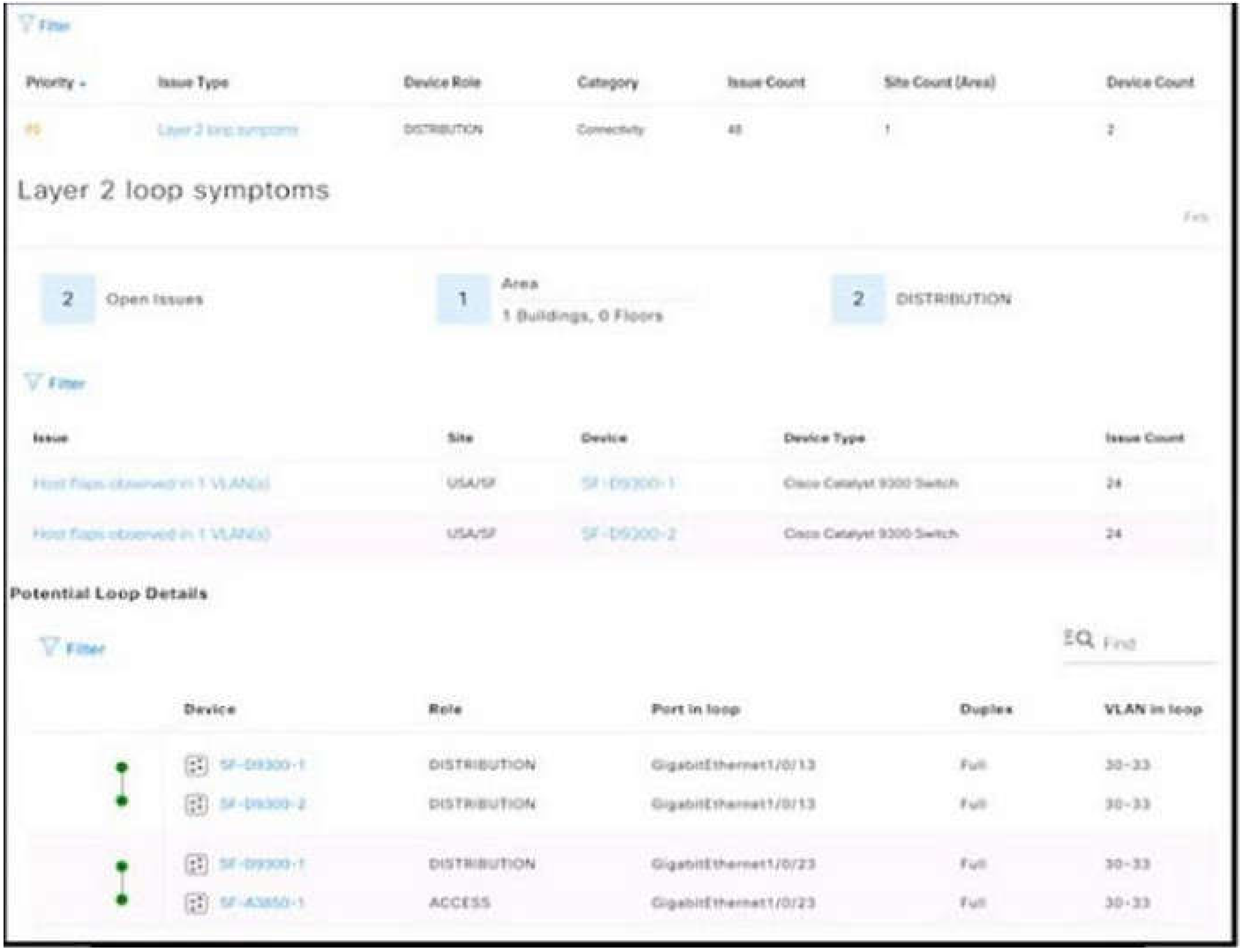
QUESTION 38
Which two methods use IPsec to provide secure connectivity from the branch office to the headquarters office? (Choose two.)

A. DMVPN
B. MPLS VPN
C. Virtual Tunnel Interface (VTI)
D. SSL VPN
E. PPPoE

Correct Answer: AC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 39
Refer to the exhibit. An engineer identifier a Layer 2 loop using DNAC. Which command fixes the problem in the SFD9300-1 switch?



Priority	Issue Type	Device Role	Category	Issue Count	Site Count (Area)	Device Count
P3	Layer 2 loop symptoms	DISTRIBUTION	Connectivity	48	1	2

Layer 2 loop symptoms

2 Open Issues

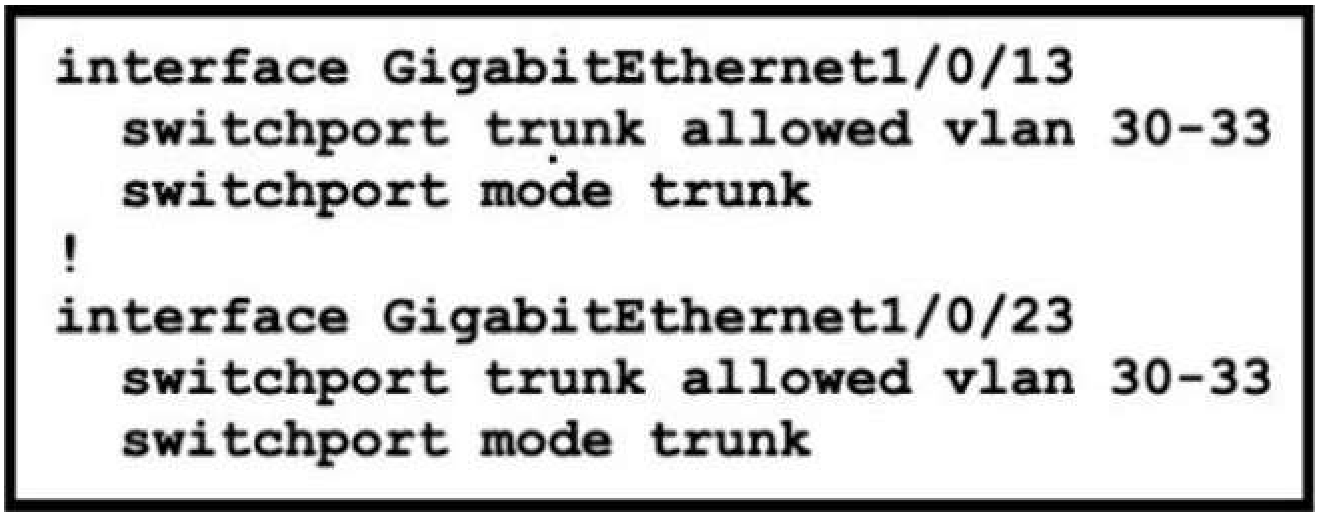
1 Area
1 Buildings, 0 Floors

2 DISTRIBUTION

Issue	Site	Device	Device Type	Issue Count
Host flaps observed in 1 VLAN(s)	USA/SF	SF-D9300-1	Cisco Catalyst 9300 Switch	24
Host flaps observed in 1 VLAN(s)	USA/SF	SF-D9300-2	Cisco Catalyst 9300 Switch	24

Potential Loop Details

Device	Role	Port in loop	Duplex	VLAN in loop
SF-D9300-1	DISTRIBUTION	GigabitEthernet1/0/13	Full	30-33
SF-D9300-2	DISTRIBUTION	GigabitEthernet1/0/13	Full	30-33
SF-D9300-1	DISTRIBUTION	GigabitEthernet1/0/23	Full	30-33
SF-A3850-1	ACCESS	GigabitEthernet1/0/23	Full	30-33



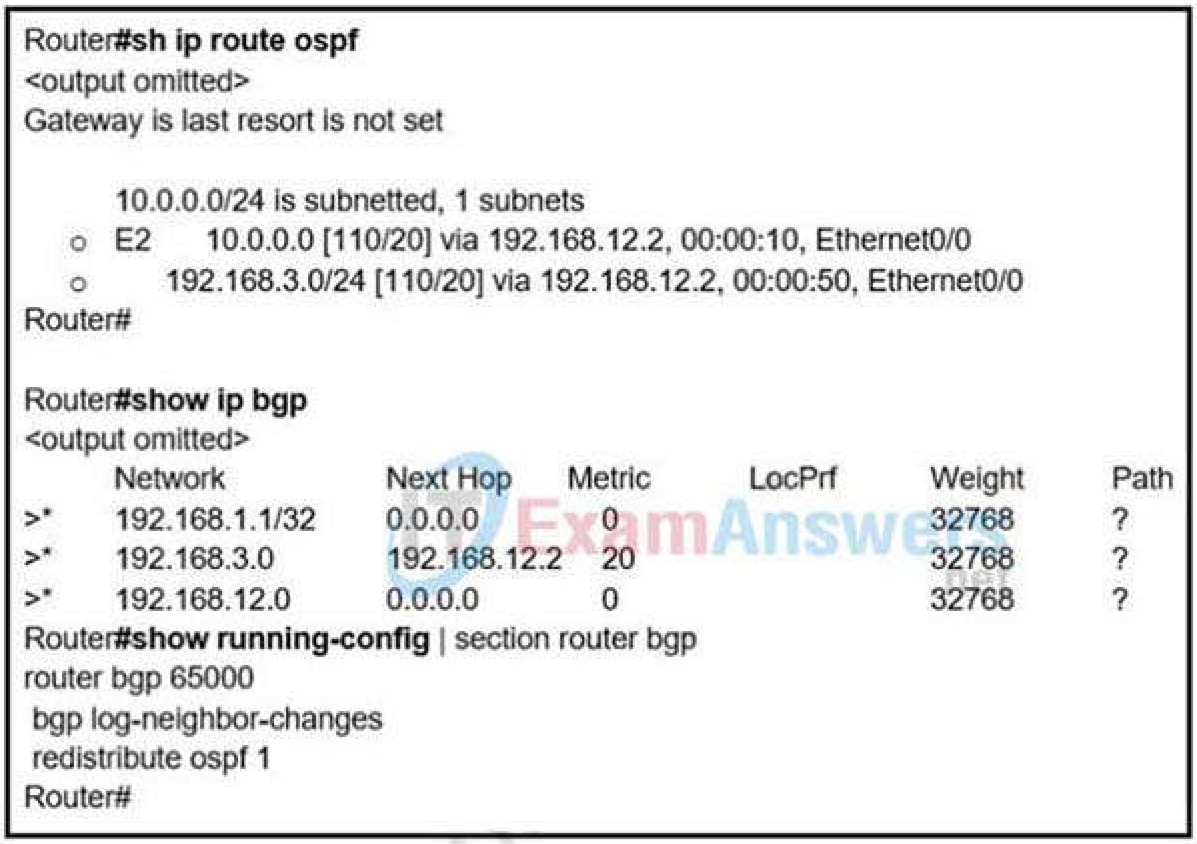
```
interface GigabitEthernet1/0/13
  switchport trunk allowed vlan 30-33
  switchport mode trunk
!
interface GigabitEthernet1/0/23
  switchport trunk allowed vlan 30-33
  switchport mode trunk
```

A. no spanning-tree uplinkfast
B. spanning-tree loopguard default
C. spanning-tree backbonesfast
D. spanning-tree portfast bpduguard

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 40
Refer to the exhibit. An engineer is trying to redistribute OSPF to BGP, but not all of the routes are redistributed. What is the reason for this issue?



```
Router#sh ip route ospf
<output omitted>
Gateway is last resort is not set

      10.0.0.0/24 is subnetted, 1 subnets
O  E2     10.0.0.0 [110/20] via 192.168.12.2, 00:00:10, Ethernet0/0
O        192.168.3.0/24 [110/20] via 192.168.12.2, 00:00:50, Ethernet0/0
Router#

Router#show ip bgp
<output omitted>
      Network          Next Hop      Metric      LocPrf      Weight      Path
>*    192.168.1.1/32   0.0.0.0       0                       32768       ?
>*    192.168.3.0      192.168.12.2  20                      32768       ?
>*    192.168.12.0     0.0.0.0       0                       32768       ?
Router#show running-config | section router bgp
router bgp 65000
 bgp log-neighbor-changes
 redistribute ospf 1
Router#
```

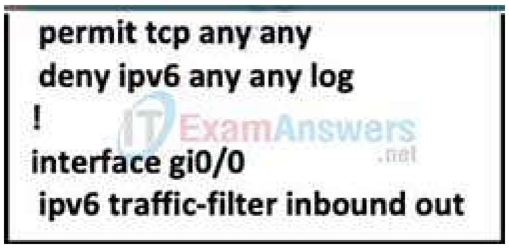
A. By default, only internal routes and external type 1 routes are redistributed into BGP
B. Only classful networks are redistributed from OSPF to BGP
C. BGP convergence is slow, so the route will eventually be present in the BGP table
D. By default, only internal OSPF routes are redistributed into BGP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

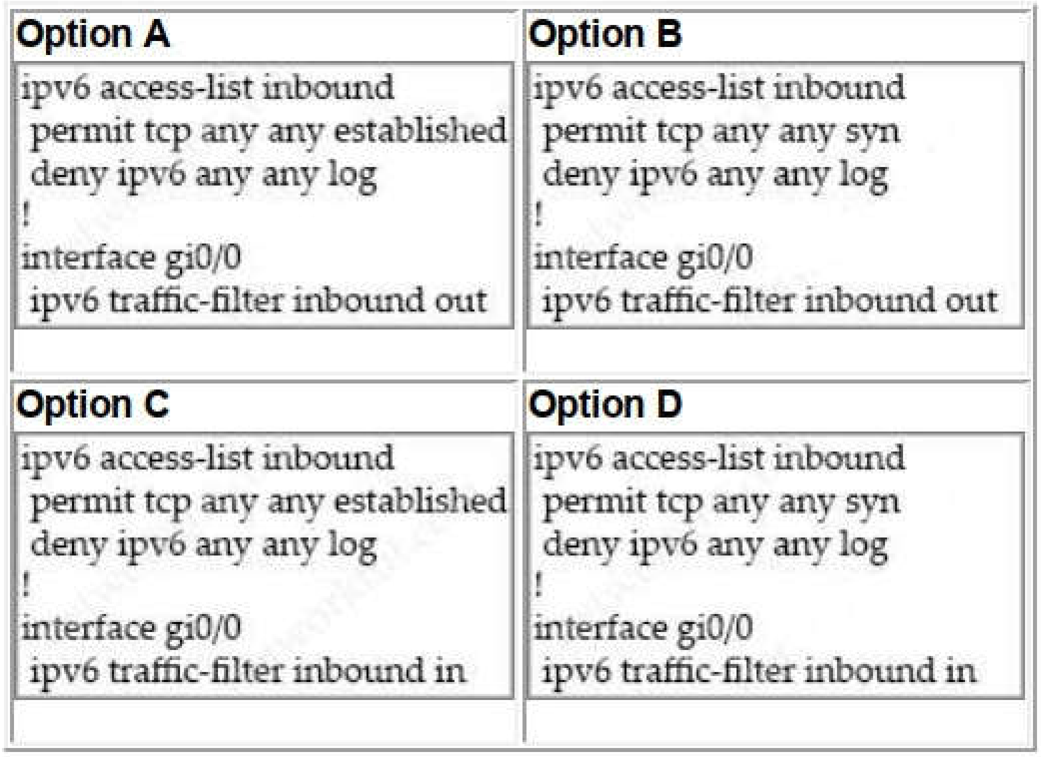
If you configure the redistribution of OSPF into BGP without keywords, only OSPF intra-area and inter-area routes are redistributed into BGP, by default.
You can redistribute both internal and external (type-1 & type-2) OSPF routes via this command:
– Router(config-router)#redistribute ospf 1 match internal external 1 external 2||

QUESTION 41
Refer to the exhibit.



```
 permit tcp any any
 deny ipv6 any any log
!
interface gi0/0
 ipv6 traffic-filter inbound out
```

A network administrator configured an IPv6 access list to allow TCP return frame only, but it is not working as expected. Which changes resolve this issue?



Option A

```
ipv6 access-list inbound
 permit tcp any any established
 deny ipv6 any any log
!
interface gi0/0
 ipv6 traffic-filter inbound out
```

Option B

```
ipv6 access-list inbound
 permit tcp any any syn
 deny ipv6 any any log
!
interface gi0/0
 ipv6 traffic-filter inbound out
```

Option C

```
ipv6 access-list inbound
 permit tcp any any established
 deny ipv6 any any log
!
interface gi0/0
 ipv6 traffic-filter inbound in
```

Option D

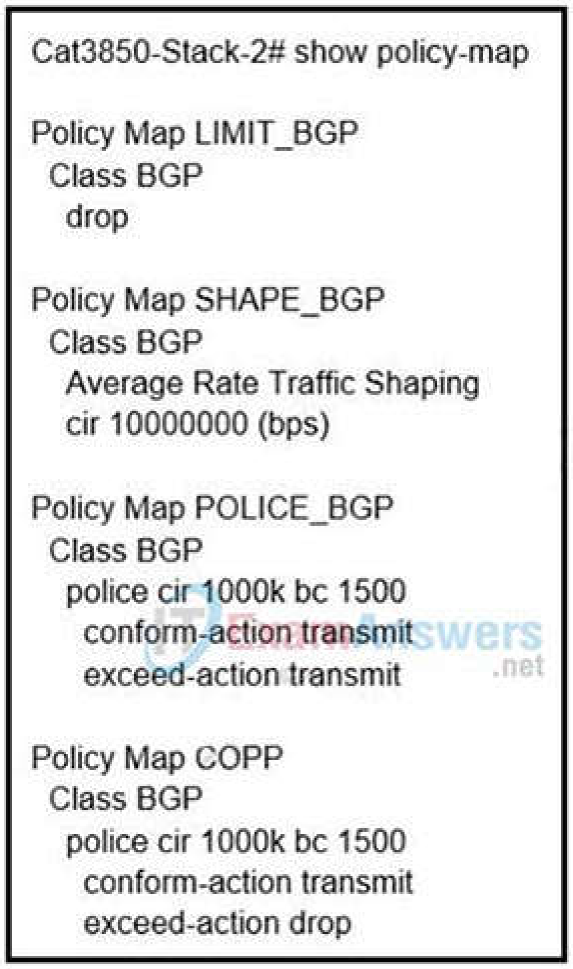
```
ipv6 access-list inbound
 permit tcp any any syn
 deny ipv6 any any log
!
interface gi0/0
 ipv6 traffic-filter inbound in
```

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 42
Refer to the exhibit. Which control plane policy limits BGP traffic that is destined to the CPU to 1 Mbps and ignores BGP traffic that is sent at higher rate?



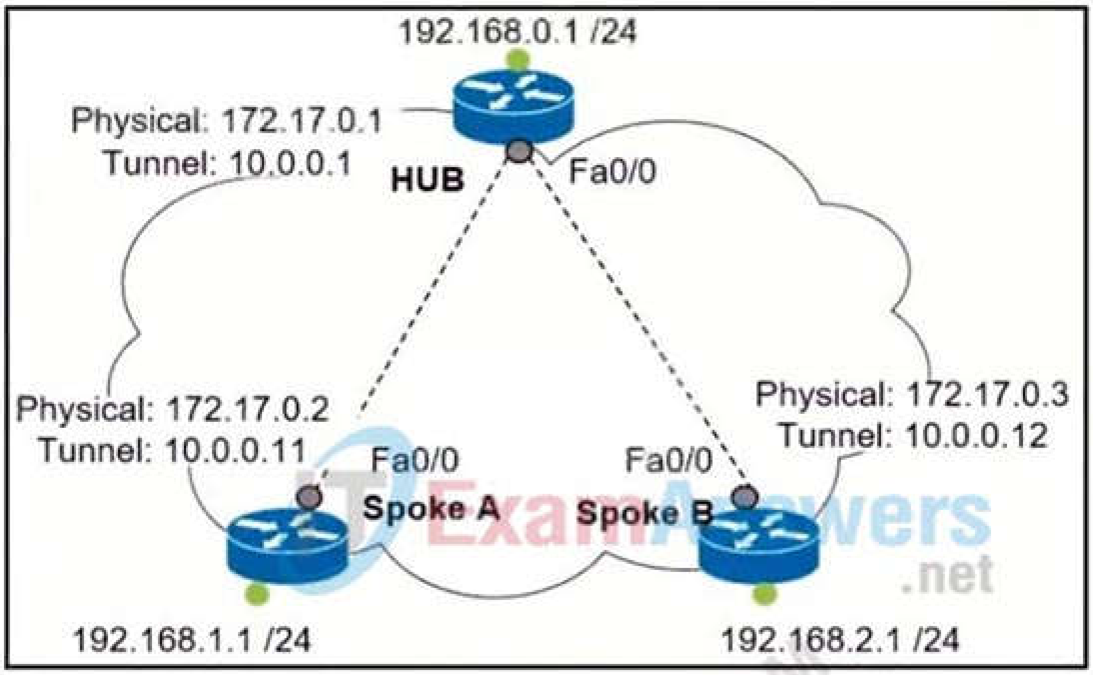
```
Cat3850-Stack-2# show policy-map

Policy Map LIMIT_BGP
 Class BGP
  drop

Policy Map SHAPE_BGP
 Class BGP
  Average Rate Traffic Shaping
  cir 10000000 (bps)

Policy Map POLICE_BGP
 Class BGP
  police cir 1000k bc 1500
   conform-action transmit
   exceed-action transmit

Policy Map COPP
 Class BGP
  police cir 1000k bc 1500
   conform-action transmit
   exceed-action drop
```

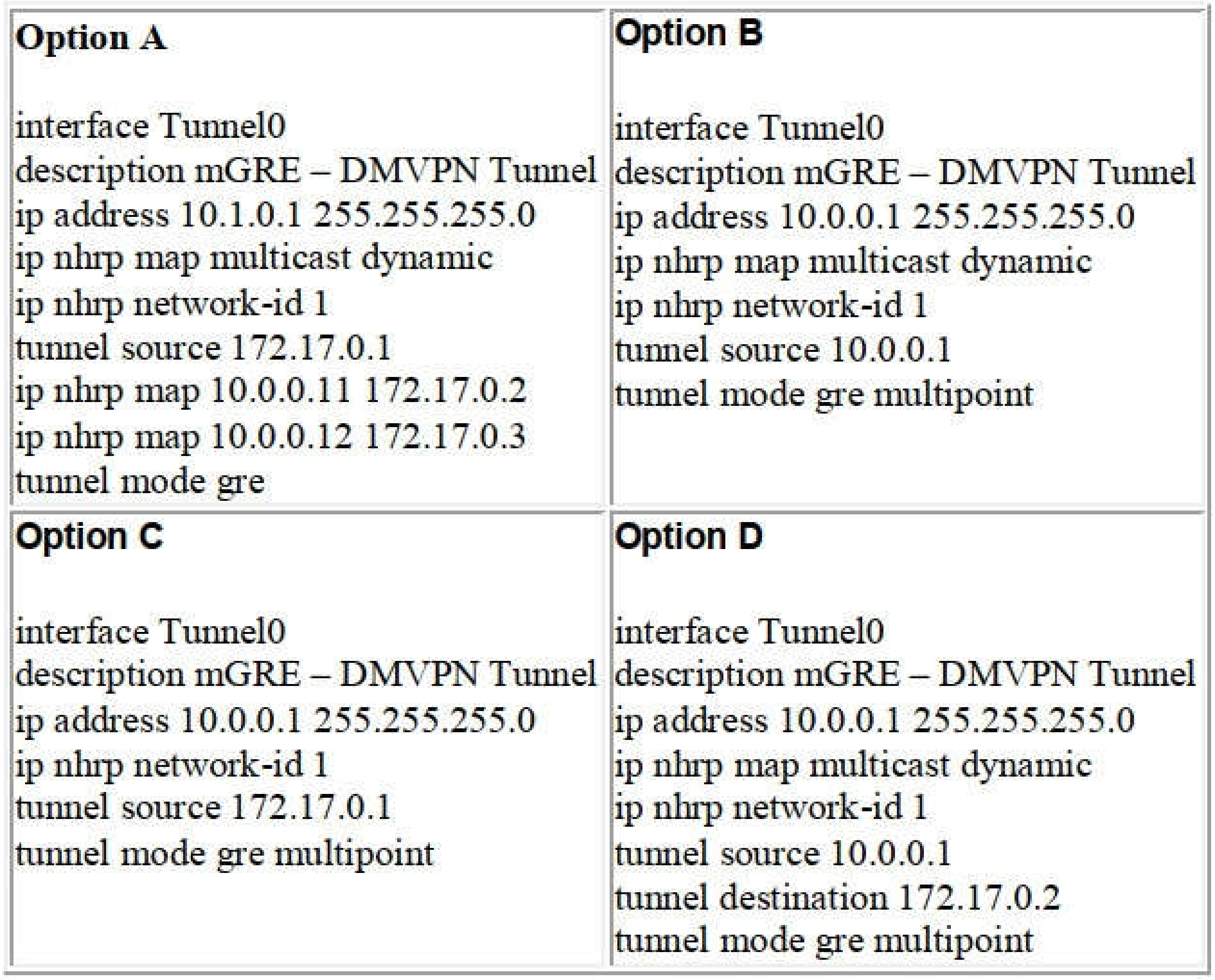
A. policy-map SHAPE_BGP
B. policy-map LIMIT_BGP
C. policy-map POLICE_BGP
D. policy-map COPP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 43
Refer to the exhibit. Which interface configuration must be configured on the HUB router to enable DMVPN with mGRE mode?





Option A interface Tunnel0 description mGRE – DMVPN Tunnel ip address 10.1.0.1 255.255.255.0 ip nhrp map multicast dynamic ip nhrp network-id 1 tunnel source 172.17.0.1 ip nhrp map 10.0.0.11 172.17.0.2 ip nhrp map 10.0.0.12 172.17.0.3 tunnel mode gre	**Option B** interface Tunnel0 description mGRE – DMVPN Tunnel ip address 10.0.0.1 255.255.255.0 ip nhrp map multicast dynamic ip nhrp network-id 1 tunnel source 10.0.0.1 tunnel mode gre multipoint
Option C interface Tunnel0 description mGRE – DMVPN Tunnel ip address 10.0.0.1 255.255.255.0 ip nhrp network-id 1 tunnel source 172.17.0.1 tunnel mode gre multipoint	**Option D** interface Tunnel0 description mGRE – DMVPN Tunnel ip address 10.0.0.1 255.255.255.0 ip nhrp map multicast dynamic ip nhrp network-id 1 tunnel source 10.0.0.1 tunnel destination 172.17.0.2 tunnel mode gre multipoint

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

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec_conn_dmvpn/configuration/15-mt/sec-conn-dmvpn-15-mt-book/sec-conn-dmvpn-dmvpn.html

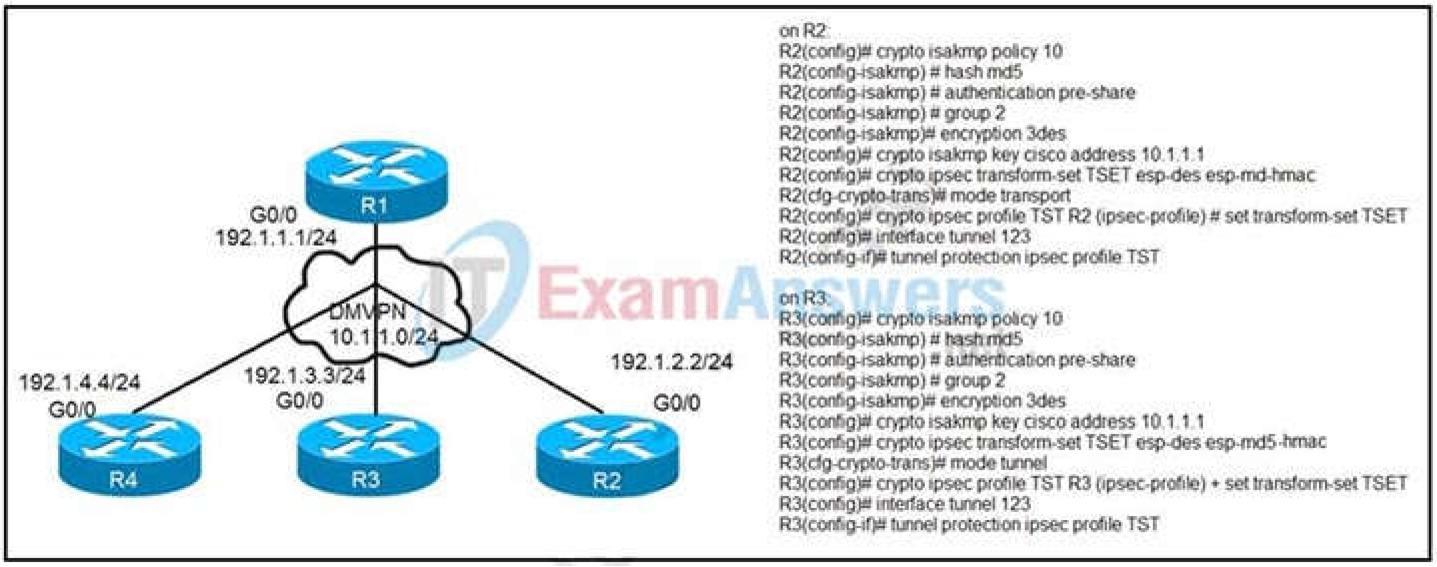
QUESTION 44
Which protocol is used to determine the NBMA address on the other end of a tunnel when mGRE is used?

A. NHRP
B. IPsec
C. MP-BGP
D. OSPF

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 45
Refer to the exhibit. After applying IPsec, the engineer observed that the DMVPN tunnel went down, and both spoke-tospoke and hub were not establishing. Which two actions resolve the issue? (Choose two.)



```
on R2:
R2(config)# crypto isakmp policy 10
R2(config-isakmp) # hash md5
R2(config-isakmp) # authentication pre-share
R2(config-isakmp) # group 2
R2(config-isakmp)# encryption 3des
R2(config)# crypto isakmp key cisco address 10.1.1.1
R2(config)# crypto ipsec transform-set TSET esp-des esp-md-hmac
R2(cfg-crypto-trans)# mode transport
R2(config)# crypto ipsec profile TST R2 (ipsec-profile) # set transform-set TSET
R2(config)# interface tunnel 123
R2(config-if)# tunnel protection ipsec profile TST

on R3:
R3(config)# crypto isakmp policy 10
R3(config-isakmp) # hash md5
R3(config-isakmp) # authentication pre-share
R3(config-isakmp) # group 2
R3(config-isakmp)# encryption 3des
R3(config)# crypto isakmp key cisco address 10.1.1.1
R3(config)# crypto ipsec transform-set TSET esp-des esp-md5-hmac
R3(cfg-crypto-trans)# mode tunnel
R3(config)# crypto ipsec profile TST R3 (ipsec-profile) + set transform-set TSET
R3(config)# interface tunnel 123
R3(config-if)# tunnel protection ipsec profile TST
```

A. Change the mode from mode tunnel to mode transport on R3.
B. Remove the crypto isakmp key cisco address 10.1.1.1 on R2 and R3.
C. Configure the crypto isakmp key cisco address 192.1.1.1 on R2 and R3.
D. Configure the crypto isakmp key cisco address 0.0.0.0 on R2 and R3.
E. Change the mode from mode transport to mode tunnel on R2.

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

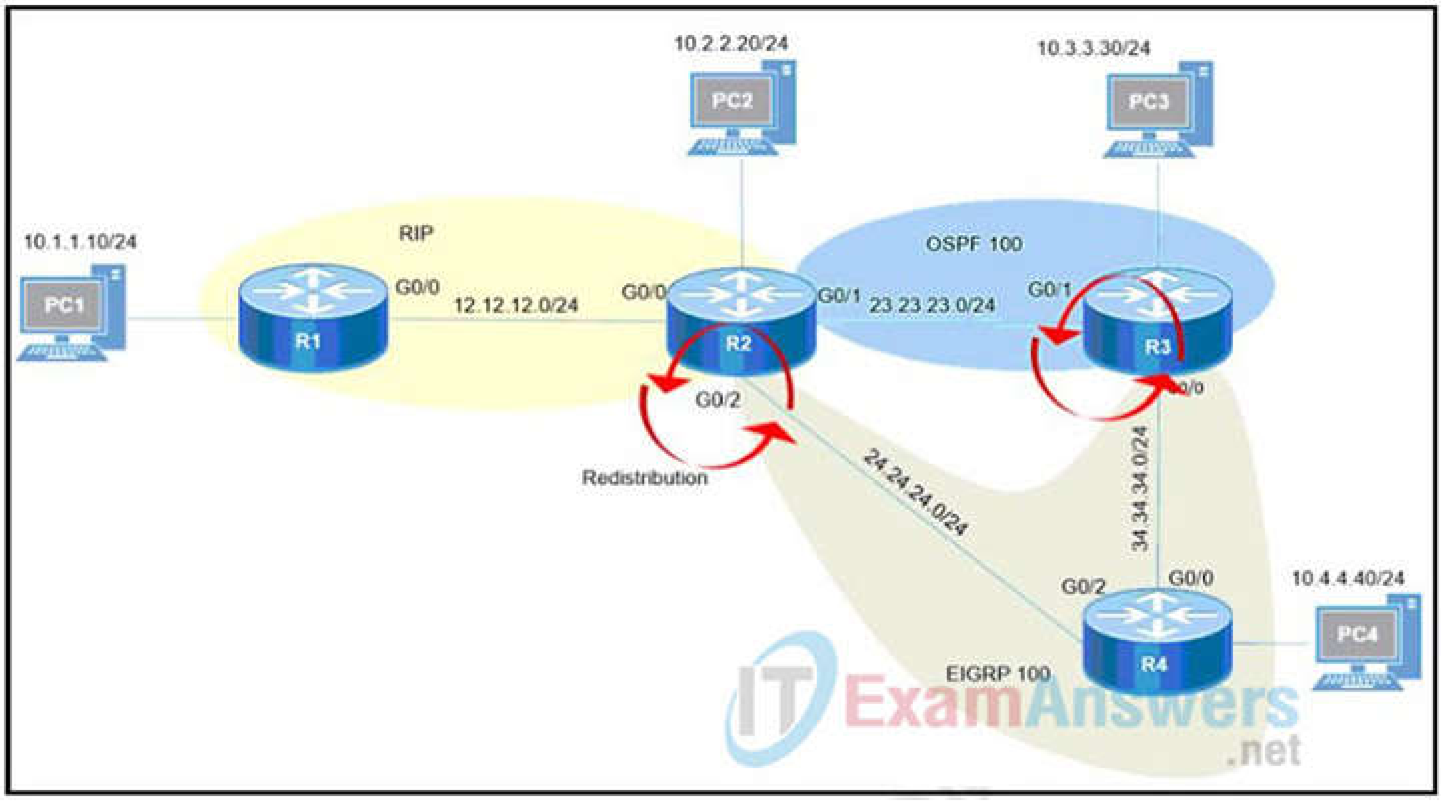
QUESTION 46
What is a function of IPv6 ND inspection?

A. It learns and secures bindings for stateless autoconfiguration addresses in Layer 3 neighbor tables
B. It learns and secures bindings for stateless autoconfiguration addresses in Layer 2 neighbor tables
C. It learns and secures bindings for stateful autoconfiguration addresses in Layer 2 neighbor tables.
D. It learns and secures bindings for stateful autoconfiguration addresses in Layer 3 neighbor tables.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 47
Refer to the exhibit. After redistribution is enabled between the routing protocols; PC2, PC3, and PC4 cannot reach PC1. Which action can the engineer take to solve the issue so that all the PCs are reachable?



A. Set the administrative distance 100 under the RIP process on R2.
B. Filter the prefix 10.1.1.0/24 when redistributed from OSPF to EIGRP.
C. Filter the prefix 10.1.1.0/24 when redistributed from RIP to EIGRP.
D. Redistribute the directly connected interfaces on R2.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 48
Which is statement about IPv6 inspection is true?

A. It learns and secures bindings for stateless autoconfiguration addresses in Layer 3 neighbor tables
B. It learns and secures bindings for stateful autoconfiguration addresses in Layer 3 neighbor tables
C. It learns and secures bindings for stateful autoconfiguration addresses in Layer 2 neighbor tables
D. It learns and secures binding for stateless autoconfiguration addresses in Layer 2 neighbor tables.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 49
Which command displays the IP routing table information that is associated with VRF-Lite?

A. show ip vrf
B. show ip route vrf
C. show run vrf
D. show ip protocols vrf

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst4500/12-2/50sg/configuration/guide/Wrapper-46SG/vrf.html#wp1045708

QUESTION 50
Which statement about IPv6 RA Guard is true?

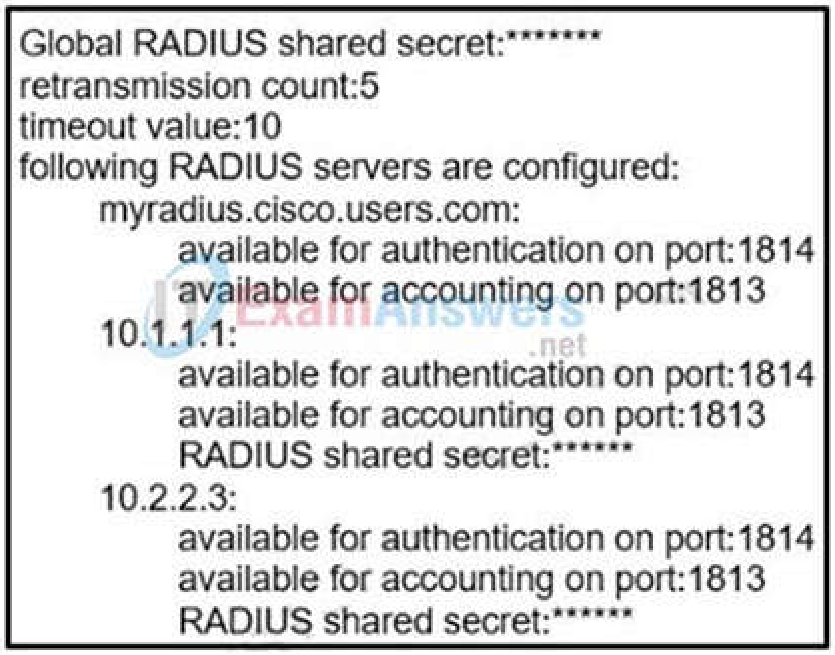
A. It does not offer protection in environments where IPv6 traffic is tunneled.
B. It cannot be configured on a switch port interface in the ingress direction.
C. Packets that are dropped by IPv6 RA Guard cannot be spanned.
D. It is not supported in hardware when TCAM is programmed.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The IPv6 RA Guard feature does not offer protection in environments where IPv6 traffic is tunneled.

Reference: **Here (from cisco)**

QUESTION 51
Refer to the exhibit. AAA server 10.1.1.1 is configured with the default authentication and accounting settings, but the switch cannot communicate with the server Which action resolves this issue?



```
Global RADIUS shared secret:*******
retransmission count:5
timeout value:10
following RADIUS servers are configured:
        myradius.cisco.users.com:
                available for authentication on port:1814
                available for accounting on port:1813
        10.1.1.1:
                available for authentication on port:1814
                available for accounting on port:1813
                RADIUS shared secret:******
        10.2.2.3:
                available for authentication on port:1814
                available for accounting on port:1813
                RADIUS shared secret:******
```

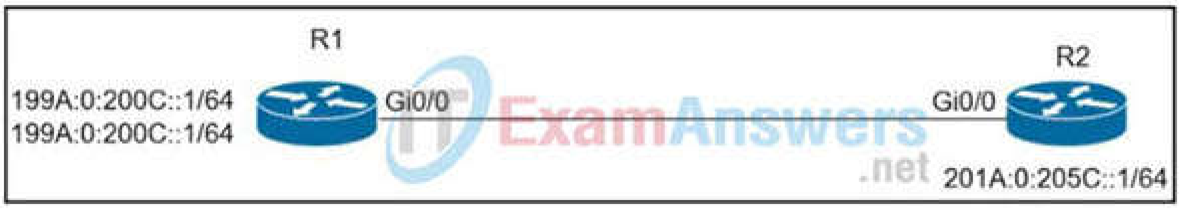
A. Match the authentication port
B. Match the accounting port
C. Correct the timeout value.
D. Correct the shared secret.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Command Default
Accounting port: 1813
Authentication port: 1812
Accounting: enabled
Authentication: enabled
Retransmission count: 1
Idle-time: 0
Server monitoring: disabled
Timeout: 5 seconds
Test username: test
Test password: test
Reference:
https://www.cisco.com/c/m/en_us/techdoc/dc/reference/cli/n5k/commands/radius-server-host.html

By default, RADIUS uses UDP port 1812 for authentication and port 1813 for accounting. In the exhibit above we see port 1814 is being used for authentication to AAA server at 10.1.1.1 which is not the default port so we must adjust the authentication port to the default value 1812.

QUESTION 52
Refer to the exhibit. Which configuration denies Telnet traffic to router 2 from 198A:0:200C::1/64?



A. Ipv6 access-list Deny_Telnet
   sequence 10 deny tcp host 198A:0:200C::1/64 host 201A:0:205C::1/64 !
   int Gi0/0
   Ipv6 access-map Deny_Telnet in
   !
B. Ipv6 access-list Deny_Telnet
   sequence 10 deny tcp host 198A:0:200C::1/64 host 201A:0:205C::1/64 !
   int Gi0/0
   Ipv6 traffic-filter Deny_Telnet in
   !
C. Ipv6 access-list Deny_Telnet
   sequence 10 deny tcp host 198A:0:200C::1/64 host 201A:0:205C::1/64 eq telnet
   !
   int Gi0/0
   Ipv6 access-map Deny_Telnet in
   !
D. Ipv6 access-list Deny_Telnet
   sequence 10 deny tcp host 198A:0:200C::1/64 host 201A:0:205C::1/64 eq telnet
   !
   int Gi0/0
   Ipv6 traffic-filter Deny_Telnet in
   !

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

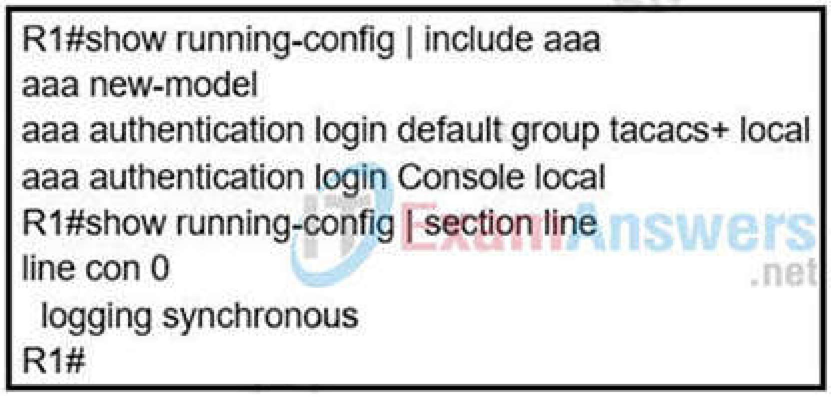
QUESTION 53
Which transport layer protocol is used to form LDP sessions?

A. UDP
B. SCTP
C. TCP
D. RDP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
LDP multicasts hello messages to a well-known UDP port (646) in order to discover neighbors. Once the discovery is accomplished, a TCP connection (port 646) is established and the LDP session begins. LDP keepalives ensure the health of the session. Thanks to the LDP session, LDP messages create the label mappings required for a FEC. Withdraw messages are used when FECs need to be torn down.

QUESTION 54
Refer to the exhibit. An engineer is trying to configure local authentication on the console line, but the device is trying to authenticate using TACACS+. Which action produces the desired configuration?



```
R1#show running-config | include aaa
aaa new-model
aaa authentication login default group tacacs+ local
aaa authentication login Console local
R1#show running-config | section line
line con 0
 logging synchronous
R1#
```

A. Add the aaa authentication login default none command to the global configuration.

B. Replace the capital “C” with a lowercase “c” in the aaa authentication login Console local command.
C. Add the aaa authentication login default group tacacs+ local-case command to the global configuration.
D. Add the login authentication Console command to the line configuration

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://community.cisco.com/t5/switching/how-to-define-login-local-for-console-0/td-p/2949493

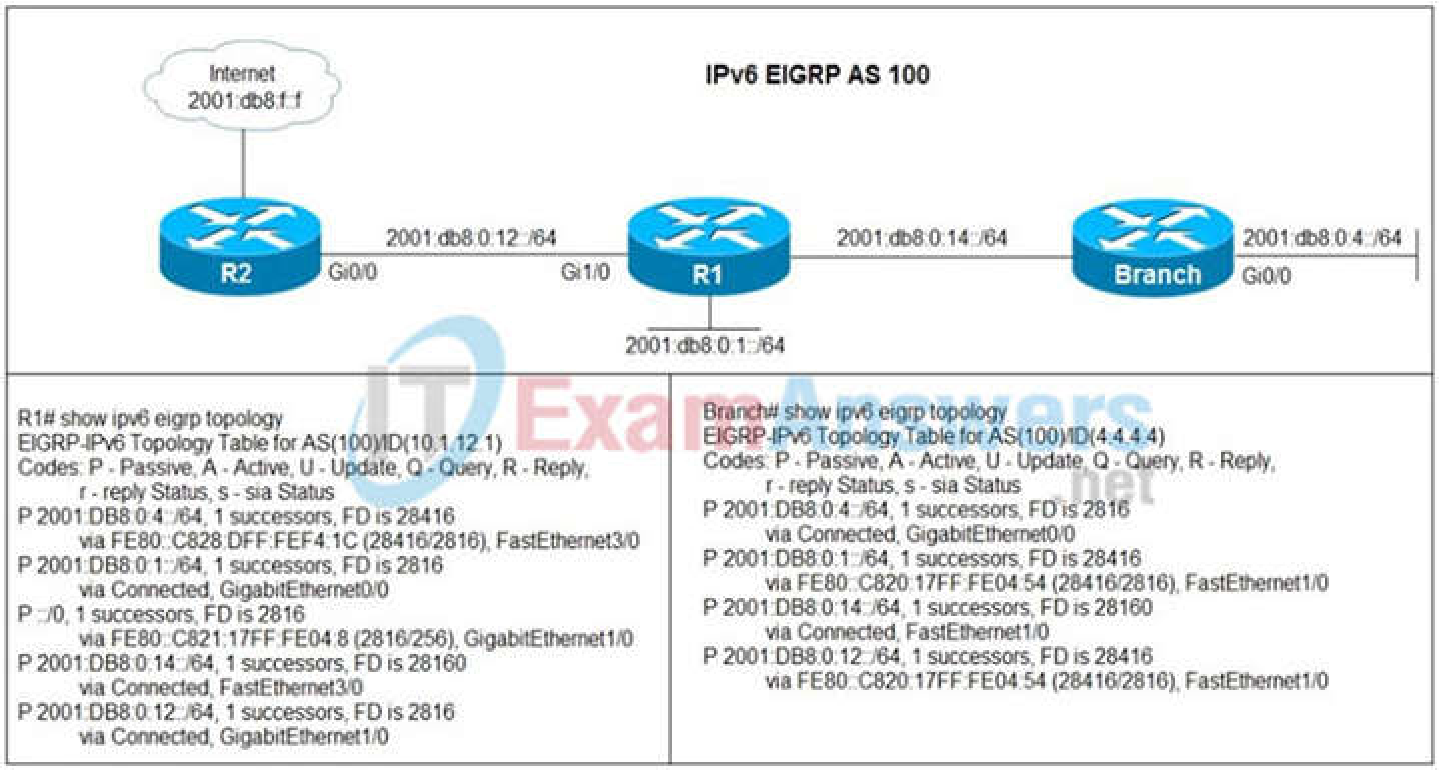
QUESTION 55
Which feature drops packets if the source address is not found in the snooping table?

A. IPv6 Source Guard
B. IPv6 Destination Guard
C. IPv6 Prefix Guard
D. Binding Table Recovery

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6_fhsec/configuration/xe-3s/ip6f-xe-3s-book/ip6-snooping.pdf

QUESTION 56
Refer to the exhibit. Users in the branch network of 2001:db8:0:4::/64 report that they cannot access the Internet. Which command is issued in IPv6 router EIGRP 100 configuration mode to solve this issue?



```
R1# show ipv6 eigrp topology
EIGRP-IPv6 Topology Table for AS(100)/ID(10.1.12.1)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status
P 2001:DB8:0:4::/64, 1 successors, FD is 28416
       via FE80::C828:DFF:FEF4:1C (28416/2816), FastEthernet3/0
P 2001:DB8:0:1::/64, 1 successors, FD is 2816
       via Connected, GigabitEthernet0/0
P ::/0, 1 successors, FD is 2816
       via FE80::C821:17FF:FE04:8 (2816/256), GigabitEthernet1/0
P 2001:DB8:0:14::/64, 1 successors, FD is 28160
       via Connected, FastEthernet3/0
P 2001:DB8:0:12::/64, 1 successors, FD is 2816
       via Connected, GigabitEthernet1/0
```

```
Branch# show ipv6 eigrp topology
EIGRP-IPv6 Topology Table for AS(100)/ID(4.4.4.4)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - reply Status, s - sia Status
P 2001:DB8:0:4::/64, 1 successors, FD is 2816
       via Connected, GigabitEthernet0/0
P 2001:DB8:0:1::/64, 1 successors, FD is 28416
       via FE80::C820:17FF:FE04:54 (28416/2816), FastEthernet1/0
P 2001:DB8:0:14::/64, 1 successors, FD is 28160
       via Connected, FastEthernet1/0
P 2001:DB8:0:12::/64, 1 successors, FD is 28416
       via FE80::C820:17FF:FE04:54 (28416/2816), FastEthernet1/0
```

A. Issue the eigrp stub command on R1.
B. Issue the no eigrp stub command on R1.
C. Issue the eigrp stub command on R2.
D. Issue the no eigrp stub command on R2.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 57
What does the PE router convert the Ipv4 prefix to within an MPLS VPN?

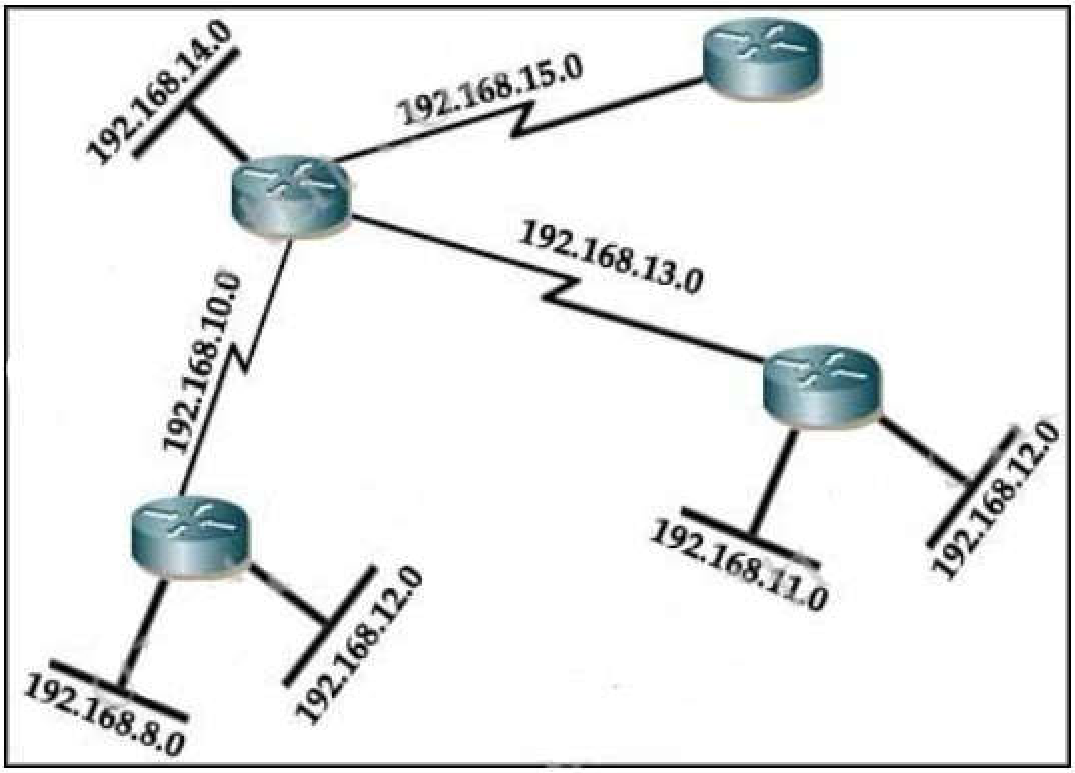
A. 48-bit route combining the IP and PE router-id

B. VPN-IPv4 prefix combined with the 64-bit route distinguisher
C. prefix that combines the ASN, PE router-id and IP prefix
D. eBGP path association between the PE and CE sessions

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The IP prefix is a member of the IPv4 address family. After the PE device learns the IP prefix, the PE converts it into a VPN-IPv4 prefix by combining it with an 8-byte route distinguisher (RD). The generated prefix is a member of the VPN-IPv4 address family. It uniquely identifies the customer address, even if the customer site is using globally nonunique (unregistered private) IP addresses. The route distinguisher used to generate the VPN-IPv4 prefix is specified by a configuration command associated with the virtual routing and forwarding (VRF) instance on the PE device.

QUESTION 58
Given the network diagram, which address would successfully summarize only the networks seen?

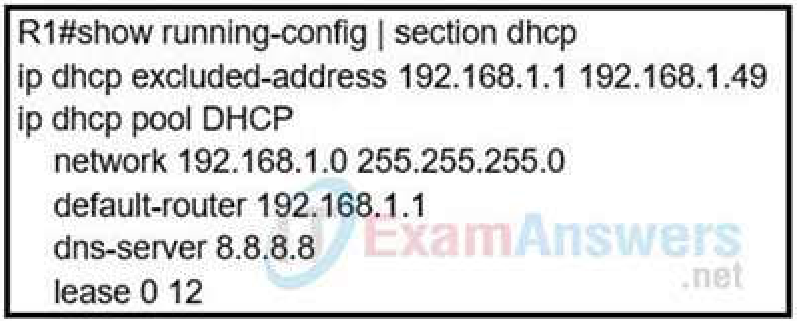


A. 192.168.0.0/24
B. 192.168.8.0/20
C. 192.168.8.0/21
D. 192.168.12.0/20
E. 192.168.16.0/21
F. These networks cannot be summarized.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 59
Refer to the exhibit. Users report that IP addresses cannot be acquired from the DHCP server. The DHCP server is configured as shown. About 300 total nonconcurrent users are using this DHCP server, but none of them are active for more than two hours per day. Which action fixes the issue within the current resources?



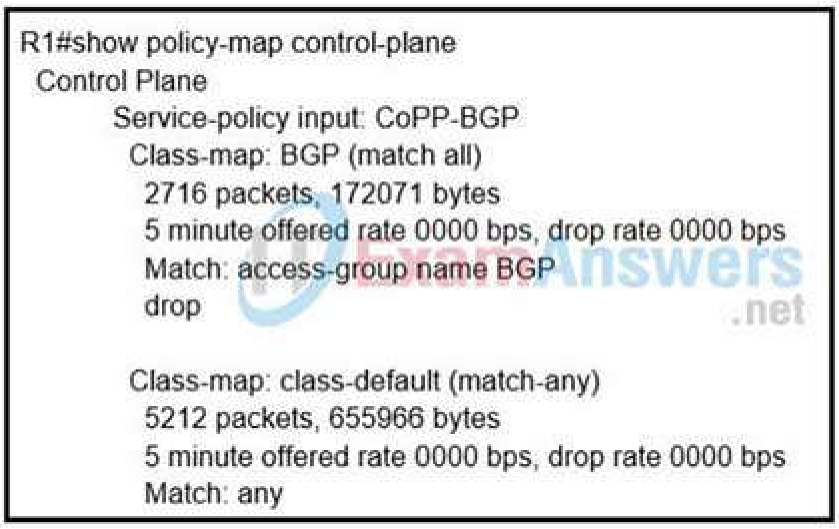
```
R1#show running-config | section dhcp
ip dhcp excluded-address 192.168.1.1 192.168.1.49
ip dhcp pool DHCP
   network 192.168.1.0 255.255.255.0
   default-router 192.168.1.1
   dns-server 8.8.8.8
   lease 0 12
```

A. Modify the subnet mask to the network 192.168.1.0 255.255.254.0 command in the DHCP pool
B. Configure the DHCP lease time to a smaller value
C. Configure the DHCP lease time to a bigger value
D. Add the network 192.168.2.0 255.255.255.0 command to the DHCP pool

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 60
Refer to the exhibit. What is the result of applying this configuration?



```
R1#show policy-map control-plane
 Control Plane
      Service-policy input: CoPP-BGP
       Class-map: BGP (match all)
        2716 packets, 172071 bytes
        5 minute offered rate 0000 bps, drop rate 0000 bps
        Match: access-group name BGP
        drop

       Class-map: class-default (match-any)
        5212 packets, 655966 bytes
        5 minute offered rate 0000 bps, drop rate 0000 bps
        Match: any
```

A. The router can form BGP neighborships with any other device.
B. The router cannot form BGP neighborships with any other device.
C. The router cannot form BGP neighborships with any device that is matched by the access list named “BGP”.
D. The router can form BGP neighborships with any device that is matched by the access list named “BGP”.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
After bgp session are UP.I configured the CoPP to drop 10.3.3.3 bgp traffic (R3).
R3 bgp traffic that matched the ACL 100 is dropped and the state is in IDLE

```
--------------------------------------------
access-list 100 permit tcp host 10.3.3.3 any eq bgp
access-list 100 permit tcp host 10.3.3.3 eq bgp any
!
class-map match-all class-bgp
match access-group 100
!
policy-map policy-bgp
class class-bgp
drop
!
control-plane
service-policy input policy-bgp
!
```

The 10.3.3.3 neighbor goes to IDLE

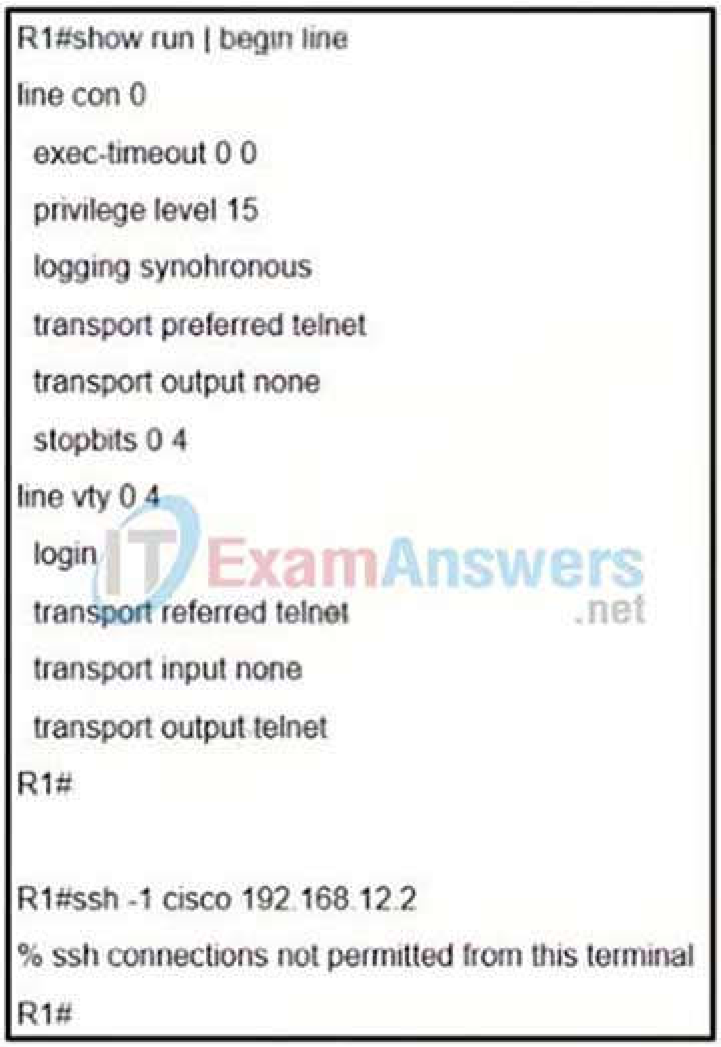
QUESTION 61
The router can form BGP neighborships with any device that is matched by the access list named “BGP”.

A. SWAP and POP
B. SWAP and PUSH
C. PUSH and PHP
D. PUSH and POP

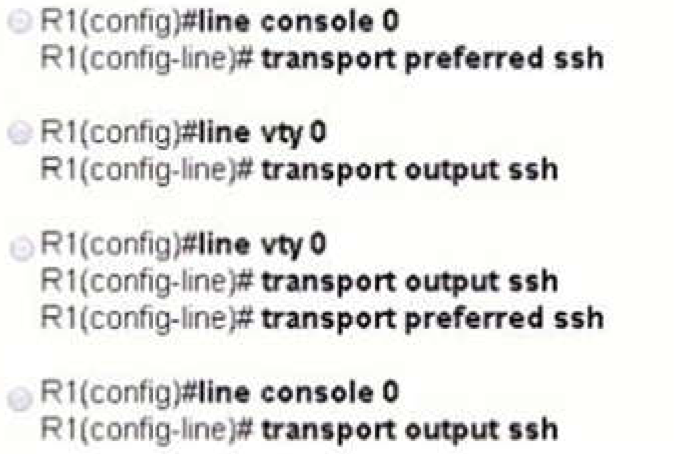
Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
A label edge router (LER, also known as edge LSR) is a router that operates at the edge of an MPLS network and acts as the entry and exit points for the network. LERs push an MPLS label onto an incoming packet and pop it off an outgoing packet.
Reference:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/nx-os/mpls/configuration/guide/mpls_cg/mp_mpls_overview.pdf

QUESTION 62
Refer to the exhibit. An engineer receives this error message when trying to access another router m-band from the serial interface connected to the console of R1. Which configuration is needed on R1 to resolve this issue?



```
R1#show run | begin line
line con 0
 exec-timeout 0 0
 privilege level 15
 logging synohronous
 transport preferred telnet
 transport output none
 stopbits 0 4
line vty 0 4
 login
 transport referred telnet
 transport input none
 transport output telnet
R1#


R1#ssh -1 cisco 192.168.12.2
% ssh connections not permitted from this terminal
R1#
```



```
○ R1(config)#line console 0
  R1(config-line)# transport preferred ssh

○ R1(config)#line vty 0
  R1(config-line)# transport output ssh

○ R1(config)#line vty 0
  R1(config-line)# transport output ssh
  R1(config-line)# transport preferred ssh

○ R1(config)#line console 0
  R1(config-line)# transport output ssh
```

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

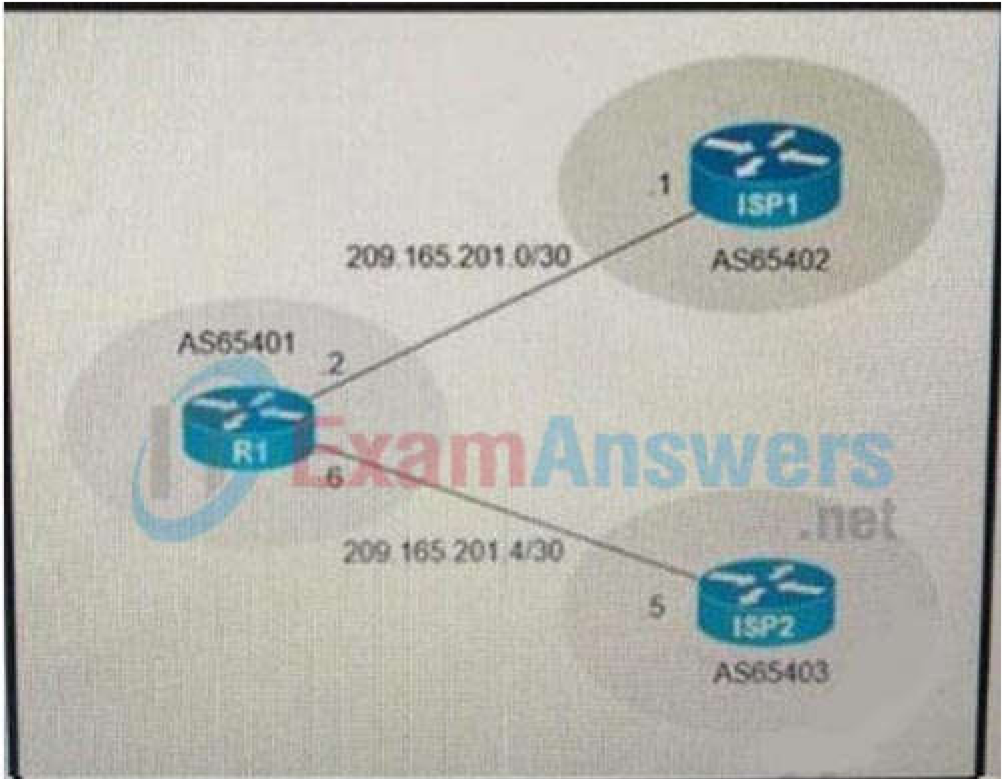
Correct Answer: D
Section: (none)
Explanation

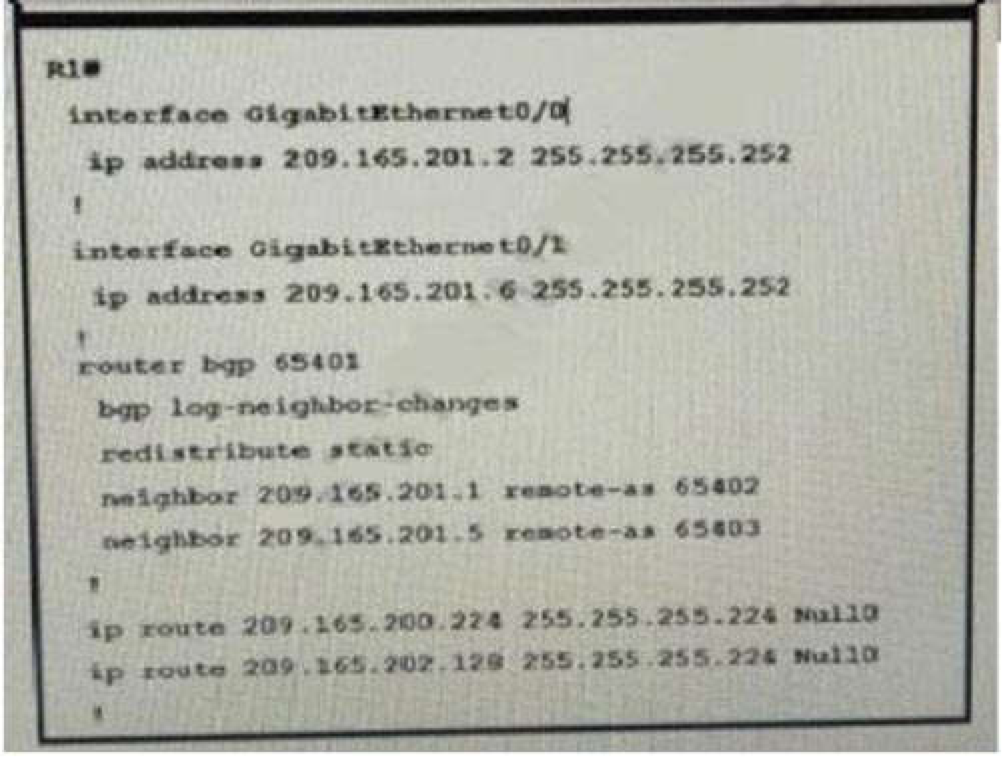
Explanation/Reference:
https://community.cisco.com/t5/other-network-architecture/out-of-band-router-access/td-p/333295

The “transport output none” command prevents any protocol connection made from R1.
Therefore our SSH connection to 192.168.12.2 was refused. In order to fix this problem we can configure “transport output ssh” under “line console 0” of R1.
Note: The parameter “-l” specifies the username to log in as on the remote machine.

QUESTION 63

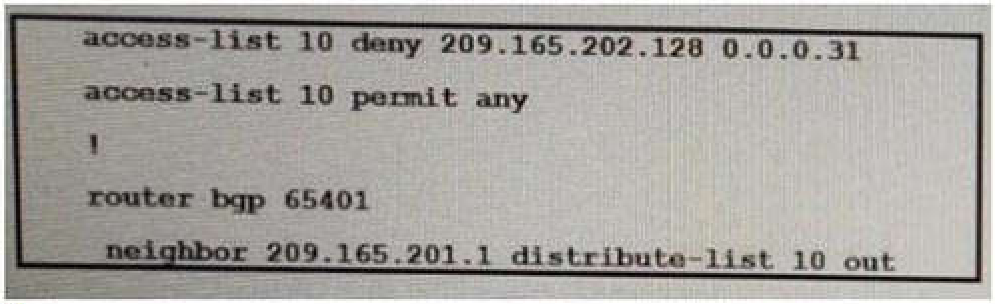
Refer to the exhibit. A company with autonomous system number AS65401 has obtained IP address block 209.165.200.224/27 fro, ARIN. The company needed more IP addresses and was assigned block 209.165.202.128/27 from ISP2. An engineer is ISP1 reports they are receiving ISP2 routes from AS65401. Which configuration onR1 resolves the issue?





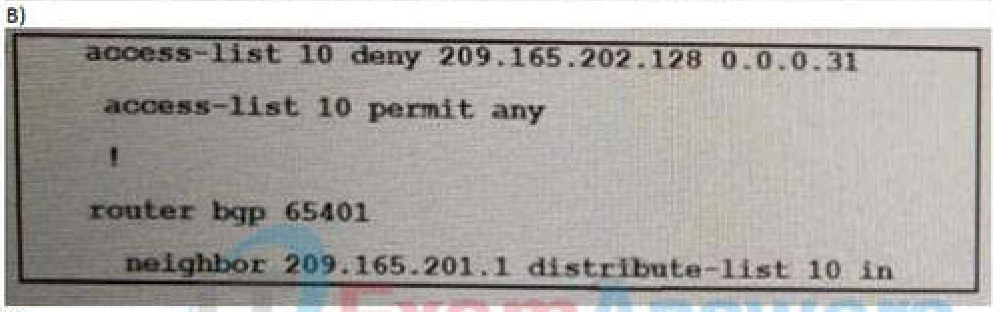
```
R1#
 interface GigabitEthernet0/0
  ip address 209.165.201.2 255.255.255.252
 !
 interface GigabitEthernet0/1
  ip address 209.165.201.6 255.255.255.252
 !
 router bgp 65401
  bgp log-neighbor-changes
  redistribute static
  neighbor 209.165.201.1 remote-as 65402
  neighbor 209.165.201.5 remote-as 65403
 !
 ip route 209.165.200.224 255.255.255.224 Null0
 ip route 209.165.202.128 255.255.255.224 Null0
 !
```

A)



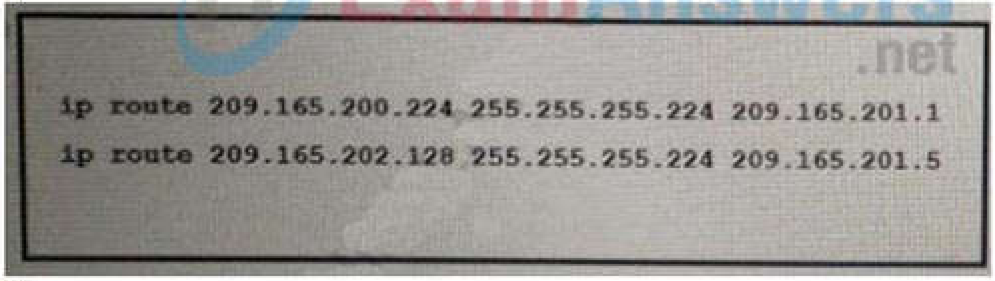
```
access-list 10 deny 209.165.202.128 0.0.0.31
access-list 10 permit any
!
router bgp 65401
 neighbor 209.165.201.1 distribute-list 10 out
```

B)



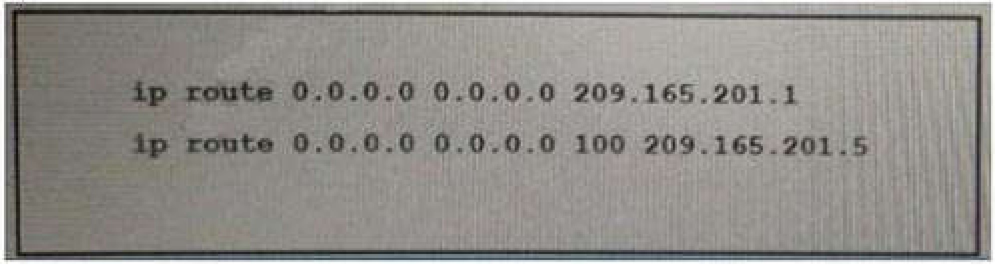
```
access-list 10 deny 209.165.202.128 0.0.0.31
 access-list 10 permit any
 !
router bgp 65401
  neighbor 209.165.201.1 distribute-list 10 in
```

C)



```
ip route 209.165.200.224 255.255.255.224 209.165.201.1
ip route 209.165.202.128 255.255.255.224 209.165.201.5
```

D)



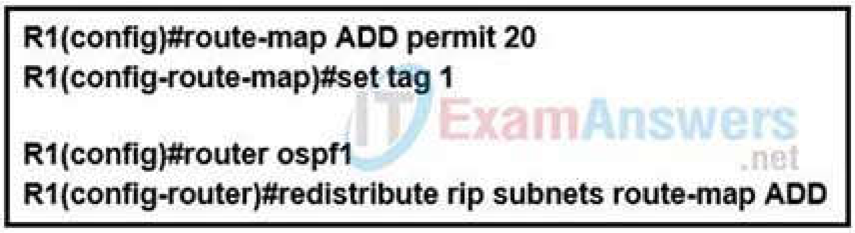
```
ip route 0.0.0.0 0.0.0.0 209.165.201.1
ip route 0.0.0.0 0.0.0.0 100 209.165.201.5
```

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/23675-27.html

QUESTION 64
Refer to the exhibit. Which statement about R1 is true?



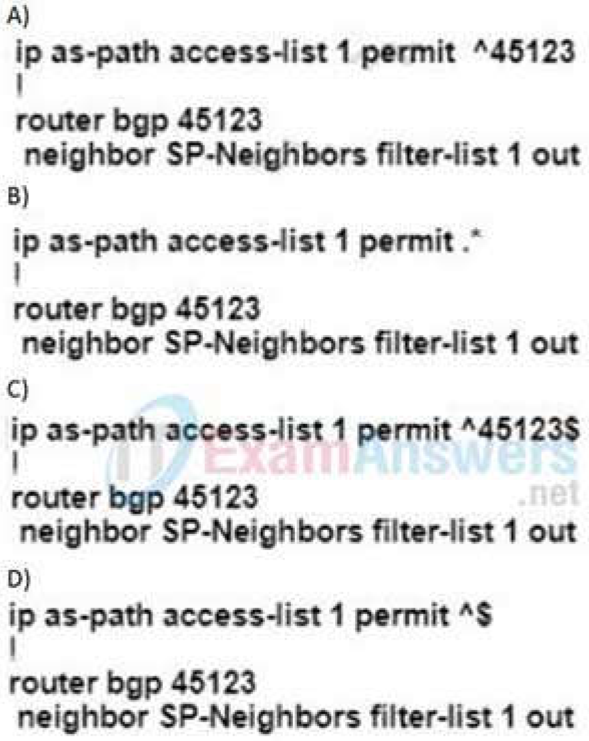
```
R1(config)#route-map ADD permit 20
R1(config-route-map)#set tag 1

R1(config)#router ospf1
R1(config-router)#redistribute rip subnets route-map ADD
```

A. OSPF redistributes RIP routes only if they have a tag of one.
B. RIP learned routes are distributed to OSPF with a tag value of one.
C. R1 adds one to the metric for RIP learned routes before redistributing to OSPF.
D. RIP routes are redistributed to OSPF without any changes.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 65
After some changes in the routing policy, it is noticed that the router in AS 45123 is being used as a transit AS router for several service provides. Which configuration ensures that the branch router in AS 45123 advertises only the local networks to all SP neighbors?

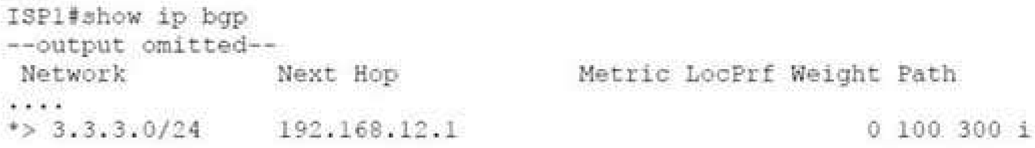


A)
```
ip as-path access-list 1 permit  ^45123
!
router bgp 45123
 neighbor SP-Neighbors filter-list 1 out
```
B)
```
ip as-path access-list 1 permit .*
!
router bgp 45123
 neighbor SP-Neighbors filter-list 1 out
```
C)
```
ip as-path access-list 1 permit ^45123$
!
router bgp 45123
 neighbor SP-Neighbors filter-list 1 out
```
D)
```
ip as-path access-list 1 permit ^$
!
router bgp 45123
 neighbor SP-Neighbors filter-list 1 out
```

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
By default BGP advertises all prefixes to external BGP neighbors. This means that if you are multihomed (connected to two or more ISPs) then you might become a transit AS. For example, ISP 2 in AS 200 can send traffic to your router in AS 100 to reach ISP 3 in AS 300 because you advertised prefixes in ISP 3 to ISP 2.
This is what will be seen in the BGP routing table of ISP1:



```
ISP1#show ip bgp
--output omitted--
 Network          Next Hop            Metric LocPrf Weight Path
....
*> 3.3.3.0/24     192.168.12.1                         0 100 300 i
```

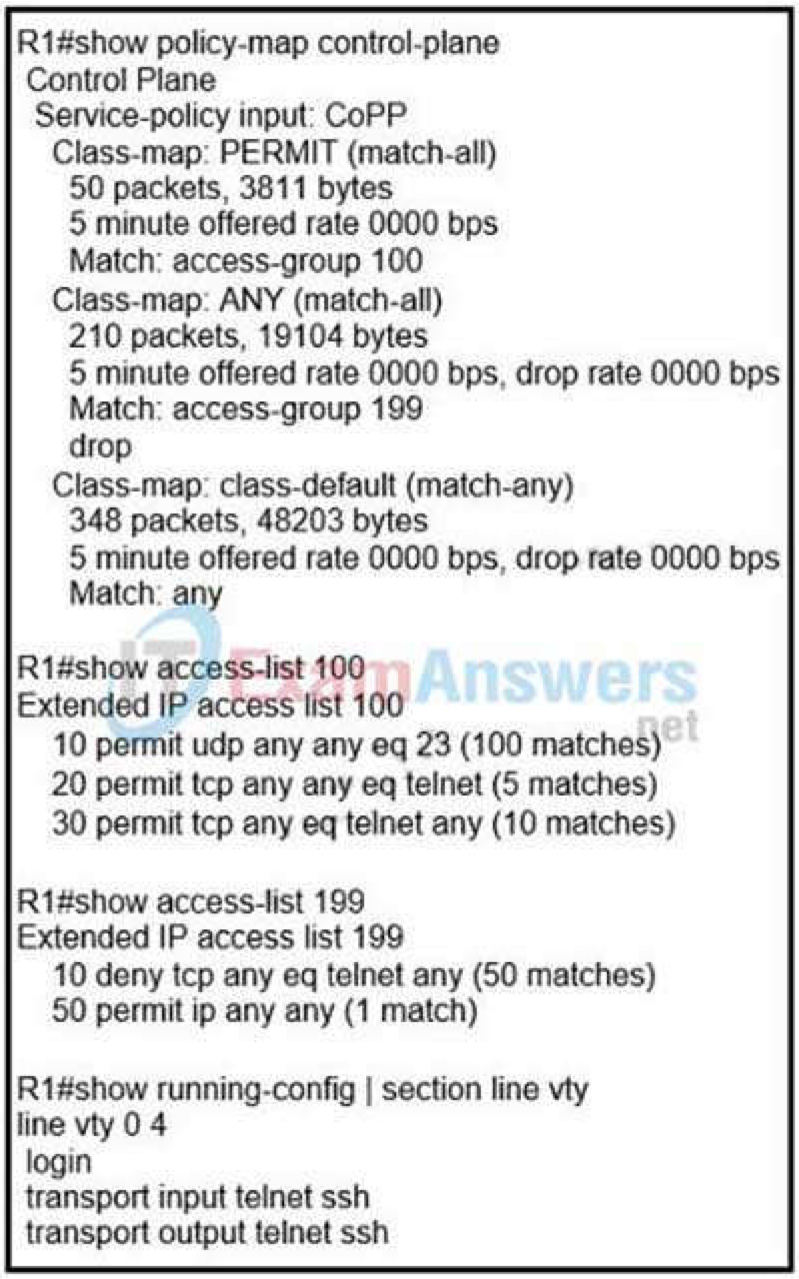
QUESTION 66
What is an advantage of using BFD?

A. It detects local link failure at layer 1 and updates routing table.
B. It detects local link failure at layer 2 and updates routing protocols.
C. It has sub-second failure detection for layer 1 and layer 3 problems.
D. It has sub-second failure detection for layer 1 and layer 2 problems.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
BFD provides a low-overhead, short-duration method of detecting failures in the forwarding path between two adjacent routers, including the interfaces, data links, and forwarding planes. BFD is a detection protocol that you enable at the interface and routing protocol levels

QUESTION 67
Refer to the exhibit. Which two actions restrict access to router R1 by SSH? (Choose two.)



```
R1#show policy-map control-plane
 Control Plane
  Service-policy input: CoPP
    Class-map: PERMIT (match-all)
      50 packets, 3811 bytes
      5 minute offered rate 0000 bps
      Match: access-group 100
    Class-map: ANY (match-all)
      210 packets, 19104 bytes
      5 minute offered rate 0000 bps, drop rate 0000 bps
      Match: access-group 199
      drop
    Class-map: class-default (match-any)
      348 packets, 48203 bytes
      5 minute offered rate 0000 bps, drop rate 0000 bps
      Match: any

R1#show access-list 100
Extended IP access list 100
    10 permit udp any any eq 23 (100 matches)
    20 permit tcp any any eq telnet (5 matches)
    30 permit tcp any eq telnet any (10 matches)

R1#show access-list 199
Extended IP access list 199
    10 deny tcp any eq telnet any (50 matches)
    50 permit ip any any (1 match)

R1#show running-config | section line vty
line vty 0 4
 login
 transport input telnet ssh
 transport output telnet ssh
```

A. Configure transport input ssh on line vty and remove sequence 30 from access list 100.
B. Configure transport output ssh on line vty and remove sequence 20 from access list 100.
C. Remove class-map ANY from service-policy CoPP
D. Configure transport output ssh on line vty and remove sequence 10 from access list 199.
E. Remove sequence 10 from access list 100 and add sequence 20 deny tcp any any eq telnet to access list 199

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
To only allow SSH to R1, we have to: + Deny Telnet in ACL 100 because the action of class-map: PERMIT is "permit" + Permit Telnet in ACL 199 because the action of class-map: ANY is "drop" But:
+ In ACL 100 there is a permit statement for Telnet traffic "20 permit tcp any any eq telnet (5 matches)" which is not correct so we must remove this statement.
+ In ACL 199 there is an ACL statement "10 deny tcp any eq telnet any (50 matches)". This statement is aimed for Telnet traffic leaving R1 which is not correct so we must remove this statement.
Note:
+ The command "transport output telnet ssh" allows telnet and SSH from this device (to other devices).
+ Telnet is TCP port 23. + When using Telnet on source port, it affects Telnet traffic leaving from R1.

QUESTION 68
An engineer is configuring a network and needs packets to be forwarded to an interface for any destination address that is not in the routing table. What should be configured to accomplish this task?

A. set ip next-hop
B. set ip default next-hop
C. set ip next-hop recursive
D. set ip next-hop verify-availability

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The set ip default next-hop command verifies the existence of the destination IP address in the routing table, and…
• if the destination IP address exists, the command does not policy route the packet, but forwards the packet based on the routing table.
• if the destination IP address does not exist, the command policy routes the packet by sending it to the specified next hop.

QUESTION 69
Which attribute eliminates LFAs that belong to protected paths in situations where links in a network are connected through a common fiber?

A. Shared Risk Link Group (SRLG)-disjoint
B. linecard-disjoint
C. lowest-repair-path-metric
D. interface-disjoint

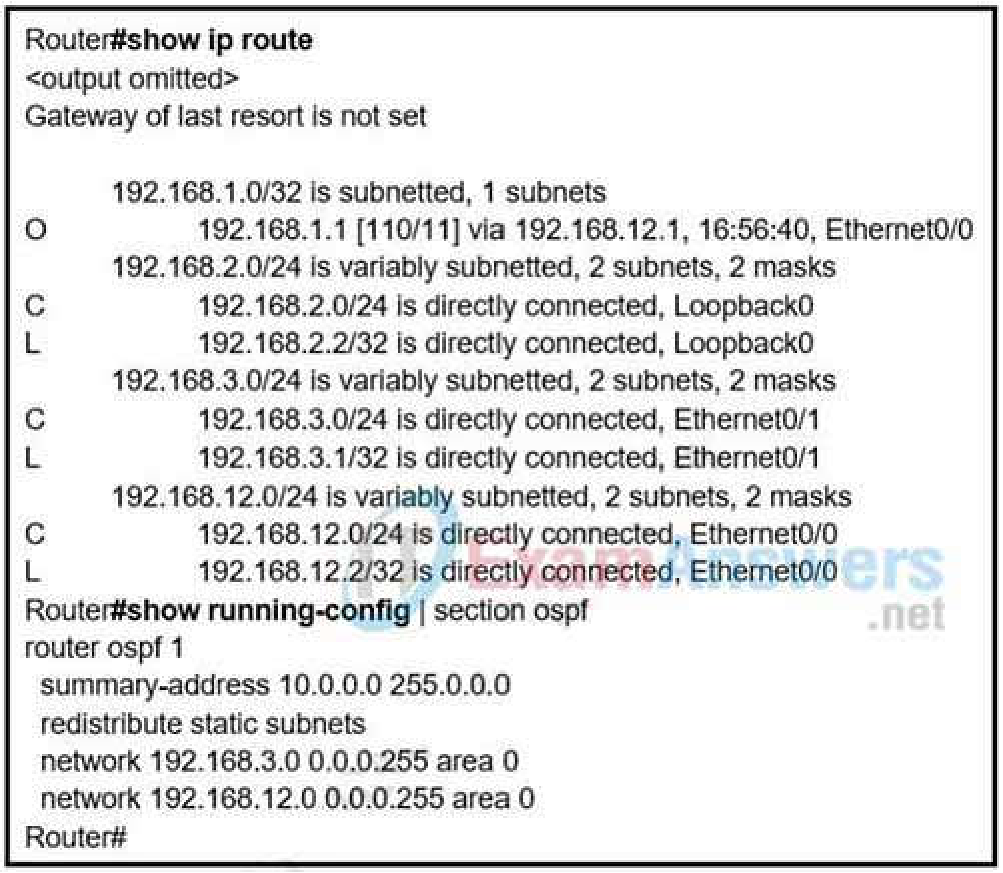
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
LFA Tie-Breaking Rules

When there are multiple candidate LFAs for a given primary path, EIGRP uses a tie-breaking rule to select one LFA per primary path per prefix. A tie-breaking rule considers LFAs that satisfy certain conditions or have certain attributes. EIGRP uses the following four attributes to implement tie-breaking rules:
– Interface-disjoint—Eliminates LFAs that share the outgoing interface with the protected path.
– Linecard-disjoint—Eliminates LFAs that share the line card with the protected path.
– Lowest-repair-path-metric—Eliminates LFAs whose metric to the protected prefix is high. Multiple LFAs with the same lowest path metric may remain in the routing table after this tie-breaker is applied.
– Shared Risk Link Group (SRLG)-disjoint—Eliminates LFAs that belong to any of the protected path SRLGs. SRLGs refer to situations where links in a network share a common fiber (or a common physical attribute). If one link fails, other links in the group may also fail. Therefore, links in a group share risks.

Source : https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_eigrp/configuration/xe-3s/asr1000/ire-xe-3s-asr1000/ire-ipfrr.html

QUESTION 70
Refer to the exhibit. An engineer is trying to generate a summary route in OSPF for network 10.0.0.0/8, but the summary route does not show up in the routing table. Why is the summary route missing?



```
Router#show ip route
<output omitted>
Gateway of last resort is not set

        192.168.1.0/32 is subnetted, 1 subnets
O               192.168.1.1 [110/11] via 192.168.12.1, 16:56:40, Ethernet0/0
        192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C               192.168.2.0/24 is directly connected, Loopback0
L               192.168.2.2/32 is directly connected, Loopback0
        192.168.3.0/24 is variably subnetted, 2 subnets, 2 masks
C               192.168.3.0/24 is directly connected, Ethernet0/1
L               192.168.3.1/32 is directly connected, Ethernet0/1
        192.168.12.0/24 is variably subnetted, 2 subnets, 2 masks
C               192.168.12.0/24 is directly connected, Ethernet0/0
L               192.168.12.2/32 is directly connected, Ethernet0/0
Router#show running-config | section ospf
router ospf 1
 summary-address 10.0.0.0 255.0.0.0
 redistribute static subnets
 network 192.168.3.0 0.0.0.255 area 0
 network 192.168.12.0 0.0.0.255 area 0
Router#
```

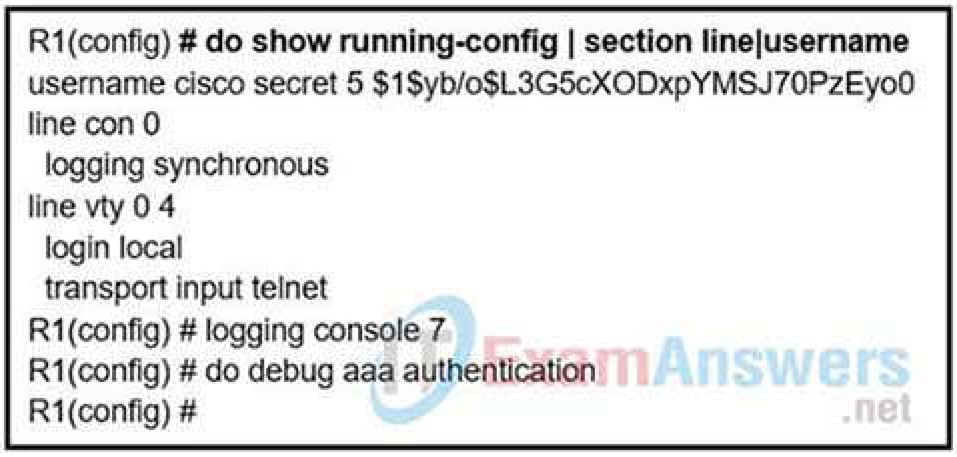
A. The summary-address command is used only for summarizing prefixes between areas.
B. The summary route is visible only in the OSPF database, not in the routing table.

C. There is no route for a subnet inside 10.0.0.0/8, so the summary route is not generated.
D. The summary route is not visible on this router, but it is visible on other OSPF routers in the same area.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The summary-address is only used to create aggregate addresses for OSPF at an autonomous system boundary. It means this command should only be used on the ASBR when you are trying to summarize externally redistributed routes from another protocol domain or you have a NSSA area.
But a requirement to create a summarized route is:
-The ASBR compares the summary route’s range of addresses with all routes redistributed into OSPF on that ASBR to find any subordinate subnets (subnets that sit inside the summary route range). If at least one subordinate subnet exists, the ASBR advertises the summary route.

QUESTION 71
Refer to the exhibit. An administrator that is connected to the console does not see debug messages when remote users log in. Which action ensures that debug messages are displayed for remote logins?



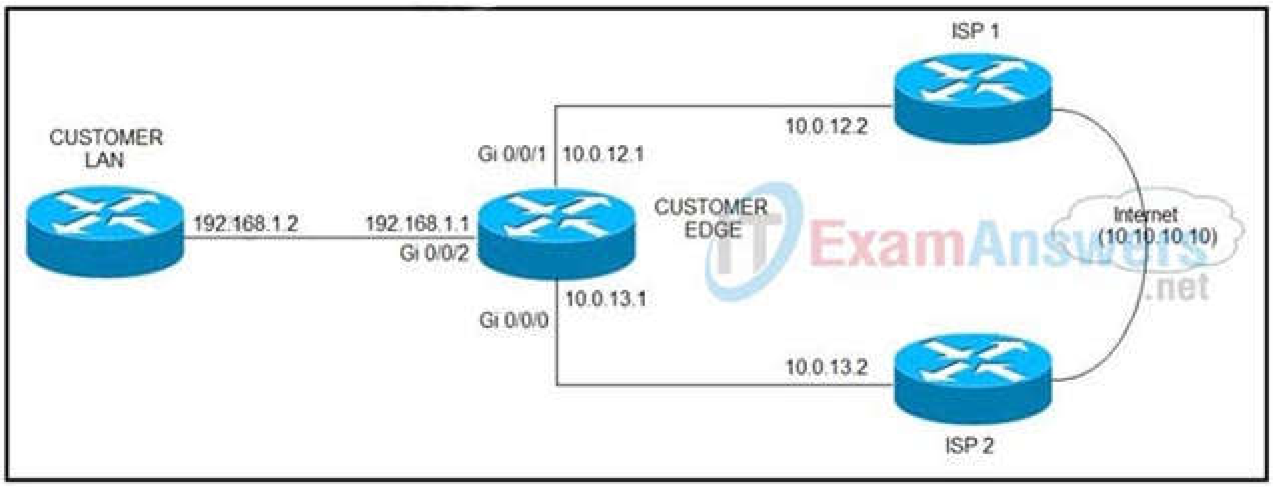
```
R1(config) # do show running-config | section line|username
username cisco secret 5 $1$yb/o$L3G5cXODxpYMSJ70PzEyo0
line con 0
  logging synchronous
line vty 0 4
  login local
  transport input telnet
R1(config) # logging console 7
R1(config) # do debug aaa authentication
R1(config) #
```

A. Enter the transport input ssh configuration command.
B. Enter the terminal monitor exec command.
C. Enter the logging console debugging configuration command.
D. Enter the aaa new-model configuration command.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 72
Refer to the exhibit. ISP 1 and ISP 2 directly connect to the Internet. A customer is tracking both ISP links to achieve redundancy and cannot see the Cisco IOS IP SLA tracking output on the router console. Which command is missing from the IP SLA configuration?



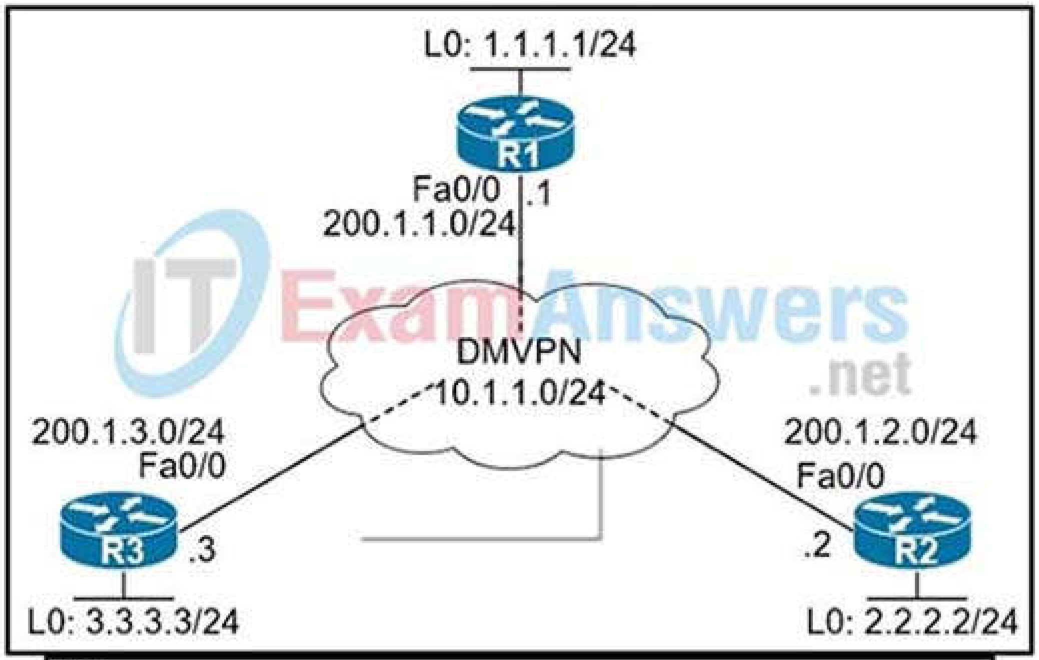
A. Start-time 00:00
B. Start-time 0
C. Start-time immediately
D. Start-time now

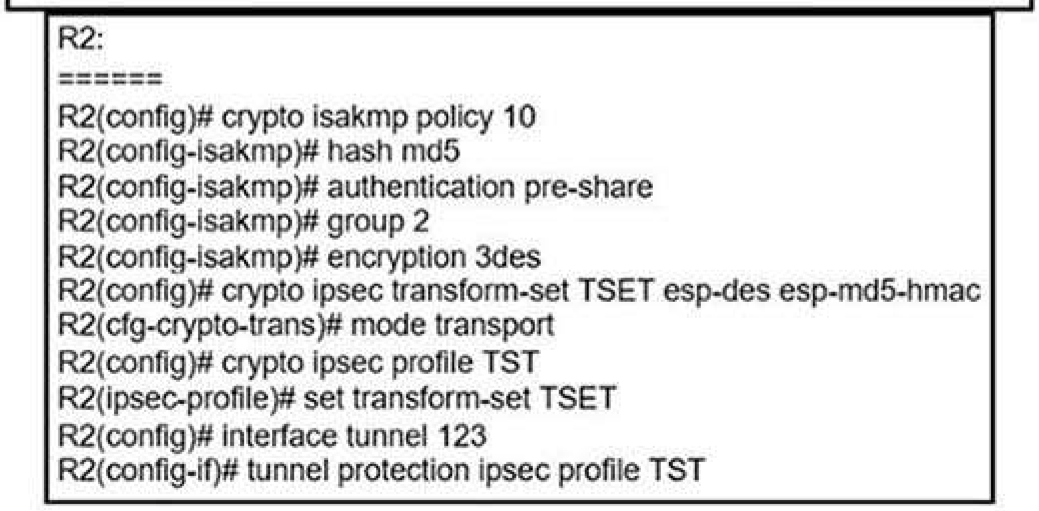
Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-mt/sla-15-mt-book/sla_icmp_echo.html

QUESTION 73
Refer to the exhibits. When DMVPN is configured, which configuration allows spoke-to-spoke communication using loopback as tunnel source?





```
R2:
======
R2(config)# crypto isakmp policy 10
R2(config-isakmp)# hash md5
R2(config-isakmp)# authentication pre-share
R2(config-isakmp)# group 2
R2(config-isakmp)# encryption 3des
R2(config)# crypto ipsec transform-set TSET esp-des esp-md5-hmac
R2(cfg-crypto-trans)# mode transport
R2(config)# crypto ipsec profile TST
R2(ipsec-profile)# set transform-set TSET
R2(config)# interface tunnel 123
R2(config-if)# tunnel protection ipsec profile TST
```

A. Configure crypto isakmp key cisco address 0.0.0.0 on the hub.
B. Configure crypto isakmp key Cisco address 200.1.0.0 255.255.0.0 on the hub.
C. Configure crypto isakmp key cisco address 200.1.0.0 255.255.0.0 on the spokes.
D. Configure crypto isakmp key cisco address 0.0.0.0 on the spokes.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation: https://www.cisco.com/en/US/technologies/tk583/tk372/technologies_white_paper0900aecd802b8f3c.html

QUESTION 74
Which protocol is used in a DMVPN network to map physical IP addresses to logical IP addresses?

A. BGP
B. LLDP
C. EIGRP
D. NHRP

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

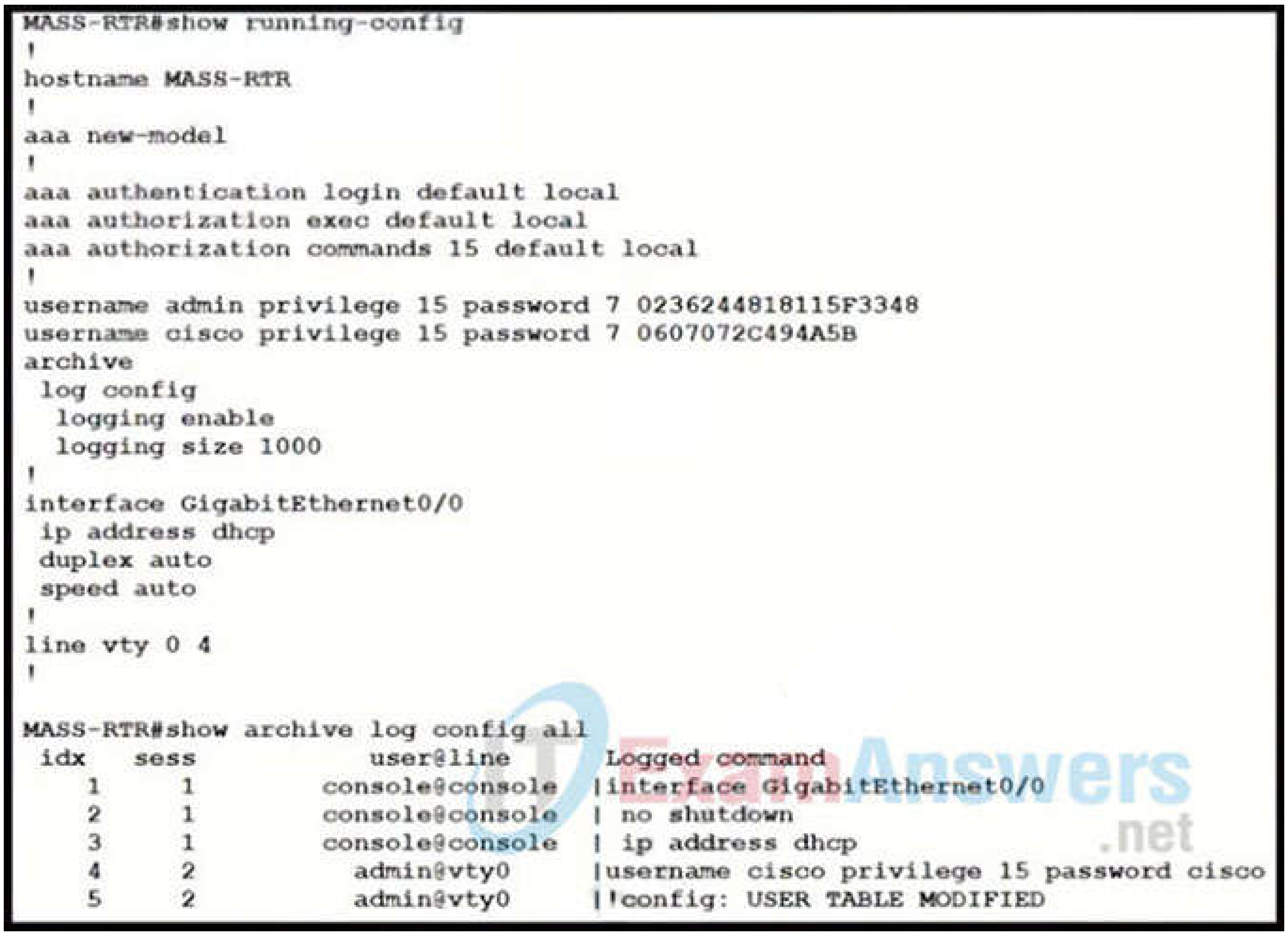
QUESTION 75
Which list defines the contents of an MPLS label?

A. 20-bit label; 3-bit traffic class; 1-bit bottom stack; 8-bit TTL
B. 32-bit label; 3-bit traffic class; 1-bit bottom stack; 8-bit TTL
C. 20-bit label; 3-bit flow label; 1-bit bottom stack; 8-bit hop limit
D. 32-bit label; 3-bit flow label; 1-bit bottom stack; 8-bit hop limit

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
The first 20 bits constitute a label, which can have 2^20 values. Next comes 3 bit value called Traffic Class. It was formerly called as experimental (EXP) field. Now it has been renamed to Traffic Class (TC). This field is used for QoS related functions. Ingress router can classify the packet according to some criterion and assign a 3 bit value to this filed. If an incoming packet is marked with some IP Precedence or DSCP value and the ingress router may use such a field to assign an FEC to the packet.
Next bit is Stack bit which is called bottom-of-stack bit. This field is used when more than one label is assigned to a packet, as in the case of MPLS VPNs or MPLS TE. Next byte is MPLS TTL field which serves the same purpose as that of IP TTL byte in the IP header

QUESTION 76
Refer to the exhibit. A client is concerned that passwords are visible when running this show archive log config all. Which router configuration is needed to resolve this issue?

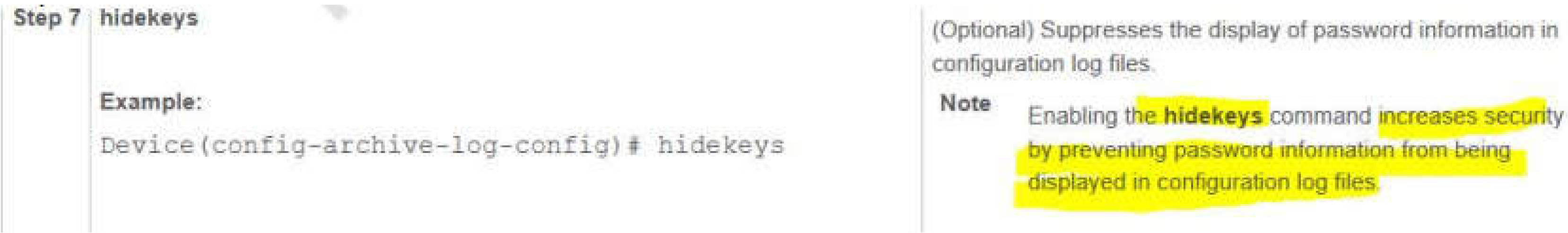


```
MASS-RTR#show running-config
!
hostname MASS-RTR
!
aaa new-model
!
aaa authentication login default local
aaa authorization exec default local
aaa authorization commands 15 default local
!
username admin privilege 15 password 7 0236244818115F3348
username cisco privilege 15 password 7 0607072C494A5B
archive
 log config
  logging enable
  logging size 1000
!
interface GigabitEthernet0/0
 ip address dhcp
 duplex auto
 speed auto
!
line vty 0 4
!

MASS-RTR#show archive log config all
 idx   sess           user@line       Logged command
    1     1      console@console    |interface GigabitEthernet0/0
    2     1      console@console    | no shutdown
    3     1      console@console    | ip address dhcp
    4     2        admin@vty0       |username cisco privilege 15 password cisco
    5     2        admin@vty0       |!config: USER TABLE MODIFIED
```

A. MASS-RTR(config-archive-log-cfg)#password encryption aes
B. MASS-RTR(config)#aaa authentication arap
C. MASS-RTR(config)#service password-encryption
D. MASS-RTR(config-archive-log-cfg)#hidekeys

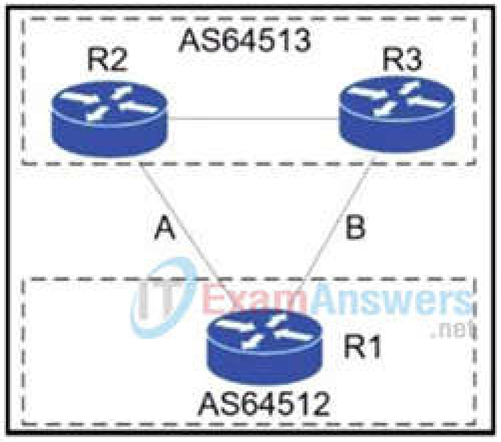
Correct Answer: D
Section: (none)
Explanation

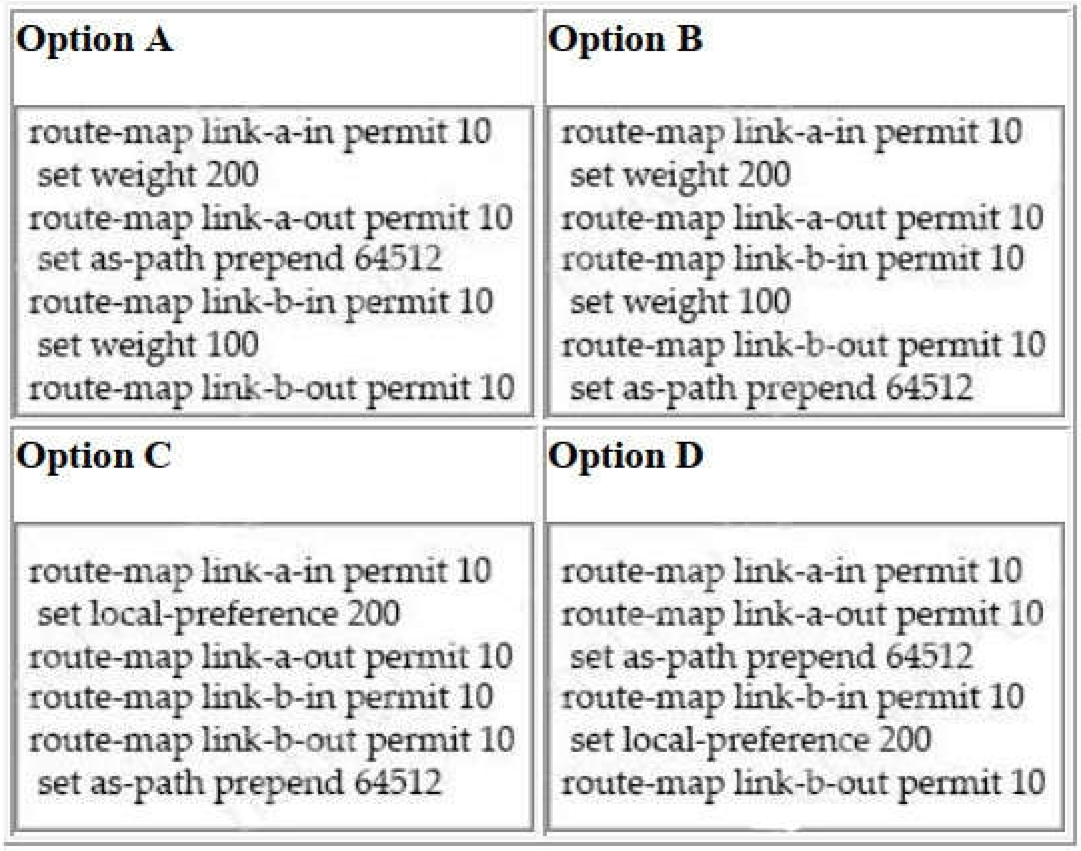
Explanation/Reference:



Step 7	**hidekeys** **Example:** `Device(config-archive-log-config)# hidekeys`	(Optional) Suppresses the display of password information in configuration log files. **Note** Enabling the **hidekeys** command increases security by preventing password information from being displayed in configuration log files.

QUESTION 77
Refer to the exhibit. A network engineer for AS64512 must remove the inbound and outbound traffic from link A during maintenance without closing the BGP session so that there is still a backup link over link A toward the ASN. Which BGP configuration on R1 accomplishes this goal?





Option A

```
route-map link-a-in permit 10
 set weight 200
route-map link-a-out permit 10
 set as-path prepend 64512
route-map link-b-in permit 10
 set weight 100
route-map link-b-out permit 10
```

Option B

```
route-map link-a-in permit 10
 set weight 200
route-map link-a-out permit 10
route-map link-b-in permit 10
 set weight 100
route-map link-b-out permit 10
 set as-path prepend 64512
```

Option C

```
route-map link-a-in permit 10
 set local-preference 200
route-map link-a-out permit 10
route-map link-b-in permit 10
route-map link-b-out permit 10
 set as-path prepend 64512
```

Option D

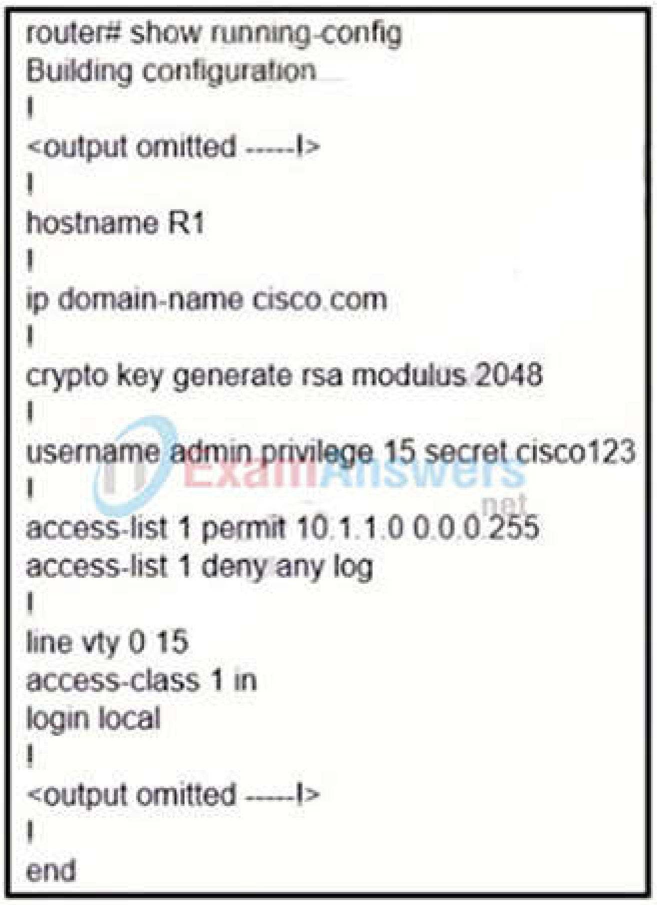
```
route-map link-a-in permit 10
route-map link-a-out permit 10
 set as-path prepend 64512
route-map link-b-in permit 10
 set local-preference 200
route-map link-b-out permit 10
```

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 78
Refer to the exhibit. A user cannot SSH to the router. What action must be taken to resolve this issue?



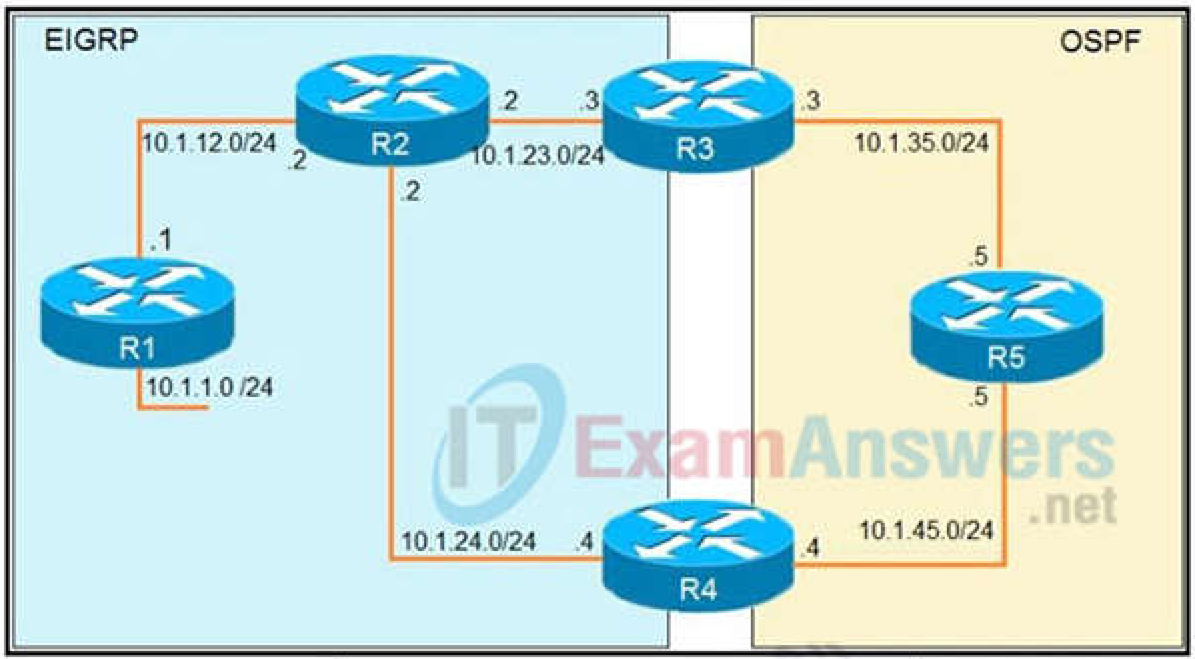
```
router# show running-config
Building configuration
!
<output omitted -----!>
!
hostname R1
!
ip domain-name cisco.com
!
crypto key generate rsa modulus 2048
!
username admin privilege 15 secret cisco123
!
access-list 1 permit 10.1.1.0 0.0.0.255
access-list 1 deny any log
!
line vty 0 15
access-class 1 in
login local
!
<output omitted -----!>
!
end
```

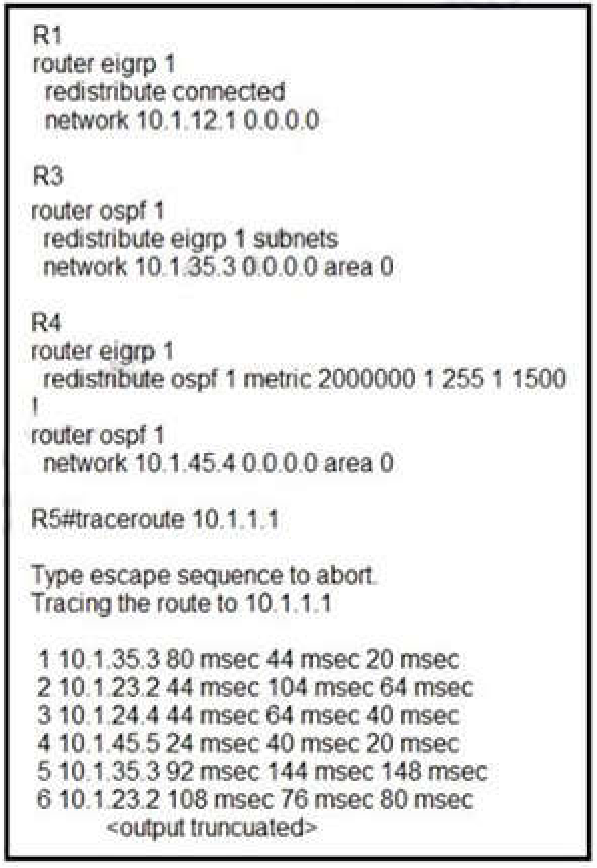
A. Configure transport input ssh
B. Configure transport output ssh
C. Configure ip ssh version 2
D. Configure ip ssh source-interface loopback0

Correct Answer: A
Section: (none)
Explanation

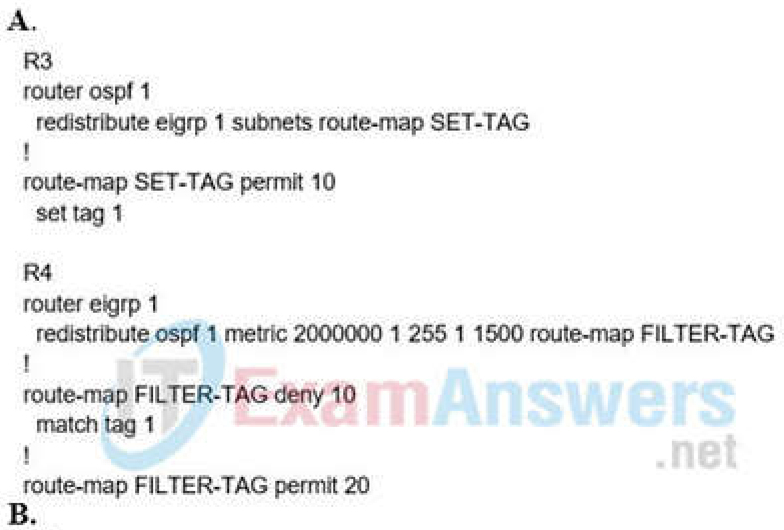
Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst2960x/software/15-0_2_EX/security/configuration_guide/b_sec_152ex_2960-x_cg/b_sec_152ex_2960-x_cg_chapter_01001.html

QUESTION 79
Refer to the exhibit. The output of the trace route from R5 shows a loop in the network. Which configuration prevents this loop?



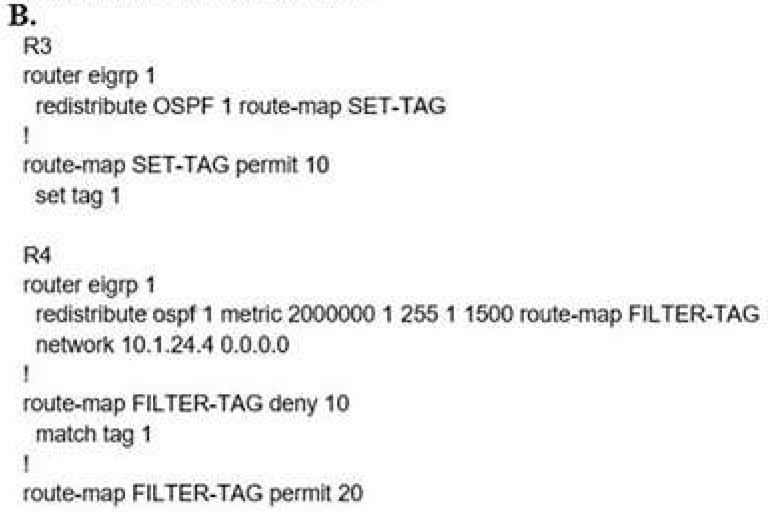


```
R1
router eigrp 1
 redistribute connected
 network 10.1.12.1 0.0.0.0

R3
router ospf 1
 redistribute eigrp 1 subnets
 network 10.1.35.3 0.0.0.0 area 0

R4
router eigrp 1
 redistribute ospf 1 metric 2000000 1 255 1 1500
!
router ospf 1
 network 10.1.45.4 0.0.0.0 area 0

R5#traceroute 10.1.1.1

Type escape sequence to abort.
Tracing the route to 10.1.1.1

 1 10.1.35.3 80 msec 44 msec 20 msec
 2 10.1.23.2 44 msec 104 msec 64 msec
 3 10.1.24.4 44 msec 64 msec 40 msec
 4 10.1.45.5 24 msec 40 msec 20 msec
 5 10.1.35.3 92 msec 144 msec 148 msec
 6 10.1.23.2 108 msec 76 msec 80 msec
          <output truncuated>
```



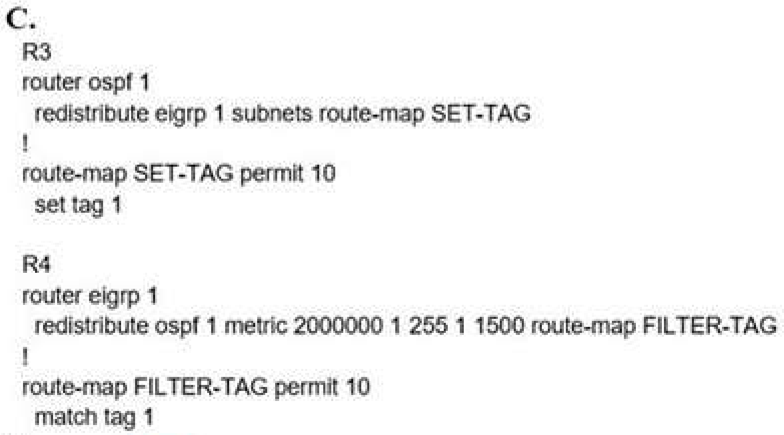
A.

```
R3
router ospf 1
 redistribute eigrp 1 subnets route-map SET-TAG
!
route-map SET-TAG permit 10
 set tag 1

R4
router eigrp 1
 redistribute ospf 1 metric 2000000 1 255 1 1500 route-map FILTER-TAG
!
route-map FILTER-TAG deny 10
 match tag 1
!
route-map FILTER-TAG permit 20
```



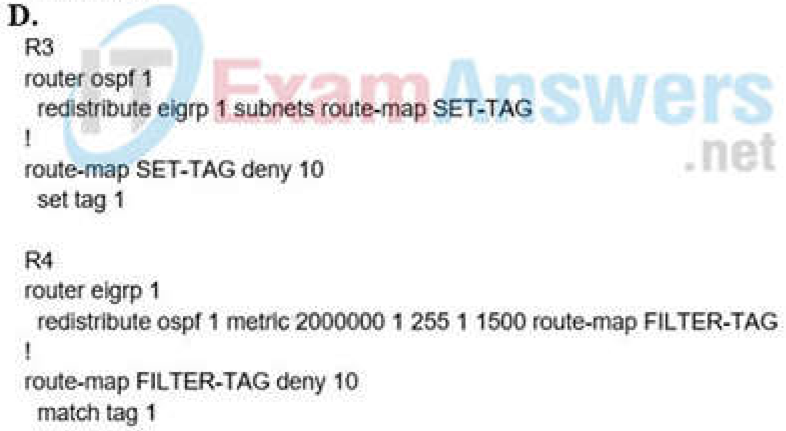
B.

```
R3
router eigrp 1
 redistribute OSPF 1 route-map SET-TAG
!
route-map SET-TAG permit 10
 set tag 1

R4
router eigrp 1
 redistribute ospf 1 metric 2000000 1 255 1 1500 route-map FILTER-TAG
 network 10.1.24.4 0.0.0.0
!
route-map FILTER-TAG deny 10
 match tag 1
!
route-map FILTER-TAG permit 20
```



C.

```
R3
router ospf 1
 redistribute eigrp 1 subnets route-map SET-TAG
!
route-map SET-TAG permit 10
 set tag 1

R4
router eigrp 1
 redistribute ospf 1 metric 2000000 1 255 1 1500 route-map FILTER-TAG
!
route-map FILTER-TAG permit 10
 match tag 1
```



D.

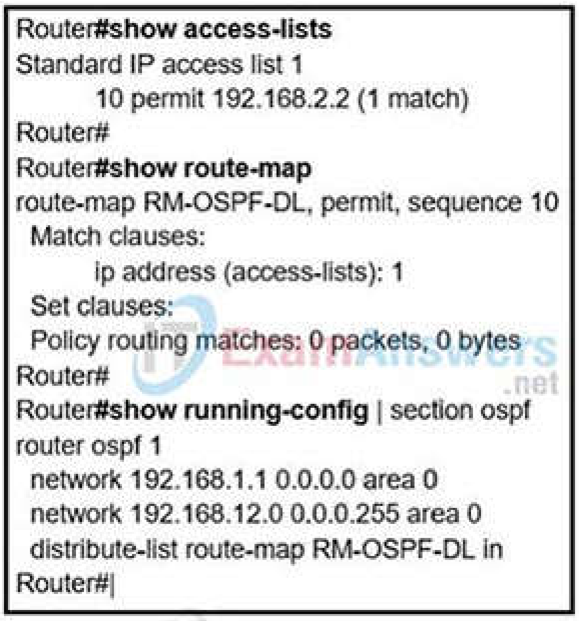
```
R3
router ospf 1
 redistribute eigrp 1 subnets route-map SET-TAG
!
route-map SET-TAG deny 10
 set tag 1

R4
router eigrp 1
 redistribute ospf 1 metric 2000000 1 255 1 1500 route-map FILTER-TAG
!
route-map FILTER-TAG deny 10
 match tag 1
```

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

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 80
Refer to the exhibit. An engineer is trying to block the route to 192.168.2.2 from the routing table by using the configuration that is shown. The route is still present in the routing table as an OSPF route. Which action blocks the route?



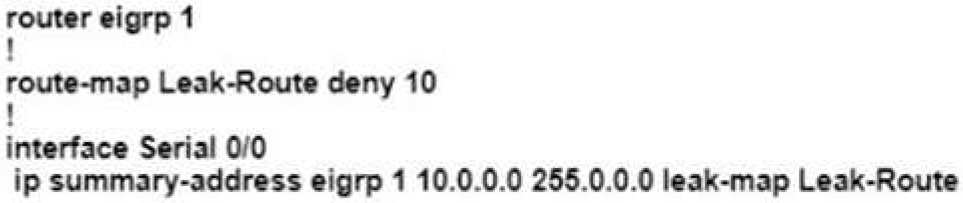
```
Router#show access-lists
Standard IP access list 1
        10 permit 192.168.2.2 (1 match)
Router#
Router#show route-map
route-map RM-OSPF-DL, permit, sequence 10
  Match clauses:
        ip address (access-lists): 1
  Set clauses:
  Policy routing matches: 0 packets, 0 bytes
Router#
Router#show running-config | section ospf
router ospf 1
  network 192.168.1.1 0.0.0.0 area 0
  network 192.168.12.0 0.0.0.255 area 0
  distribute-list route-map RM-OSPF-DL in
Router#|
```

A. Use an extended access list instead of a standard access list.
B. Change sequence 10 in the route-map command from permit to deny.
C. Use a prefix list instead of an access list in the route map.
D. Add this statement to the route map: route-map RM-OSPF-DL deny 20.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 81
An engineer configured a leak-map command to summarize EIGRP routes and advertise specifically loopback 0 with an IP of 10.1.1.1.255.255.255.252 along with the summary route. After finishing configuration, the customer complained not receiving summary route with specific loopback address. Which two configurations will fix it? (Choose two.)



```
router eigrp 1
!
route-map Leak-Route deny 10
!
interface Serial 0/0
 ip summary-address eigrp 1 10.0.0.0 255.0.0.0 leak-map Leak-Route
```

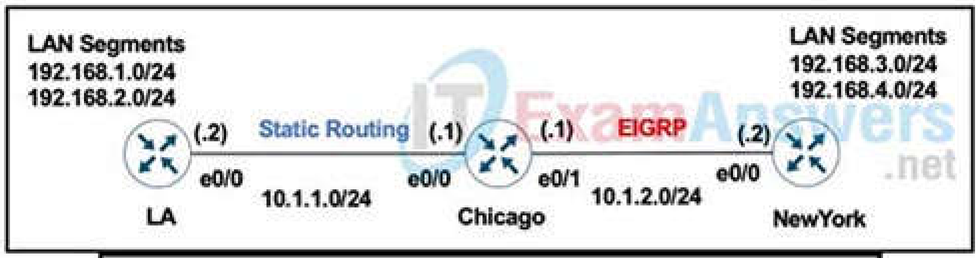
A. Configure access-list 1 permit 10.1.1.0.0.0.0.3.
B. Configure access-list 1 permit 10.1.1.1.0.0.0.252.
C. Configure access-list 1 and match under route-map Leak-Route.
D. Configure route-map Leak-Route permit 10 and match access-list 1.
E. Configure route-map Leak-Route permit 20.

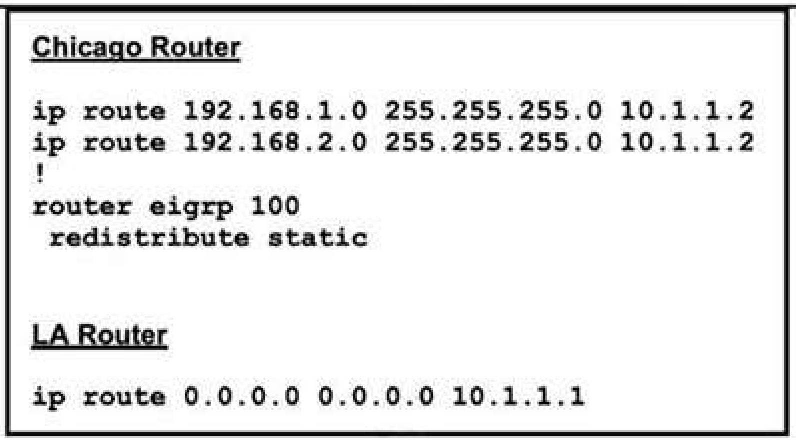
Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:
When you configure an EIGRP summary route, all networks that fall within the range of your summary are suppressed and no longer advertised on the interface. Only the summary route is advertised. But if we want to advertise a network that has been suppressed along with the summary route then we can use leak-map feature. The below commands will fix the configuration in this question:

R1(config)#access-list 1 permit 10.1.1.0 0.0.0.3
R1(config)#route-map Leak-Route permit 10 // this command will also remove the "route_map LeakRoute deny 10" command.
R1(config-route-map)#match ip address 1

QUESTION 82
Refer to the exhibits.





Chicago Router

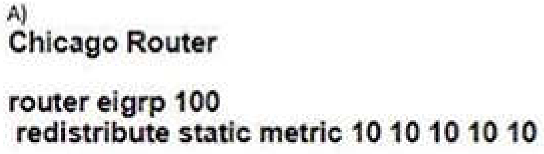
```
ip route 192.168.1.0 255.255.255.0 10.1.1.2
ip route 192.168.2.0 255.255.255.0 10.1.1.2
!
router eigrp 100
 redistribute static
```

LA Router

```
ip route 0.0.0.0 0.0.0.0 10.1.1.1
```

A user on the 192.168.1.0/24 network can successfully ping 192.168.3.1, but the administrator cannot ping 192.168.3.1 from the LA router. Which set of configurations fixes the issue?

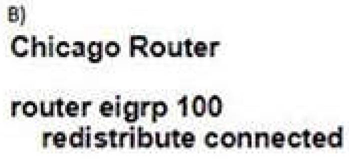
A)



Chicago Router

```
router eigrp 100
 redistribute static metric 10 10 10 10 10
```

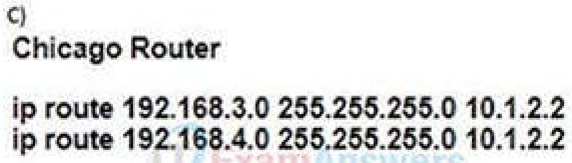
B)



Chicago Router

```
router eigrp 100
   redistribute connected
```

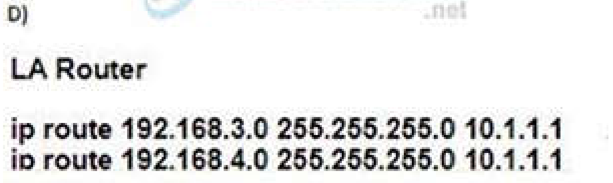
C)



Chicago Router

```
ip route 192.168.3.0 255.255.255.0 10.1.2.2
ip route 192.168.4.0 255.255.255.0 10.1.2.2
```

D)



LA Router

```
ip route 192.168.3.0 255.255.255.0 10.1.1.1
ip route 192.168.4.0 255.255.255.0 10.1.1.1
```

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

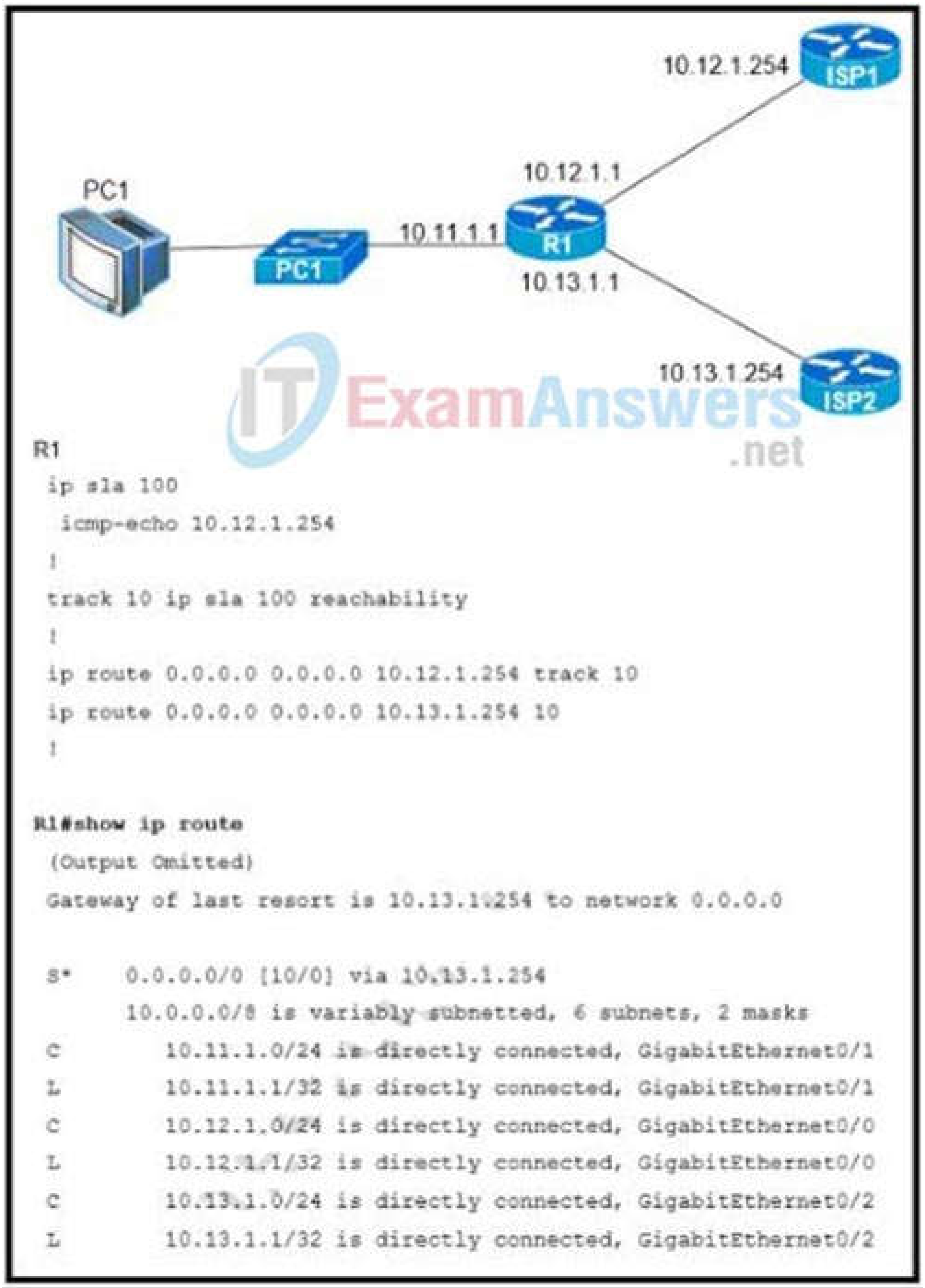
QUESTION 83
What is the role of a route distinguisher via a VRF-Lite setup implementation?

A. It extends the IP address to identify which VFP instance it belongs to.
B. It manages the import and export of routes between two or more VRF instances
C. It enables multicast distribution for VRF-Lite setups to enhance EGP routing protocol capabilities
D. It enables multicast distribution for VRF-Lite setups to enhance IGP routing protocol capabilities

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 84
Refer to the exhibit. An engineer is monitoring reachability of the configured default routes to ISP1 and ISP2. The default route from ISP1 is preferred if available. How is this issue resolved?



```
R1
 ip sla 100
  icmp-echo 10.12.1.254
 !
 track 10 ip sla 100 reachability
 !
 ip route 0.0.0.0 0.0.0.0 10.12.1.254 track 10
 ip route 0.0.0.0 0.0.0.0 10.13.1.254 10
 !

R1#show ip route
 (Output Omitted)
 Gateway of last resort is 10.13.1.254 to network 0.0.0.0

 S*    0.0.0.0/0 [10/0] via 10.13.1.254
       10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks
 C        10.11.1.0/24 is directly connected, GigabitEthernet0/1
 L        10.11.1.1/32 is directly connected, GigabitEthernet0/1
 C        10.12.1.0/24 is directly connected, GigabitEthernet0/0
 L        10.12.1.1/32 is directly connected, GigabitEthernet0/0
 C        10.13.1.0/24 is directly connected, GigabitEthernet0/2
 L        10.13.1.1/32 is directly connected, GigabitEthernet0/2
```

A. Use the icmp-echo command to track both default routes
B. Use the same AD for both default routes
C. Start IP SLA by matching numbers for track and ip sla commands
D. Start IP SLA by defining frequency and scheduling it

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
In the above configuration we have not had activated our IP SLA operation. We can start it with this command:
R1(config)#ip sla schedule 100 life forever start-time now

Also we should specific the rate of ICMP echo:
R1(config-ip-sla-echo)#frequency 5 // Send ICMP echo every 5 seconds

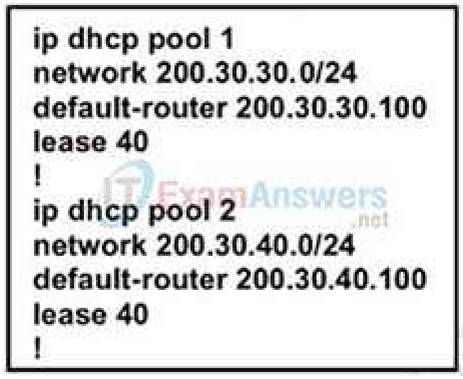
QUESTION 85
Which command is used to check IP SLA when an interface is suspected to receive lots of traffic with options?

A. show track
B. show threshold
C. show timer
D. show delay

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 86
Refer to the exhibit. The server for the finance department is not reachable consistently on the 200.30.40.0/24 network and after every second month it gets a new IP address. Which two actions must be taken to resolve this Issue? (Choose two.)



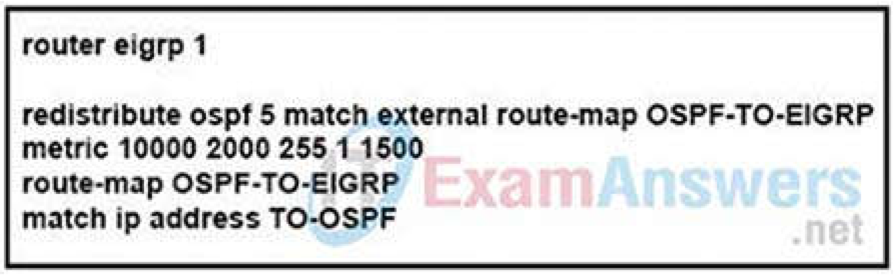
```
ip dhcp pool 1
network 200.30.30.0/24
default-router 200.30.30.100
lease 40
!
ip dhcp pool 2
network 200.30.40.0/24
default-router 200.30.40.100
lease 40
!
```

A. Configure the server to use DHCP on the network with default gateway 200 30.40.100.
B. Configure the server with a static IP address and default gateway.
C. Configure the router to exclude a server IP address.
D. Configure the server to use DHCP on the network with default gateway 200 30.30.100.
E. Configure the router to exclude a server IP address and default gateway.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 87
Refer to the exhibit. Which routes from OSPF process 5 are redistributed into EIGRP?



```
router eigrp 1

redistribute ospf 5 match external route-map OSPF-TO-EIGRP
metric 10000 2000 255 1 1500
route-map OSPF-TO-EIGRP
match ip address TO-OSPF
```

A. E1 and E2 subnets matching access list TO-OSPF
B. E1 and E2 subnets matching prefix list TO-OSPF
C. only E2 subnets matching access list TO-OSPF
D. only E1 subnets matching prefix listTO-OS1

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 88
Which Cisco VPN technology can use multipoint tunnel, resulting in a single GRE tunnel interface on the hub, to support multiple connections from multiple spoke devices?

A. DMVPN
B. GETVPN
C. Cisco Easy VPN
D. FlexVPN

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

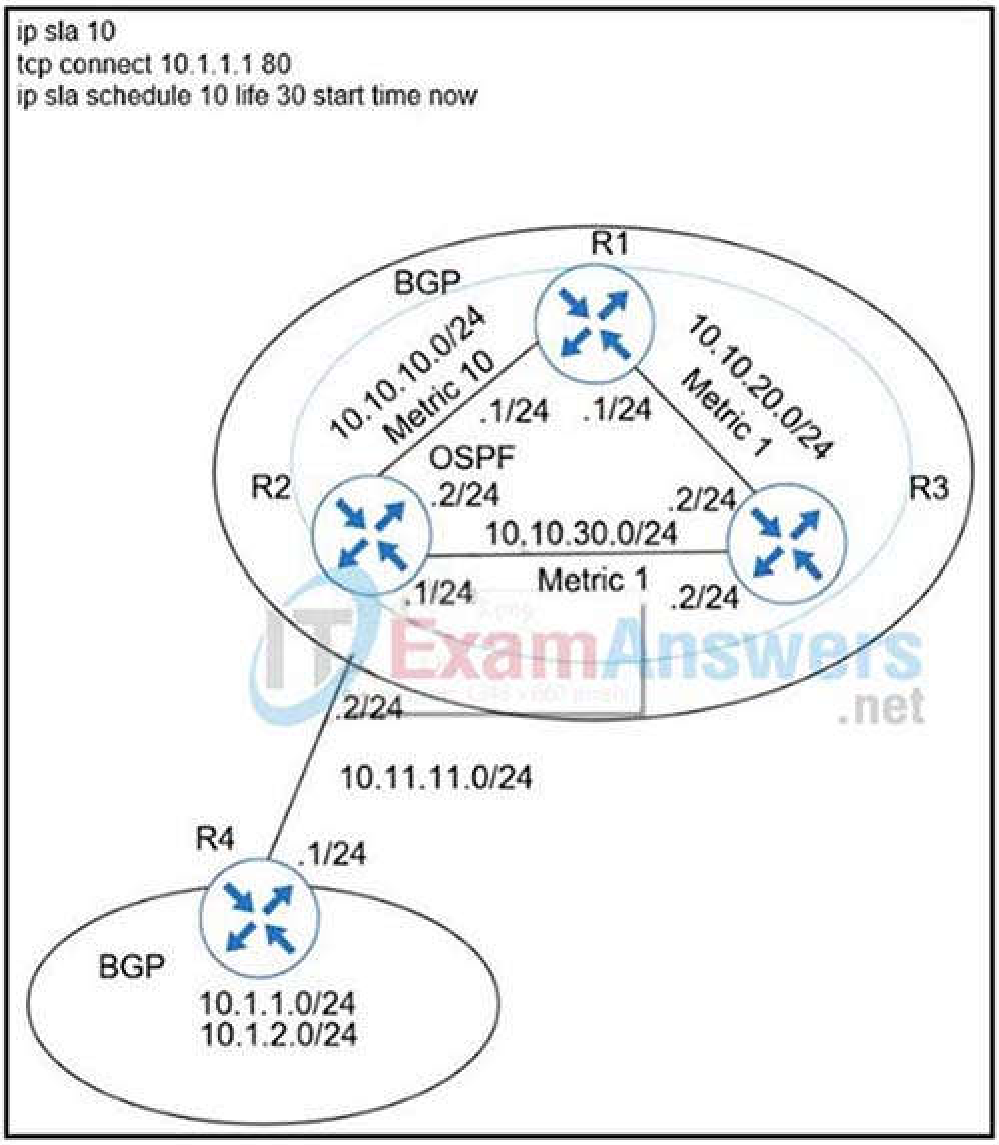
QUESTION 89
An engineer needs dynamic routing between two routers and is unable to establish OSPF adjacency. The output of the show ip ospf neighbor command shows that the neighbor state is EXSTART/EXCHANGE. Which action should be taken to resolve this issue?

A. match the passwords
B. match the hello timers
C. match the MTUs
D. match the network types

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The problem occurs most frequently when attempting to run OSPF between a Cisco router and another vendor's router. The problem occurs when the maximum transmission unit (MTU) settings for neighboring router interfaces don't match. If the router with the higher MTU sends a packet larger that the MTU set on the neighboring router, the neighboring router ignores the packet.

QUESTION 90
Refer to the exhibit. A user has set up an IP SLA probe to test if a non SLA host web server on IP address 10.1.1.1 accepts HTTP sessions prior to deployment. The probe is failing. Which action should the network administrator recommend for the probe to succeed?



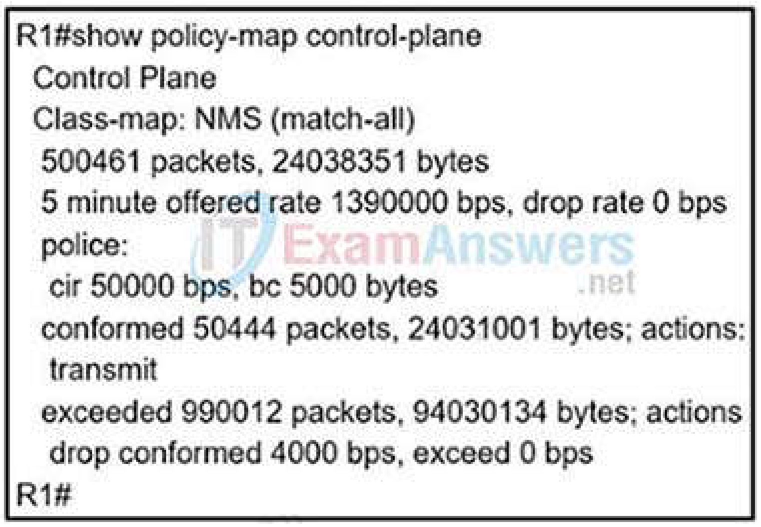
```
ip sla 10
tcp connect 10.1.1.1 80
ip sla schedule 10 life 30 start time now
```

A. Re-issue the ip sla schedule command.
B. Add icmp-echo command for the host.
C. Add the control disable option to the tcp connect.
D. Modify the ip sla schedule frequency to forever.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
You should disable control packets whenever the other side is not a responder, so if you were running TCP connect to a real web server you would have to disable it because it would not be running as a responder.

QUESTION 91
Refer to the exhibit. A company is evaluating multiple network management system tools. Trending graphs generated by SNMP data are returned by the NMS and appear to have multiple gaps. While troubleshooting the issue, an engineer noticed the relevant output. What solves the gaps in the graphs?



```
R1#show policy-map control-plane
 Control Plane
 Class-map: NMS (match-all)
  500461 packets, 24038351 bytes
  5 minute offered rate 1390000 bps, drop rate 0 bps
  police:
   cir 50000 bps, bc 5000 bytes
  conformed 50444 packets, 24031001 bytes; actions:
   transmit
  exceeded 990012 packets, 94030134 bytes; actions
   drop conformed 4000 bps, exceed 0 bps
R1#
```

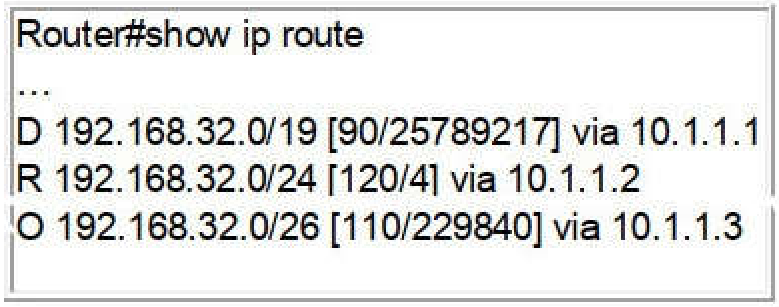
A. Remove the exceed-rate command in the class map.
B. Remove the class map NMS from being part of control plane policing.
C. Configure the CIR rate to a lower value that accommodates all the NMS tools
D. Separate the NMS class map in multiple class maps based on the specific protocols with appropriate CoPP actions

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://tools.cisco.com/security/center/resources/copp_best_practices

The class-map NMS in the exhibit did not classify traffic into specific protocols so many packets were dropped. We should create some class-map to classify the receiving traffic. It is also a recommendation of CoPP/CPP policy:
“Developing a CPP policy starts with the classification of the control plane traffic. To that end, the control plane traffic needs to be first identified and separated into different class maps.”

QUESTION 92
Refer to the exhibit. an engineer is trying to get 192.168.32.100 forwarded through 10.1.1.1, but it was forwarded through 10.1.1.2. What action forwards the packets through 10.1.1.1?



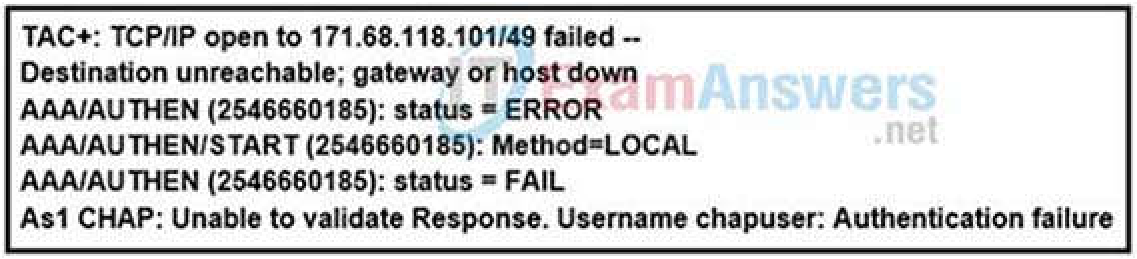
```
Router#show ip route
…
D 192.168.32.0/19 [90/25789217] via 10.1.1.1
R 192.168.32.0/24 [120/4] via 10.1.1.2
O 192.168.32.0/26 [110/229840] via 10.1.1.3
```

A. Configure EIGRP to receive 192.168.32.0 route with lower admin distance.
B. Configure EIGRP to receive 192.168.32.0 route with longer prefix than /19.
C. Configure EIGRP to receive 192.168.32.0 route with lower metric.
D. Configure EIGRP to receive 192.168.32.0 route with equal or longer prefix than /24.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 93
Refer to the exhibit. Why is user authentication being rejected?



```
TAC+: TCP/IP open to 171.68.118.101/49 failed --
Destination unreachable; gateway or host down
AAA/AUTHEN (2546660185): status = ERROR
AAA/AUTHEN/START (2546660185): Method=LOCAL
AAA/AUTHEN (2546660185): status = FAIL
As1 CHAP: Unable to validate Response. Username chapuser: Authentication failure
```

A. The TACACS+ server expects “user”, but the NT client sends “domain/user”.
B. The TACACS+ server refuses the user because the user is set up for CHAP.
C. The TACACS+ server is down, and the user is in the local database.
D. The TACACS+ server is down, and the user is not in the local database.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/security-vpn/terminal-access-controller-access-control-system-tacacs-/13864-tacacs-pppdebug.html

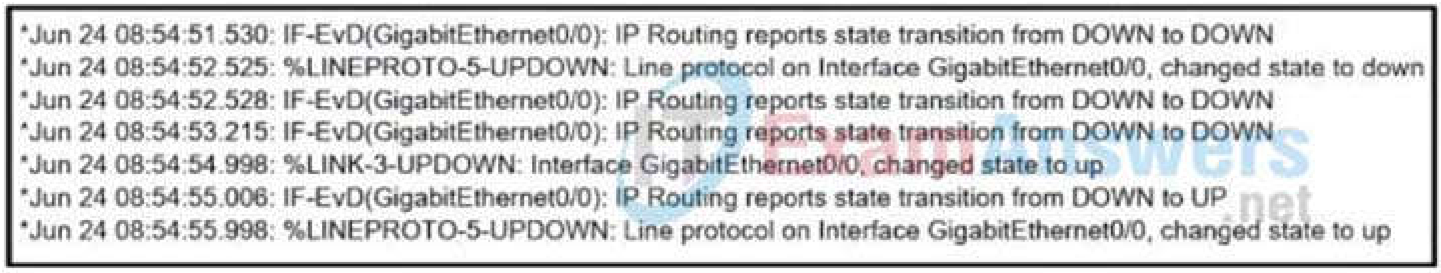
QUESTION 94
Which two statements about redistributing EIGRP into OSPF are true? (Choose two)

A. The redistributed EIGRP routes appear as type 3 LSAs in the OSPF database
B. The redistributed EIGRP routes appear as type 5 LSAs in the OSPF database
C. The administrative distance of the redistributed routes is 170
D. The redistributed EIGRP routes appear as OSPF external type 1
E. The redistributed EIGRP routes as placed into an OSPF area whose area ID matches the EIGRP autonomous system number
F. The redistributed EIGRP routes appear as OSPF external type 2 routes in the routing table

Correct Answer: BF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 95
Refer to the exhibit. R1 is connected with R2 via GigabitEthernet0/0, and R2 cannot ping R1. What action will fix the issue ?



```
*Jun 24 08:54:51.530: IF-EvD(GigabitEthernet0/0): IP Routing reports state transition from DOWN to DOWN
*Jun 24 08:54:52.525: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to down
*Jun 24 08:54:52.528: IF-EvD(GigabitEthernet0/0): IP Routing reports state transition from DOWN to DOWN
*Jun 24 08:54:53.215: IF-EvD(GigabitEthernet0/0): IP Routing reports state transition from DOWN to DOWN
*Jun 24 08:54:54.998: %LINK-3-UPDOWN: Interface GigabitEthernet0/0, changed state to up
*Jun 24 08:54:55.006: IF-EvD(GigabitEthernet0/0): IP Routing reports state transition from DOWN to UP
*Jun 24 08:54:55.998: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0, changed state to up
```

A. Fix route dampening configured on the router.
B. Replace the SFP module because it is not supported.
C. Fix IP Event Dampening configured on the interface.
D. Correct the IP SLA probe that failed.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

The IP Event Dampening feature introduces a configurable exponential decay mechanism to suppress the effects of excessive interface flapping events on routing protocols and routing tables in the network. This feature allows the network operator to configure a router to automatically identify and selectively dampen a local interface that is flapping.

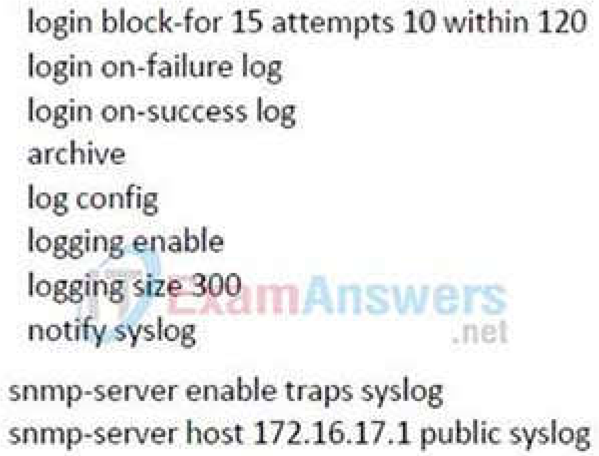
QUESTION 96
Which method changes the forwarding decision that a router makes without first changing the routing table or influencing the IP data plane?

A. nonbroadcast multiaccess
B. packet switching
C. policy-based routing
D. forwarding information base

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 97
Refer to the exhibit. The administrator can see the traps for the failed login attempts, but cannot see the traps of successful login attempts. What command is needed to resolve the issue?

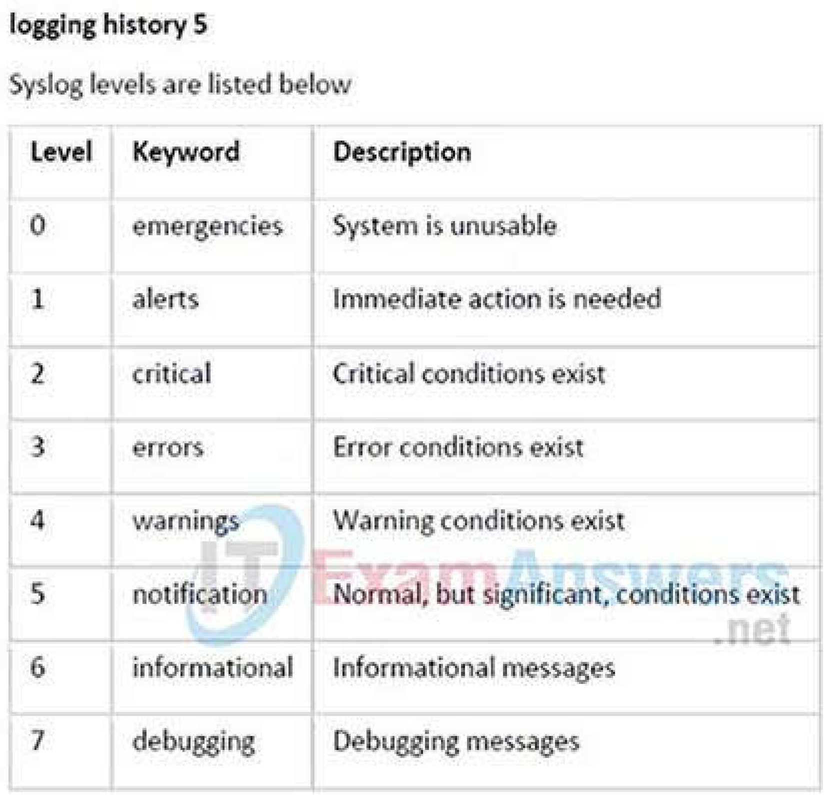


```
  login block-for 15 attempts 10 within 120
  login on-failure log
  login on-success log
  archive
  log config
  logging enable
  logging size 300
  notify syslog

snmp-server enable traps syslog
snmp-server host 172.16.17.1 public syslog
```

A. Configure logging history 2
B. Configure logging history 3
C. Configure logging history 4
D. Configure logging history 5

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
By default, the maximum severity sent as a syslog trap is warning. That is why you see syslog traps for login failures. Since a login success is severity 5 (notifications), those syslog messages will not be converted to traps. To fix this, configure:



logging history 5

Syslog levels are listed below

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

Note: The syntax of login block is:
login block-for seconds attempts tries within seconds

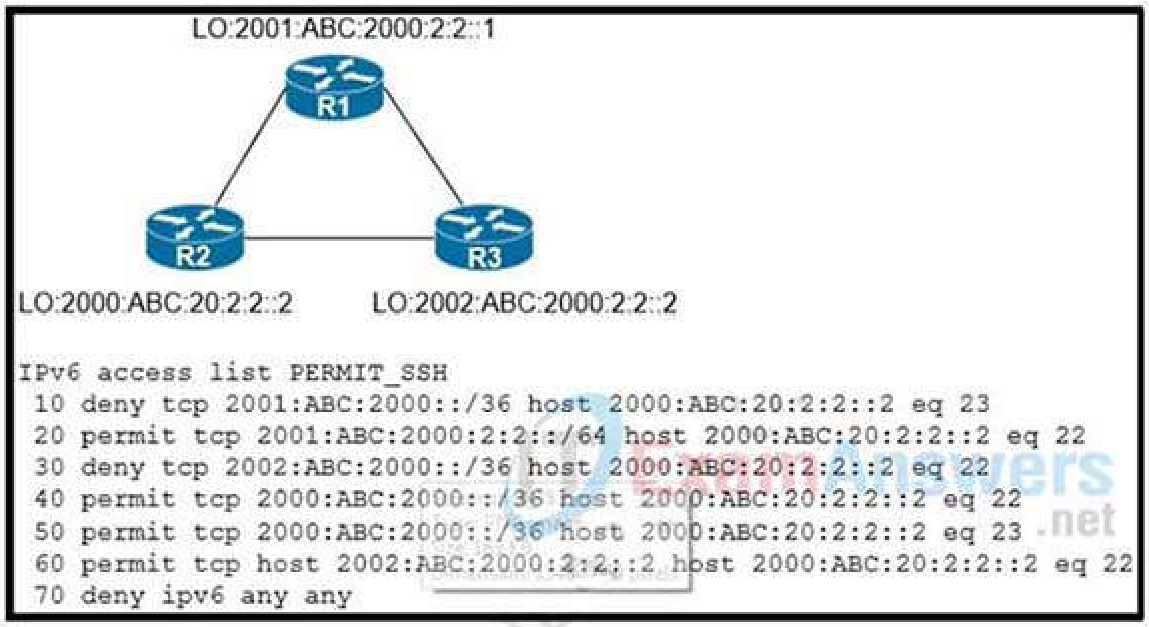
QUESTION 98
Which protocol does VRF-Lite support?

A. IS-IS
B. ODR
C. EIGRP
D. IGRP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 99
Refer to the exhibit. An IPv6 network was newly deployed in the environment and the help desk reports that R3 cannot SSH to the R2 's Loopback interface. Which action resolves the issue?



```
IPv6 access list PERMIT_SSH
 10 deny tcp 2001:ABC:2000::/36 host 2000:ABC:20:2:2::2 eq 23
 20 permit tcp 2001:ABC:2000:2:2::/64 host 2000:ABC:20:2:2::2 eq 22
 30 deny tcp 2002:ABC:2000::/36 host 2000:ABC:20:2:2::2 eq 22
 40 permit tcp 2000:ABC:2000::/36 host 2000:ABC:20:2:2::2 eq 22
 50 permit tcp 2000:ABC:2000::/36 host 2000:ABC:20:2:2::2 eq 23
 60 permit tcp host 2002:ABC:2000:2:2::2 host 2000:ABC:20:2:2::2 eq 22
 70 deny ipv6 any any
```

A. Modify line 10 of the access list to permit instead of deny.
B. Remove line 60 from the access list.
C. Modify line 30 of the access list to permit instead of deny.
D. Remove line 70 from the access list.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 100
A network engineer is investigating a flapping (up/down) interface issue on a core switch that is synchronized to an NTP server. Log output currently does not show the time of the flap. Which command allows the logging on the switch to show the time of the flap according to the clock on the device?

A. service timestamps log uptime
B. clock summer-time mst recurring 2 Sunday mar 2:00 1 Sunday nov 2:00
C. service timestamps log datetime localtime show-timezone
D. clock calendar-valid

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
By default, Catalyst switches add a simple uptime timestamp to logging messages. This is a cumulative counter that shows the hours, minutes, and seconds since the switch has been booted up

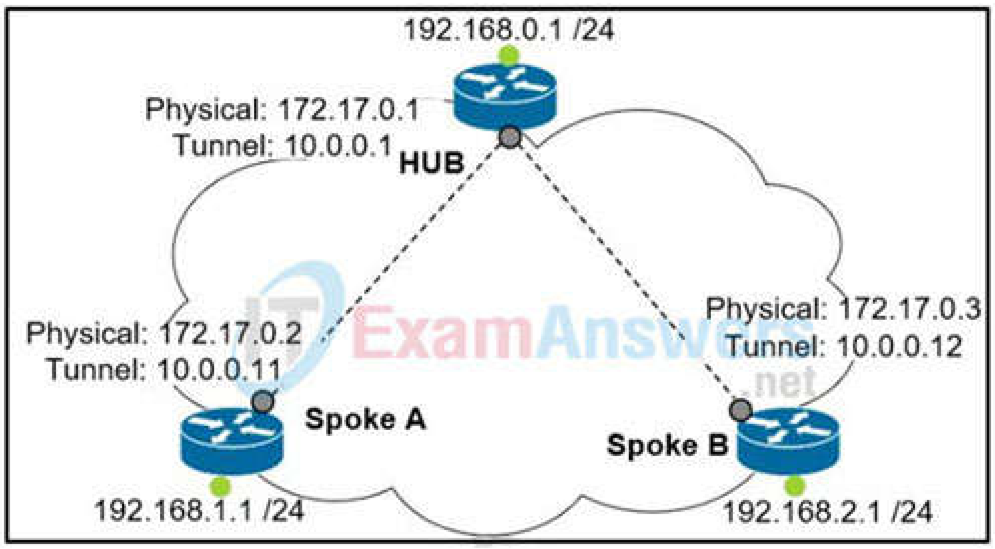
QUESTION 101
An engineer configured SNMP notifications sent to the management server using authentication and encrypting data with DES. An error in the response PDU is received as “UNKNOWNUSERNAME. WRONGDIGEST”. Which action resolves the issue?

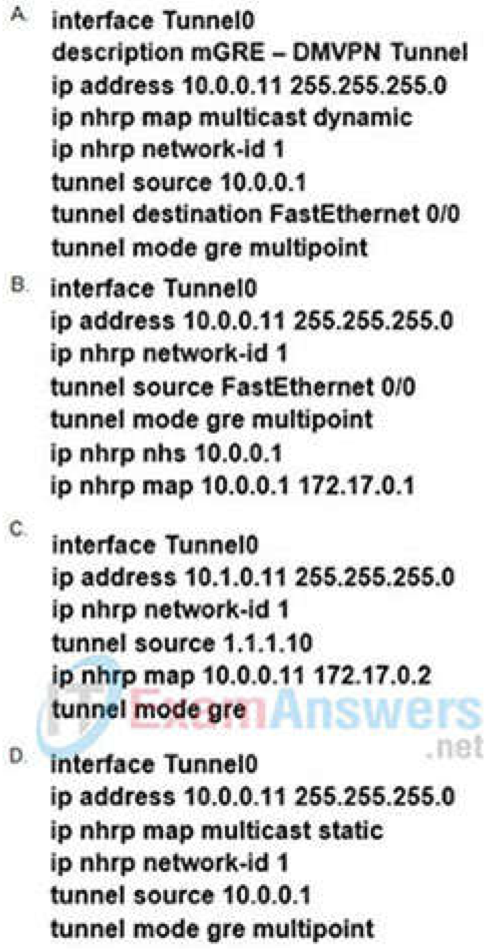
A. Configure the correct authentication password using SNMPv3 authPriv.
B. Configure the correct authentication password using SNMPv3 authNoPriv.
C. Configure correct authentication and privacy passwords using SNMPv3 authNoPriv.
D. Configure correct authentication and privacy passwords using SNMPv3 authPriv.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/snmp/configuration/xe-3se/3850/snmp-xe-3se-3850-book/nm

QUESTION 102
Refer to the exhibit. Which interface configuration must be configured on the spoke A router to enable a dynamic DMVPN tunnel with the spoke B router?





```
A. interface Tunnel0
   description mGRE – DMVPN Tunnel
   ip address 10.0.0.11 255.255.255.0
   ip nhrp map multicast dynamic
   ip nhrp network-id 1
   tunnel source 10.0.0.1
   tunnel destination FastEthernet 0/0
   tunnel mode gre multipoint
B. interface Tunnel0
   ip address 10.0.0.11 255.255.255.0
   ip nhrp network-id 1
   tunnel source FastEthernet 0/0
   tunnel mode gre multipoint
   ip nhrp nhs 10.0.0.1
   ip nhrp map 10.0.0.1 172.17.0.1
C.
   interface Tunnel0
   ip address 10.1.0.11 255.255.255.0
   ip nhrp network-id 1
   tunnel source 1.1.1.10
   ip nhrp map 10.0.0.11 172.17.0.2
   tunnel mode gre
D. interface Tunnel0
   ip address 10.0.0.11 255.255.255.0
   ip nhrp map multicast static
   ip nhrp network-id 1
   tunnel source 10.0.0.1
   tunnel mode gre multipoint
```

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

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The command -ip nhrp map multicast dynamic|| should be only used on Hub router, not spoke. If we are running dynamic routing protocols based on multicast (like RIP, OSPF, EIGRP …) we have to add the command -ip nhrp map multicast dynamic|| in Hub to replicate all multicast traffic to all dynamic entries in the NHRP table (multicast will be proceeded as unicast traffic) – The || tunnel source FastEthernet0/0″ is equivalent to -tunnel source 172.17.0.2||, which is the NBMA address of Spoke A.

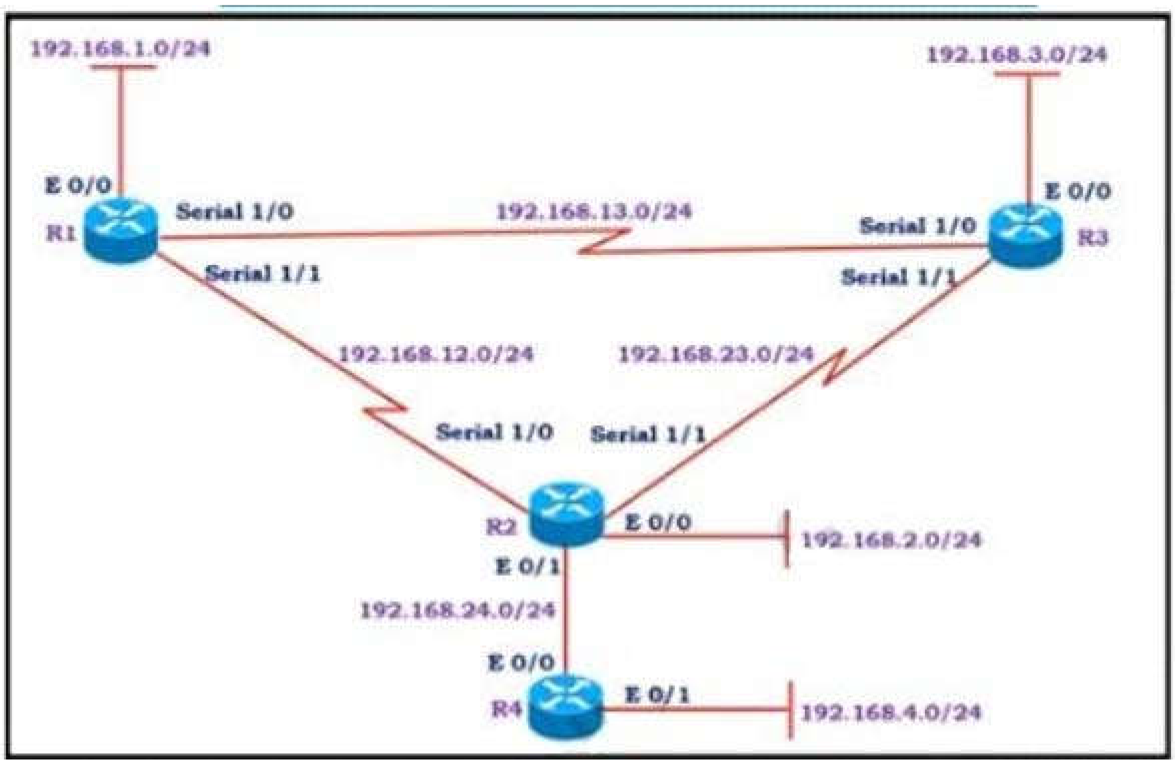
QUESTION 103
Which component of MPLS VPNs is used to extend the IP address so that an engineer is able to identify to which VPN it belongs?

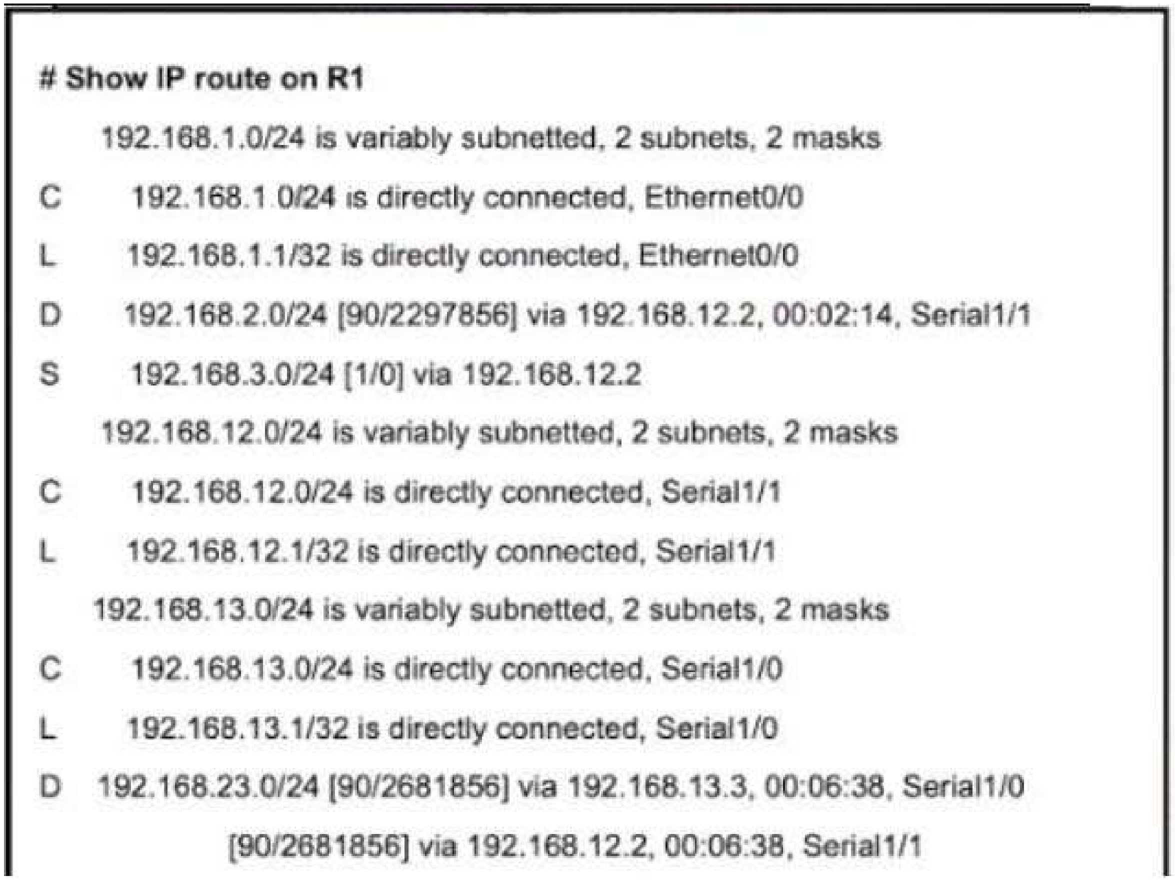
A. VPNv4 address family
B. RD
C. RT
D. LDP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 104
Refer to the exhibit. All the serial between R1, R2, and R3 have the Same bandwidth. User on the 192.168.1.0/24 network report slow response times while they access resource on network 192.168.3.0/24. When a traceroute is run on the path. It shows that the packet is getting forwarded via R2 to R3 although the link between R1 and R3 is still up. What must the network administrator to fix the slowness?





```
# Show IP route on R1
      192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.1 0/24 is directly connected, Ethernet0/0
L        192.168.1.1/32 is directly connected, Ethernet0/0
D       192.168.2.0/24 [90/2297856] via 192.168.12.2, 00:02:14, Serial1/1
S        192.168.3.0/24 [1/0] via 192.168.12.2
      192.168.12.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.12.0/24 is directly connected, Serial1/1
L        192.168.12.1/32 is directly connected, Serial1/1
      192.168.13.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.13.0/24 is directly connected, Serial1/0
L        192.168.13.1/32 is directly connected, Serial1/0
D     192.168.23.0/24 [90/2681856] via 192.168.13.3, 00:06:38, Serial1/0
                     [90/2681856] via 192.168.12.2, 00:06:38, Serial1/1
```

A. Add a static route on R1 using the next hop of R3.
B. Change the Administrative Distance of EIGRP to 5.
C. Remove the static route on R1.
D. Redistribute theR1 route to EIGRP

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 105
What are two functions of LDP? (Choose two.)

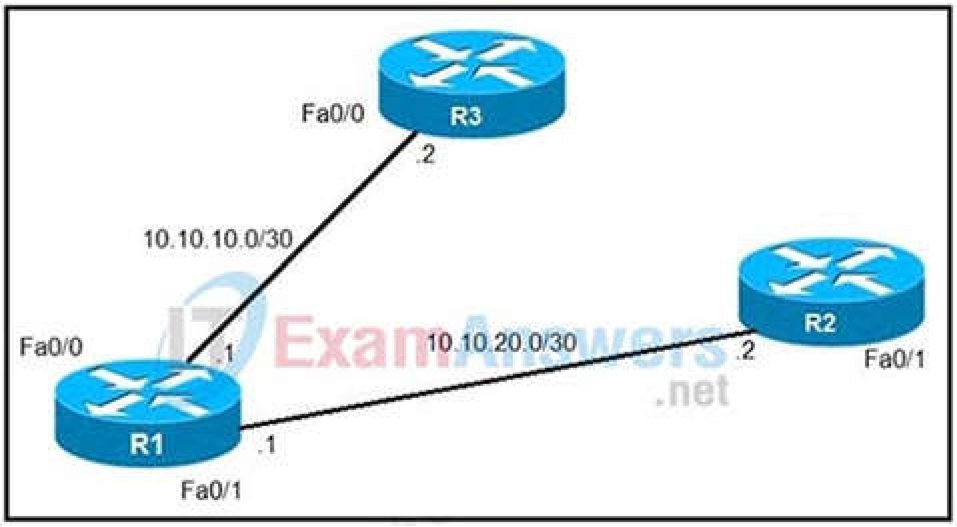
A. It is defined in RFC 3038 and 3039.
B. It requires MPLS Traffic Engineering.

C. It advertises labels per Forwarding Equivalence Class.
D. It must use Resource Reservation Protocol.
E. It uses Forwarding Equivalence Class

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nx-os/mpls/configuration/guide/mpls_cg/mp_mpls_overview.pdf

QUESTION 106
Refer to the exhibit. An IP SLA was configured on router R1 that allows the default route to be modified in the event that Fa0/0 loses reachability with the router R3 Fa0/0 interface. The route has changed to flow through router R2. Which debug command is used to troubleshoot this issue?

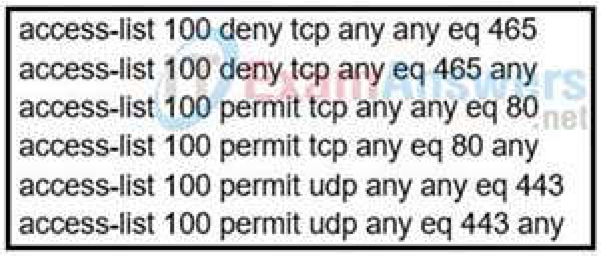


A. debug ip flow
B. debug ip sla error
C. debug ip routing
D. debug ip packet

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
debug ip routing This command enables debugging messages related to the routing table.

QUESTION 107
Refer to the exhibit. During troubleshooting it was discovered that the device is not reachable using a secure web browser. What is needed to fix the problem?



```
access-list 100 deny tcp any any eq 465
access-list 100 deny tcp any eq 465 any
access-list 100 permit tcp any any eq 80
access-list 100 permit tcp any eq 80 any
access-list 100 permit udp any any eq 443
access-list 100 permit udp any eq 443 any
```

A. permit tcp port 443
B. permit udp port 465
C. permit tcp port 465
D. permit tcp port 22

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

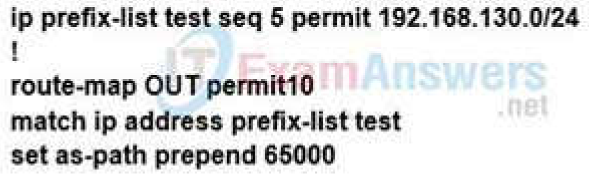
QUESTION 108
An engineer is trying to copy an IOS file from one router to another router by using TFTP. Which two actions are needed to allow the file to copy? (Choose two.)

A. Copy the file to the destination router with the copy tftp: flash: command
B. Enable the TFTP server on the source router with the tftp-server flash: <filename> command
C. TFTP is not supported in recent IOS versions, so an alternative method must be used
D. Configure a user on the source router with the username tftp password tftp command
E. Configure the TFTP authentication on the source router with the tftp-server authentication local command

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 109
R2 has a locally originated prefix 192.168.130.0/24 and has these configurations:



```
ip prefix-list test seq 5 permit 192.168.130.0/24
!
route-map OUT permit10
match ip address prefix-list test
set as-path prepend 65000
```

What is the result when the route-map OUT command is applied toward an eBGP neighbor R1 (1.1.1.1) by using the neighbor 1.1.1.1 route-map OUT out command?

A. R1 sees 192.168.130.0/24 as two AS hops away instead of one AS hop away.
B. R1 does not accept any routes other than 192.168.130.0/24
C. R1 does not forward traffic that is destined for 192.168.30.0/24
D. Network 192.168.130.0/24 is not allowed in the R1 table

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 110
Which SNMP verification command shows the encryption and authentication protocols that are used in SNMPV3?

A. show snmp group
B. show snmp user
C. show snmp
D. show snmp view

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 111
Which two protocols can cause TCP starvation? (Choose two)

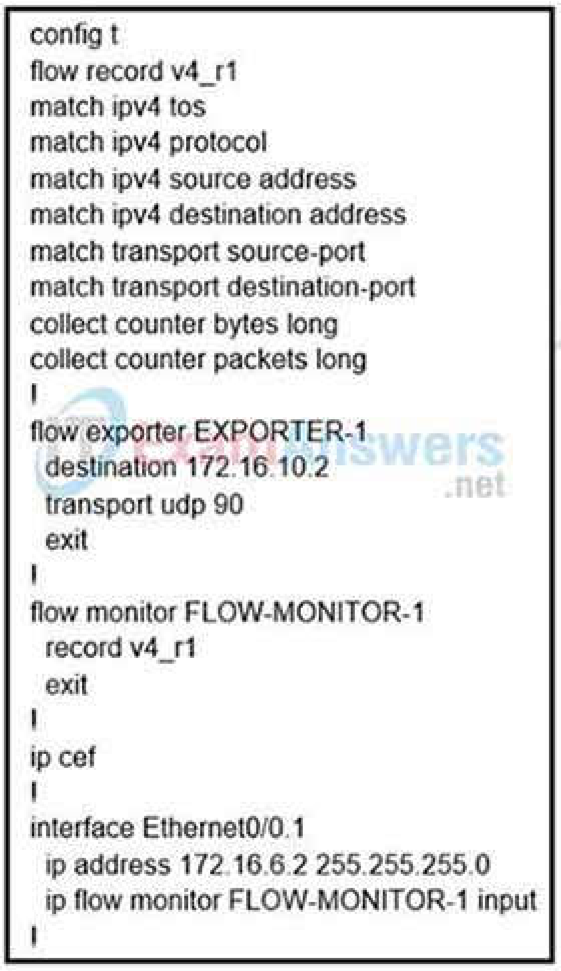
A. TFTP
B. SNMP
C. SMTP
D. HTTPS
E. FTP

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:

QUESTION 112

Refer to the exhibit. Why is the remote NetFlow server failing to receive the NetFlow data?



```
config t
flow record v4_r1
match ipv4 tos
match ipv4 protocol
match ipv4 source address
match ipv4 destination address
match transport source-port
match transport destination-port
collect counter bytes long
collect counter packets long
!
flow exporter EXPORTER-1
 destination 172.16.10.2
 transport udp 90
 exit
!
flow monitor FLOW-MONITOR-1
 record v4_r1
 exit
!
ip cef
!
interface Ethernet0/0.1
 ip address 172.16.6.2 255.255.255.0
 ip flow monitor FLOW-MONITOR-1 input
!
```

A. The flow exporter is configured but is not used.
B. The flow monitor is applied in the wrong direction.
C. The flow monitor is applied to the wrong interface.
D. The destination of the flow exporter is not reachable.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

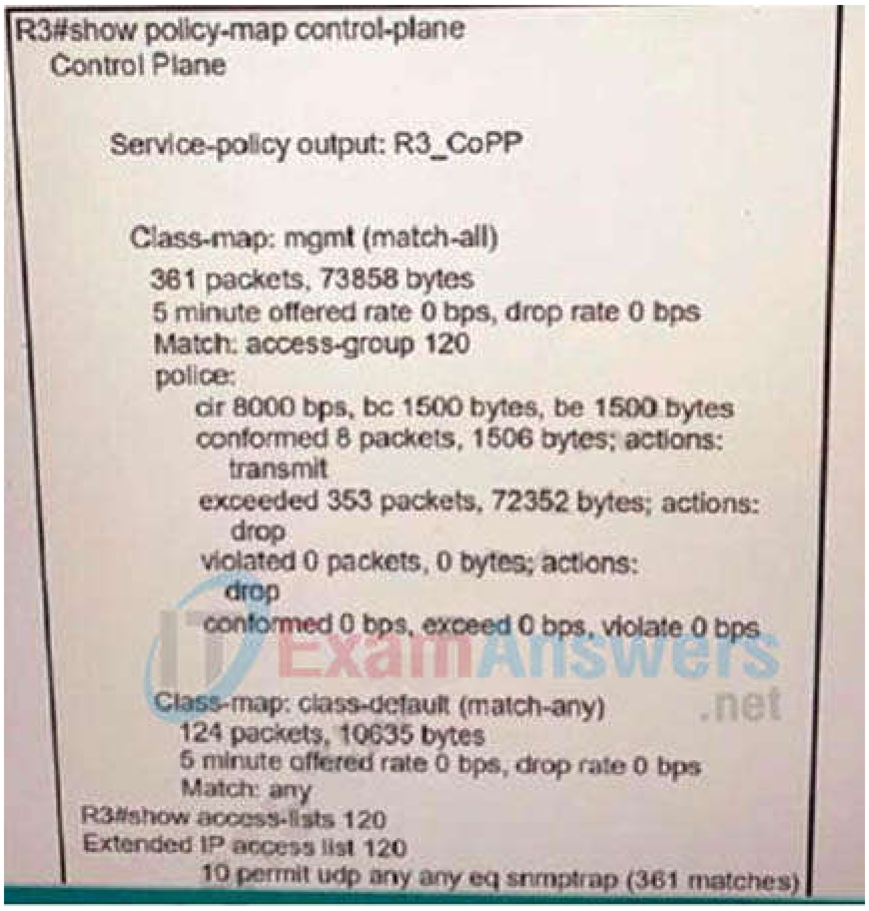
QUESTION 113
Which statement about route distinguishers in an MPLS network is true?

A. Route distinguishers allow multiple instances of a routing table to coexist within the edge router.
B. Route distinguishers are used for label bindings.
C. Route distinguishers make a unique VPNv4 address across the MPLS network.
D. Route distinguishers define which prefixes are imported and exported on the edge router.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 114
Refer the exhibit. Which action resolves intermittent connectivity observed with the SNMP trap packets?



```
R3#show policy-map control-plane
  Control Plane

     Service-policy output: R3_CoPP

       Class-map: mgmt (match-all)
         361 packets, 73858 bytes
         5 minute offered rate 0 bps, drop rate 0 bps
         Match: access-group 120
         police:
             cir 8000 bps, bc 1500 bytes, be 1500 bytes
             conformed 8 packets, 1506 bytes; actions:
               transmit
             exceeded 353 packets, 72352 bytes; actions:
               drop
             violated 0 packets, 0 bytes; actions:
               drop
             conformed 0 bps, exceed 0 bps, violate 0 bps

         Class-map: class-default (match-any)
           124 packets, 10635 bytes
           5 minute offered rate 0 bps, drop rate 0 bps
           Match: any
   R3#show access-lists 120
   Extended IP access list 120
           10 permit udp any any eq snmptrap (361 matches)
```

A. Decrease the committed burst Size of the mgmt class map
B. Increase the CIR of the mgmt class map
C. Add a new class map to match TCP traffic
D. Add one new entry in the ACL 120 to permit the UDP port 161

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

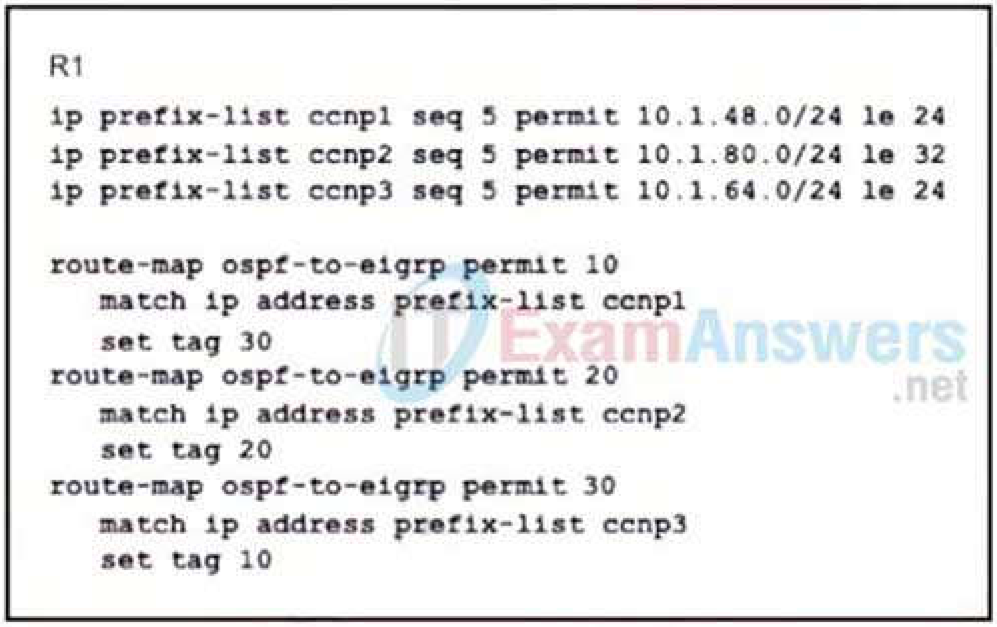
QUESTION 115
While working with software images, an engineer observes that Cisco DNA Center cannot upload its software image directly from the device. Why is the image not uploading?

A. The device must be resynced to Cisco DNA Center.
B. The software image for the device is in install mode.
C. The device has lost connectivity to Cisco DNA Center.
D. The software image for the device is in bundle mode

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Upload Software Images for Devices in Install Mode
The Image Repository page might show a software image as being in Install Mode. When a device is in Install Mode, Cisco DNA Center is unable to upload its software image directly from the device.
When a device is in install mode, you must first manually upload the software image to the Cisco DNA Center repository before marking the image as golden, as shown in the following steps.

QUESTION 116
Refer to the exhibit. An engineer wanted to set a tag of 30 to route 10 1.80.65/32 but it failed How is the issue fixed?



```
R1
ip prefix-list ccnp1 seq 5 permit 10.1.48.0/24 le 24
ip prefix-list ccnp2 seq 5 permit 10.1.80.0/24 le 32
ip prefix-list ccnp3 seq 5 permit 10.1.64.0/24 le 24

route-map ospf-to-eigrp permit 10
   match ip address prefix-list ccnp1
   set tag 30
route-map ospf-to-eigrp permit 20
   match ip address prefix-list ccnp2
   set tag 20
route-map ospf-to-eigrp permit 30
   match ip address prefix-list ccnp3
   set tag 10
```

A. Modify route-map ospf-to-eigrp permit 30 and match prefix-list ccnp2.
B. Modify route-map ospf-to-eigrp permit 10 and match prefix-list ccnp2.
C. Modify prefix-list ccnp3 to add 10.1.64.0/20 le 24
D. Modify prefix-list ccnp3 to add 10.1.64.0/20 ge 32

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

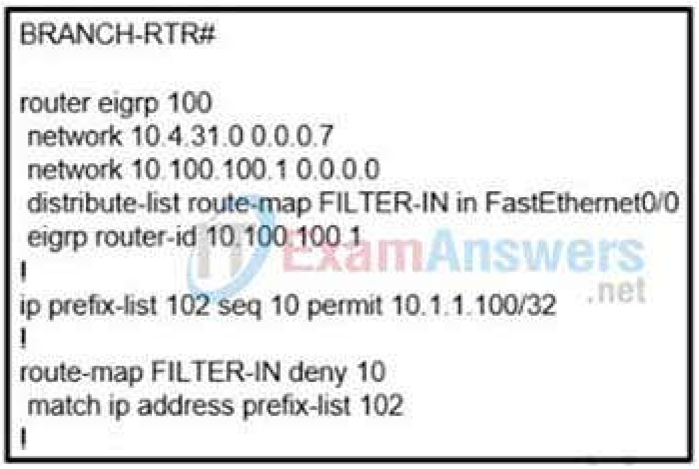
QUESTION 117
Which protocol does MPLS use to support traffic engineering?

A. Tag Distribution Protocol (TDP)
B. Resource Reservation Protocol (RSVP)
C. Border Gateway Protocol (BGP)
D. Label Distribution Protocol (LDP)

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
MPLS TE provides a way to integrate TE capabilities (such as those used on Layer 2 protocols like ATM) into Layer 3 protocols (IP). MPLS TE uses an extension to existing protocols (Intermediate System-to- Intermediate System (IS-IS), Resource Reservation Protocol (RSVP), OSPF) to calculate and establish unidirectional tunnels that are set according to the network constraint, Traffic flows are mapped on the different tunnels depending on their destination.

QUESTION 118
Refer to the exhibit. A junior engineer updated a branch router configuration. Immediately after the change, the engineer receives calls from the help desk that branch personnel cannot reach any network destinations. Which configuration restores service and continues to block 10.1.1.100/32?



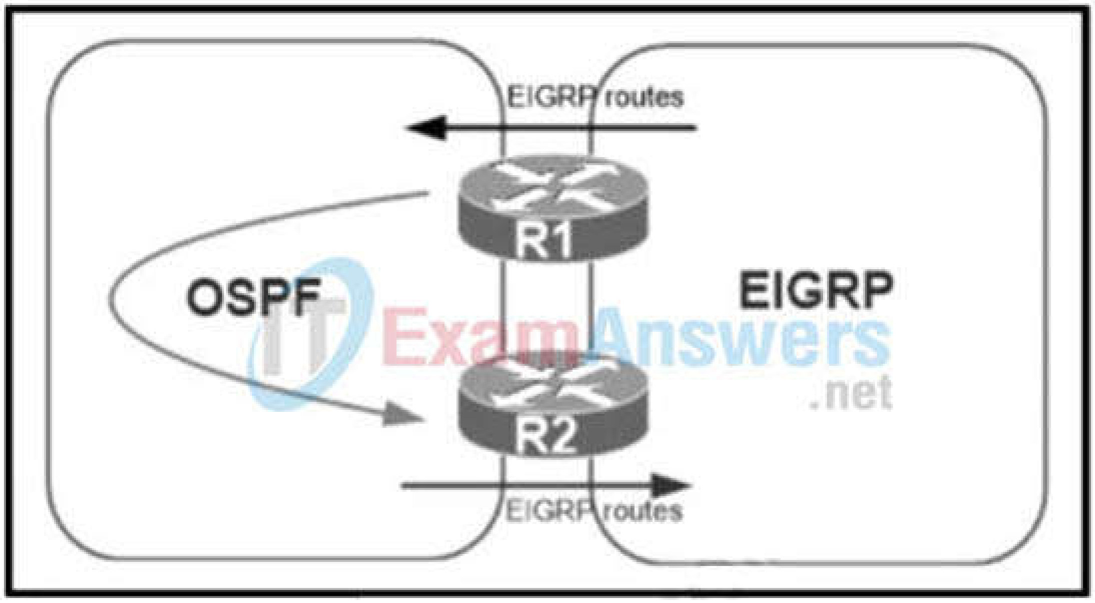
```
BRANCH-RTR#

router eigrp 100
 network 10.4.31.0 0.0.0.7
 network 10.100.100.1 0.0.0.0
 distribute-list route-map FILTER-IN in FastEthernet0/0
 eigrp router-id 10.100.100.1
!
ip prefix-list 102 seq 10 permit 10.1.1.100/32
!
route-map FILTER-IN deny 10
 match ip address prefix-list 102
!
```

A. route-map FILTER-IN deny 5
B. ip prefix-list 102 seq 15 permit 0.0.0.0/32 le 32
C. ip prefix-list 102 seq 5 permit 0.0.0.0/32 le 32
D. route-map FILTER-IN permit 20

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
By using “deny” keyword in a route-map, we can filter out the prefix specified in the prefix-list. But there is an implicit “deny all” statement in the prefix-list so we must permit other prefixes with “permit” keyword in the route-map.

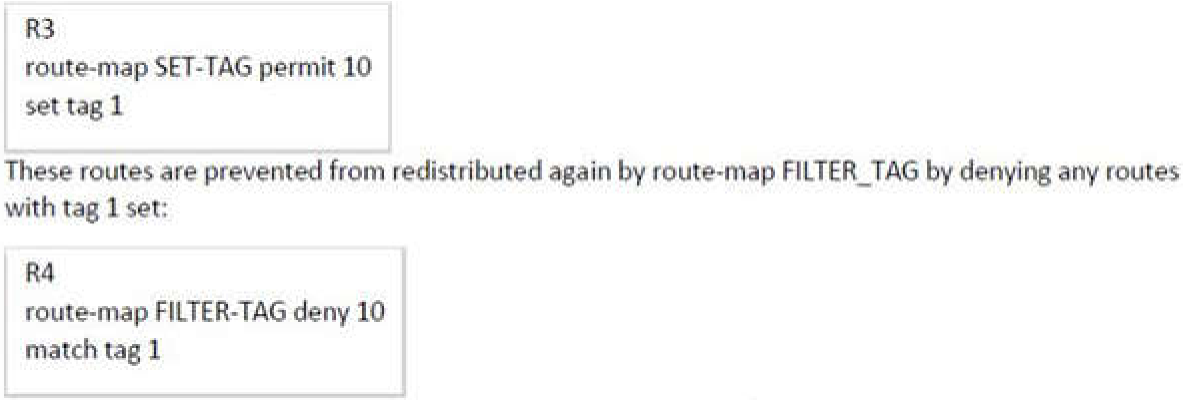
QUESTION 119
Refer to the exhibit. A network administrator configured mutual redistribution on R1 and R2 routers, which caused instability in the network. Which action resolves the issue?



A. Set a tag in the route map when redistributing EIGRP into OSPF on R1. and match the same tag on R2 to allow when redistributing OSPF into EIGRP.
B. Apply a prefix list of EIGRP network routes in OSPF domain on R1 to propagate back into the EIGRP routing domain.
C. Set a tag in the route map when redistributing EIGRP into OSPF on R1, and match the same tag on R2 to deny when redistributing OSPF into EIGRP.
D. Advertise summary routes of EIGRP to OSPF and deny specific EIGRP routes when redistributing into OSPF.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
When doing mutual redistribution at multiple points (between OSPF and EIGRP on R1 & R2), we may create routing loops so we should use route-map to prevent redistributed routes from redistributing again into the original domain.
In the below example, the route-map “SET-TAG” is used to prevent any routes that have been redistributed into EIGRP from redistributed again into OSPF domain by tagging these routes with tag 1:



```
R3
route-map SET-TAG permit 10
set tag 1
```

These routes are prevented from redistributed again by route-map FILTER_TAG by denying any routes with tag 1 set:

```
R4
route-map FILTER-TAG deny 10
match tag 1
```

QUESTION 120
Which two statements about VRF-Lite configurations are true? (Choose two.)

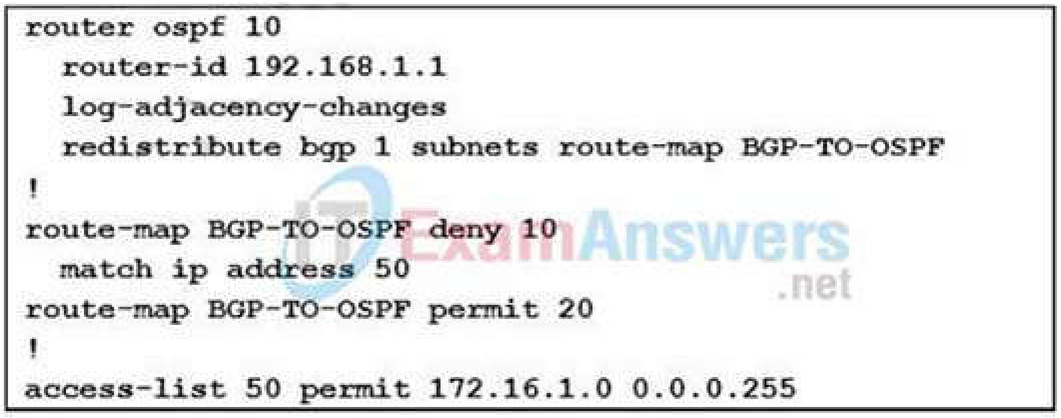
A. They support the exchange of MPLS labels

B. Different customers can have overlapping IP addresses on different VPNs
C. They support a maximum of 512.000 routes
D. Each customer has its own dedicated TCAM resources
E. Each customer has its own private routing table.
F. They support IS-IS

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 121
Refer to Exhibit. Which statement about redistribution from BGP into OSPF process 10 is true?



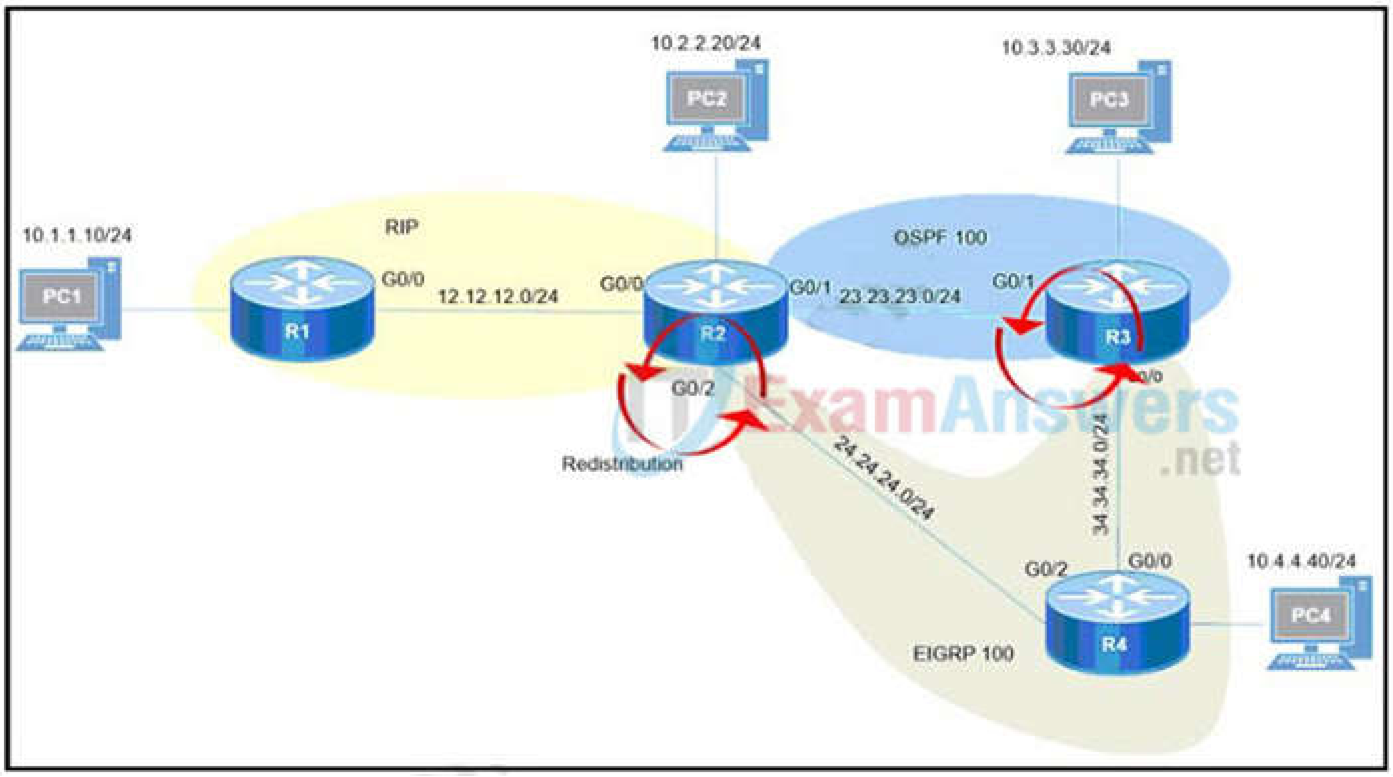
```
router ospf 10
  router-id 192.168.1.1
  log-adjacency-changes
  redistribute bgp 1 subnets route-map BGP-TO-OSPF
!
route-map BGP-TO-OSPF deny 10
  match ip address 50
route-map BGP-TO-OSPF permit 20
!
access-list 50 permit 172.16.1.0 0.0.0.255
```

A. Network 172.16.1.0/24 is not redistributed into OSPF.
B. Network 10.10 10.0/24 is not redistributed into OSPF
C. Network 172.16.1.0/24 is redistributed with administrative distance of 1.
D. Network 10.10.10.0/24 is redistributed with administrative distance of 20.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 122
Refer to the exhibit. Redistribution is enabled between the routing protocols, and nowPC2 PC3, and PC4 cannot reach PC1. What are the two solutions to fix the problem? (Choose two.)



A. Filter RIP routes back into RIP when redistributing into RIP in R2

B. Filter OSPF routes into RIP FROM EIGRP when redistributing into RIP in R2.
C. Filter all routes except RIP routes when redistributing into EIGRP in R2.
D. Filter RIP AND OSPF routes back into OSPF from EIGRP when redistributing into OSPF in R2
E. Filter all routes except EIGRP routes when redistributing into OSPF in R3.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Even PC2 cannot reach PC1 so there is something wrong with RIP redistribution in R2. Because RIP has higher Administrative Distance (AD) value than OSPF and EIGRP so it will be looped when doing mutual redistribution.

QUESTION 123
Which IGPs are supported by the MPLS LDP autoconfiguration feature?

A. RIPv2 and OSPF
B. OSPF and EIGRP
C. OSPF and ISIS
D. ISIS and RIPv2

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The MPLS LDP Autoconfiguration feature enables you to globally enable Label Distribution Protocol (LDP) on every interface associated with an Interior Gateway Protocol (IGP) instance. This feature is supported on Open Shortest Path First (OSPF) and Intermediate System-to-Intermediate System (IS-IS) IGPS.

QUESTION 124
What is a limitation of IPv6 RA Guard?

A. It is not supported in hardware when TCAM is programmed
B. It does not offer protection in environments where IPv6 traffic is tunneled.
C. It cannot be configured on a switch port interface in the ingress direction
D. Packets that are dropped by IPv6 RA Guard cannot be spanned

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Restrictions for IPv6 RA Guard
The IPv6 RA Guard feature does not offer protection in environments where IPv6 traffic is tunneled.
This feature is supported only in hardware when the ternary content addressable memory (TCAM) is programmed.
This feature can be configured on a switch port interface in the ingress direction.
This feature supports host mode and router mode.
This feature is supported only in the ingress direction; it is not supported in the egress direction.
This feature is not supported on EtherChannel and EtherChannel port members.
This feature is not supported on trunk ports with merge mode.
This feature is supported on auxiliary VLANs and private VLANs (PVLANs). In the case of PVLANs, primary VLAN features are inherited and merged with port features.
Packets dropped by the IPv6 RA Guard feature can be spanned.

Reference: Here (from cisco)

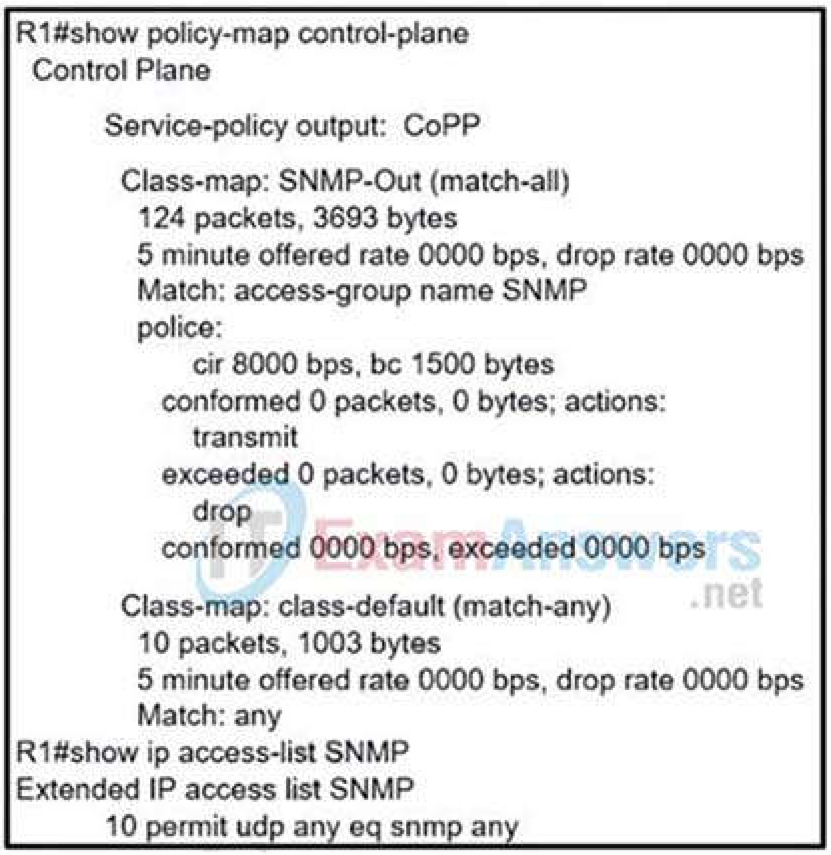
QUESTION 125
Which option is the best for protecting CPU utilization on a device?

A. fragmentation
B. COPP
C. ICMP redirects
D. ICMP unreachable messages

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 126
Refer to the exhibit. R1 is being monitored using SNMP and monitoring devices are getting only partial information. What action should be taken to resolve this issue?



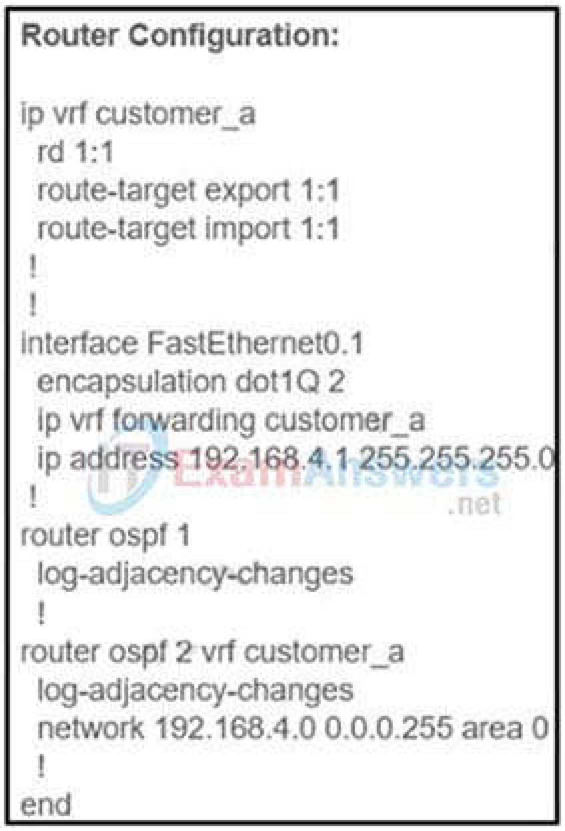
```
R1#show policy-map control-plane
 Control Plane

        Service-policy output:  CoPP

          Class-map: SNMP-Out (match-all)
            124 packets, 3693 bytes
            5 minute offered rate 0000 bps, drop rate 0000 bps
            Match: access-group name SNMP
            police:
                cir 8000 bps, bc 1500 bytes
              conformed 0 packets, 0 bytes; actions:
                transmit
              exceeded 0 packets, 0 bytes; actions:
                drop
              conformed 0000 bps, exceeded 0000 bps

          Class-map: class-default (match-any)
            10 packets, 1003 bytes
            5 minute offered rate 0000 bps, drop rate 0000 bps
            Match: any
R1#show ip access-list SNMP
Extended IP access list SNMP
        10 permit udp any eq snmp any
```

A. Modify the CoPP policy to increase the configured exceeded limit for SNMP.
B. Modify the access list to include snmptrap.
C. Modify the CoPP policy to increase the configured CIR limit for SNMP.
D. Modify the access list to add a second line to allow udp any any eq snmp

Correct Answer: B
Section: (none)
Explanation

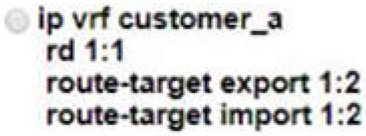
Explanation/Reference:

QUESTION 127
Refer to the exhibit.

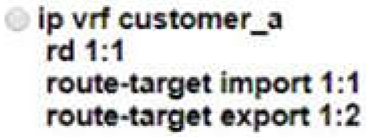


```
Router Configuration:

ip vrf customer_a
  rd 1:1
  route-target export 1:1
  route-target import 1:1
 !
 !
interface FastEthernet0.1
  encapsulation dot1Q 2
  ip vrf forwarding customer_a
  ip address 192.168.4.1 255.255.255.0
 !
router ospf 1
  log-adjacency-changes
  !
router ospf 2 vrf customer_a
  log-adjacency-changes
  network 192.168.4.0 0.0.0.255 area 0
  !
end
```

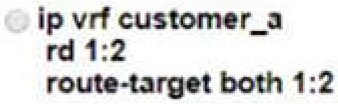
The network administrator configured VRF lite for customer A.
The technician at the remote site misconfigured VRF on the router.
Which configuration will resolve connectivity for both sites of customer A?



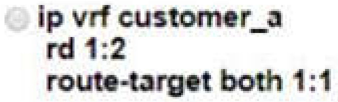
```
○ ip vrf customer_a
   rd 1:1
   route-target export 1:2
   route-target import 1:2
```



```
○ ip vrf customer_a
   rd 1:1
   route-target import 1:1
   route-target export 1:2
```



```
○ ip vrf customer_a
   rd 1:2
   route-target both 1:2
```



```
○ ip vrf customer_a
   rd 1:2
   route-target both 1:1
```

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
From the exhibit, we learned:
+ VRF customer_a was exported with Route target (RT) of 1:1 so at the remote site it must be imported with the same RT 1:1.
+ VRF customer_a was imported with Route target (RT) of 1:1 so at the remote site it must be exported with the same RT 1:1.
Therefore at the remote site we must configure the command “route-target both 1:1” (which is equivalent to two commands “route-target import 1:1” & “route-target export 1:1”.

QUESTION 128
When provisioning a device in Cisco DNA Center, the engineer sees the error message “Cannot select the device. Not compatible with template”. What is the reason for the error?

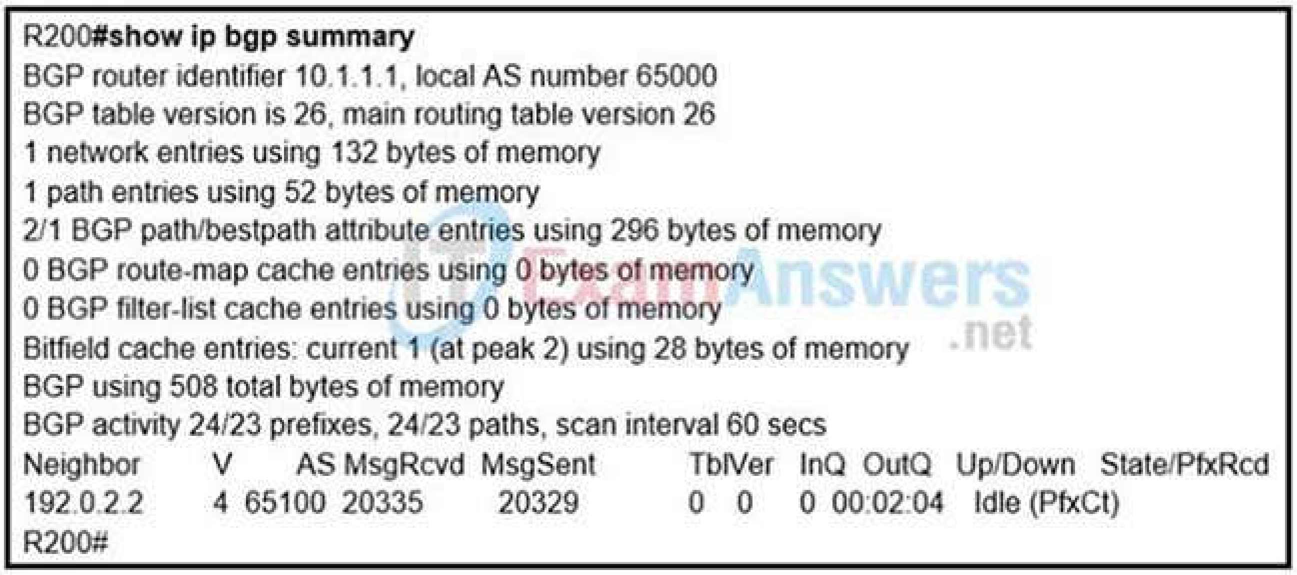
A. The template has an incorrect configuration.
B. The software version of the template is different from the software version of the device.

C. The changes to the template were not committed.
D. The tag that was used to filter the templates does not match the device tag.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
If you use tags to filter the templates, you must apply the same tags to the device to which you want to apply the templates. Otherwise, you get the following error during provisioning: -Cannot select the device. Not compatible with template.

QUESTION 129
Refer to the exhibit. In which circumstance does the BGP neighbor remain in the idle condition?



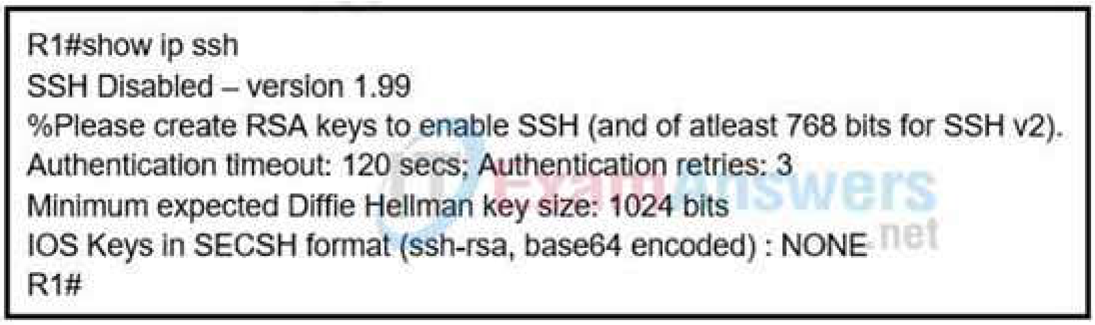
```
R200#show ip bgp summary
BGP router identifier 10.1.1.1, local AS number 65000
BGP table version is 26, main routing table version 26
1 network entries using 132 bytes of memory
1 path entries using 52 bytes of memory
2/1 BGP path/bestpath attribute entries using 296 bytes of memory
0 BGP route-map cache entries using 0 bytes of memory
0 BGP filter-list cache entries using 0 bytes of memory
Bitfield cache entries: current 1 (at peak 2) using 28 bytes of memory
BGP using 508 total bytes of memory
BGP activity 24/23 prefixes, 24/23 paths, scan interval 60 secs
Neighbor        V     AS MsgRcvd  MsgSent     TblVer  InQ  OutQ  Up/Down   State/PfxRcd
192.0.2.2       4  65100  20335     20329          0    0     0  00:02:04   Idle (PfxCt)
R200#
```

A. if prefixes are not received from the BGP peer
B. if prefixes reach the maximum limit
C. if a prefix list is applied on the inbound direction
D. if prefixes exceed the maximum limit

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/25160-bgp-maximum-prefix.html

QUESTION 130
Refer to the exhibit. An engineer is trying to connect to a device with SSH but cannot connect. The engineer connects by using the console and finds the displayed output when troubleshooting. Which command must be used in configuration mode to enable SSH on the device?



```
R1#show ip ssh
SSH Disabled – version 1.99
%Please create RSA keys to enable SSH (and of atleast 768 bits for SSH v2).
Authentication timeout: 120 secs; Authentication retries: 3
Minimum expected Diffie Hellman key size: 1024 bits
IOS Keys in SECSH format (ssh-rsa, base64 encoded) : NONE
R1#
```

A. no ip ssh disable
B. ip ssh enable
C. ip ssh version 2
D. crypto key generate rsa

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

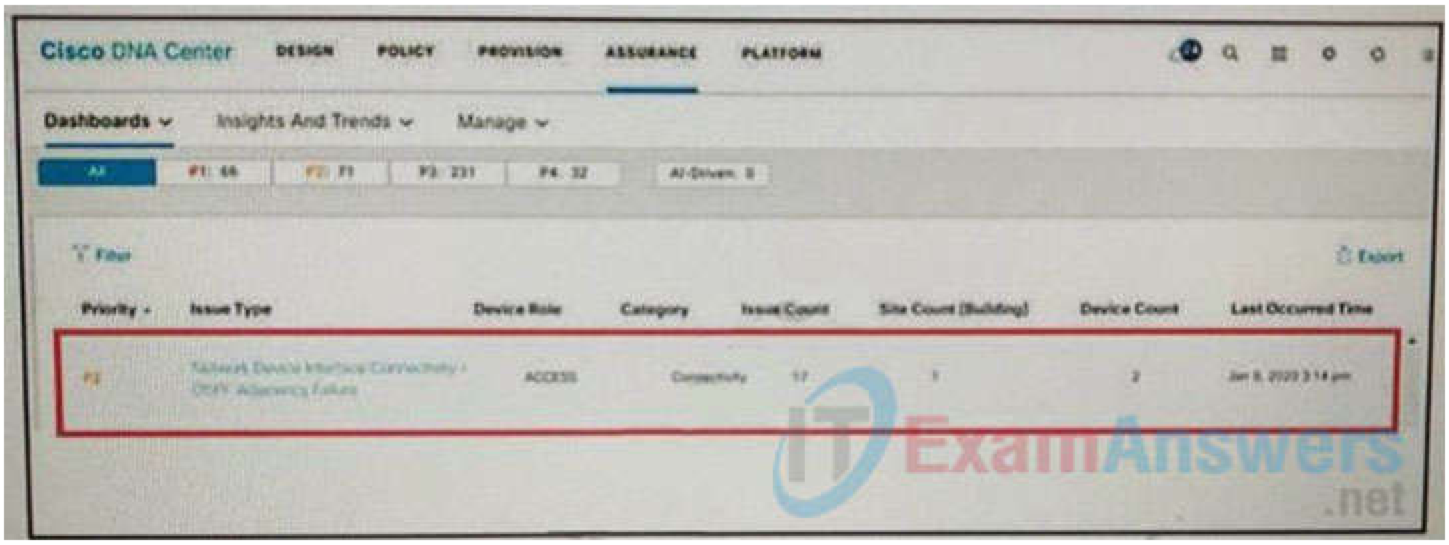
QUESTION 131
An engineer configured a Cisco router to send reliable and encrypted notifications for any events to the management server. It was noticed that the notification messages are reliable but not encrypted. Which action resolves the issue?

A. Configure all devices for SNMPv3 informs with priv.
B. Configure all devices for SNMPv3 informs with auth.
C. Configure all devices for SNMPv3 traps with auth.
D. Configure all devices for SNMPv3 traps with priv.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
SNMP notifications can be sent as traps or inform requests. Traps are unreliable because the receiver does not send acknowledgments when this device receives traps.”Send reliable and encrypted notifications for any events” so it is SNMP notifications. For encryption we need to configure “priv”.

QUESTION 132
Refer to the exhibit. A network administrator is using the DNA Assurance Dashboard panel to troubleshoot an OSPF adjacency that failed between Edge_NYC interface GigabitEthernet1/3 with Neighbor Edge_SNJ. The administrator observes that the neighborship is stuck in exstart state. How does the administrator fix this issue?



Priority	Issue Type	Device Role	Category	Issue Count	Site Count (Building)	Device Count	Last Occurred Time
P2	Network Device Interface Connectivity - OSPF Adjacency Failure	ACCESS	Connectivity	17	1	2	Jan 8, 2020 3:14 pm

A. Configure to match the OSPF interface speed and duplex settings on both routers.
B. Configure to match the OSPF interface MTU settings on both routers.
C. Configure to match the OSPF interface unique IP address and subnet mask on both routers.
D. Configure to match the OSPF interface network types on both routers.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/13684-12.html

After
two OSPF neighboring routers establish bi-directional communication and complete DR/BDR election (on multi-access networks), the routers transition to the exstart state. In this state, the neighboring routers establish a master/slave relationship and determine the initial database descriptor (DBD) sequence number to use while exchanging DBD packets.
Neighbors Stuck in Exstart/Exchange State The problem occurs most frequently when attempting to run OSPF between a Cisco router and another vendor’s router. The problem occurs when the maximum transmission unit (MTU) settings for neighboring router interfaces don’t match. If the router with the higher MTU sends a packet larger that the MTU set on the neighboring router, the neighboring router ignores the packet.

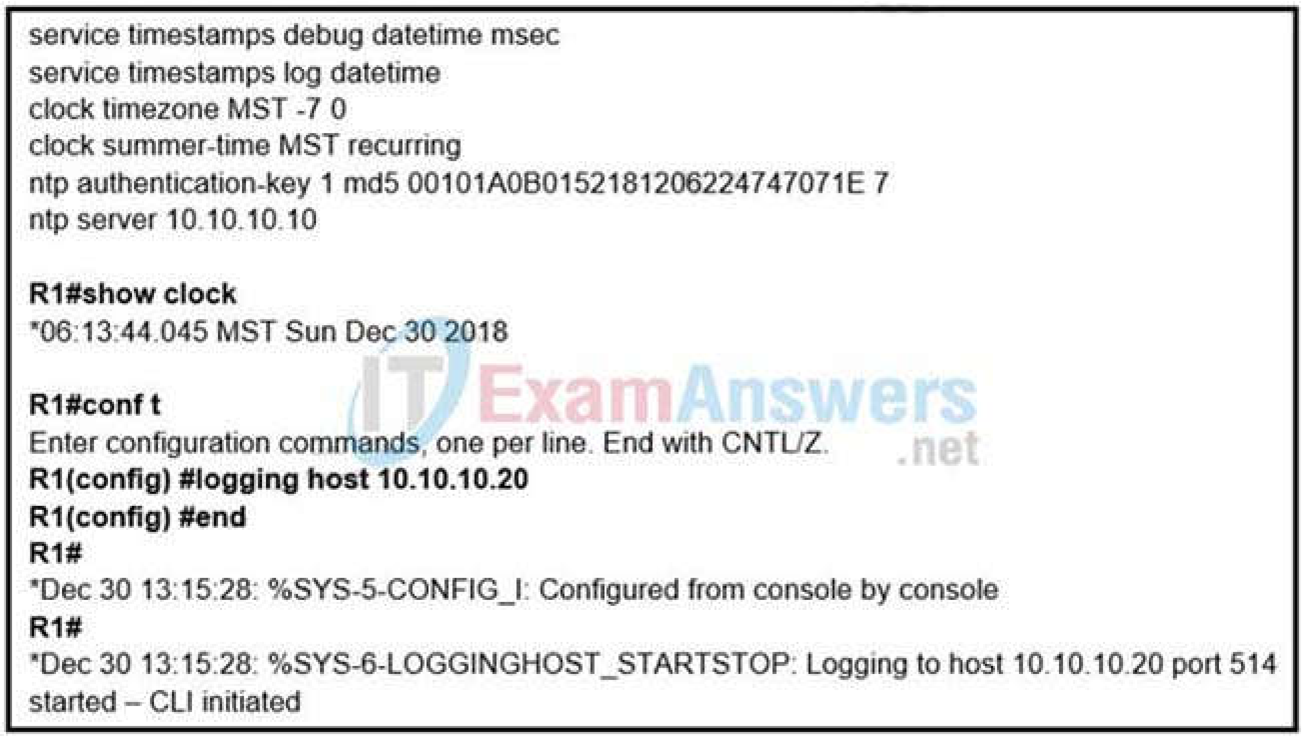
QUESTION 133
What does IPv6 Source Guard utilize to determine if IPv6 source addresses should be forwarded?

A. ACE
B. ACLS
C. DHCP
D. Binding Table

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
IPv6 source guard is an interface feature between the populated binding table and data traffic filtering. This feature enables the device to deny traffic when it is originated from an address that is not stored in the binding table. IPv6 source guard does not inspect ND or DHCP packets, rather, it works

QUESTION 134
Refer to the exhibit. An administrator noticed that after a change was made on R1, the timestamps on the system logs did not match the clock. What is the reason for this error?



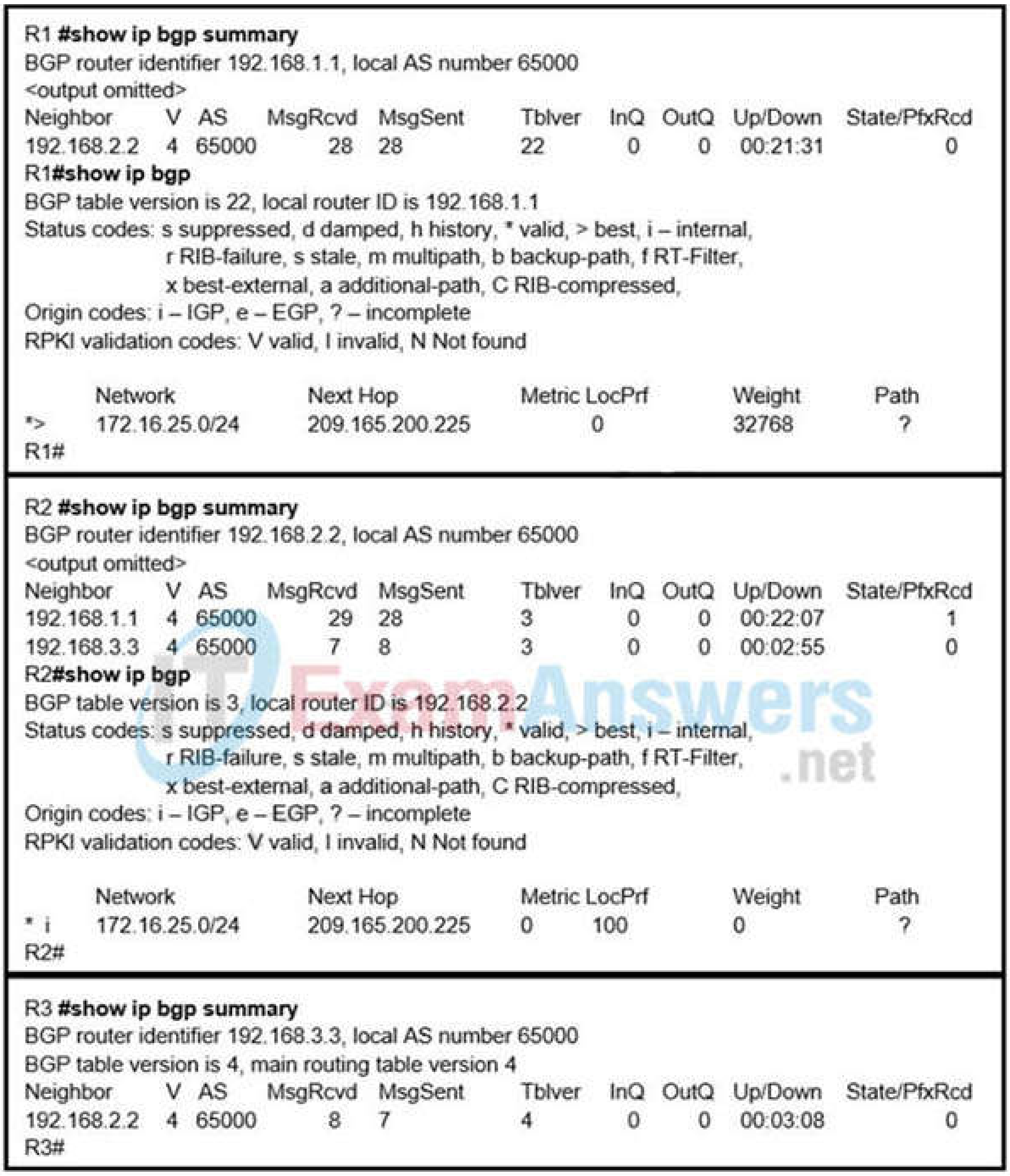
```
service timestamps debug datetime msec
service timestamps log datetime
clock timezone MST -7 0
clock summer-time MST recurring
ntp authentication-key 1 md5 00101A0B0152181206224747071E 7
ntp server 10.10.10.10

R1#show clock
*06:13:44.045 MST Sun Dec 30 2018

R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config) #logging host 10.10.10.20
R1(config) #end
R1#
*Dec 30 13:15:28: %SYS-5-CONFIG_I: Configured from console by console
R1#
*Dec 30 13:15:28: %SYS-6-LOGGINGHOST_STARTSTOP: Logging to host 10.10.10.20 port 514
started – CLI initiated
```

A. An authentication error with the NTP server results in an incorrect timestamp.
B. The keyword localtime is not defined on the timestamp service command.
C. The NTP server is in a different time zone.
D. The system clock is set incorrectly to summer-time hours.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 135
Refer to the exhibit. R2 is a route reflector, and R1 and R3 are route reflector clients. The route reflector learns the route to 172.16.25.0/24 from R1, but it does not advertise to R3. What is the reason the route is not advertised?



```
R1 #show ip bgp summary
BGP router identifier 192.168.1.1, local AS number 65000
<output omitted>
Neighbor      V  AS      MsgRcvd   MsgSent        Tblver   InQ  OutQ  Up/Down    State/PfxRcd
192.168.2.2   4  65000        28   28             22         0     0   00:21:31             0
R1#show ip bgp
BGP table version is 22, local router ID is 192.168.1.1
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
*>     172.16.25.0/24     209.165.200.225          0               32768           ?
R1#
```

```
R2 #show ip bgp summary
BGP router identifier 192.168.2.2, local AS number 65000
<output omitted>
Neighbor      V  AS      MsgRcvd   MsgSent        Tblver   InQ  OutQ  Up/Down    State/PfxRcd
192.168.1.1   4  65000        29   28             3          0     0   00:22:07             1
192.168.3.3   4  65000         7   8              3          0     0   00:02:55             0
R2#show ip bgp
BGP table version is 3, local router ID is 192.168.2.2
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
* i    172.16.25.0/24     209.165.200.225     0      100           0               ?
R2#
```

```
R3 #show ip bgp summary
BGP router identifier 192.168.3.3, local AS number 65000
BGP table version is 4, main routing table version 4
Neighbor      V  AS      MsgRcvd   MsgSent        Tblver   InQ  OutQ  Up/Down    State/PfxRcd
192.168.2.2   4  65000         8   7              4          0     0   00:03:08             0
R3#
```

A. R2 does not have a route to the next hop, so R2 does not advertise the prefix to other clients.
B. Route reflector setup requires full IBGP mesh between the routers.
C. In route reflector setup, only classful prefixes are advertised to other clients.
D. In route reflector setups, prefixes are not advertised from one client to another.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 136
How are MPLS Layer 3 VPN services deployed?

A. The RD and RT values must match under the VRR
B. The RD and RT values under a VRF must match on the remote PE router
C. The import and export RT values under a VRF must always be the same.
D. The label switch path must be available between the local and remote PE routers.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/td/docs/iosxr/ncs5500/vpn/65x/b-l3vpn-cg-ncs5500-65x/b-l3vpn-cg-ncs5500-65x_chapter_010.html

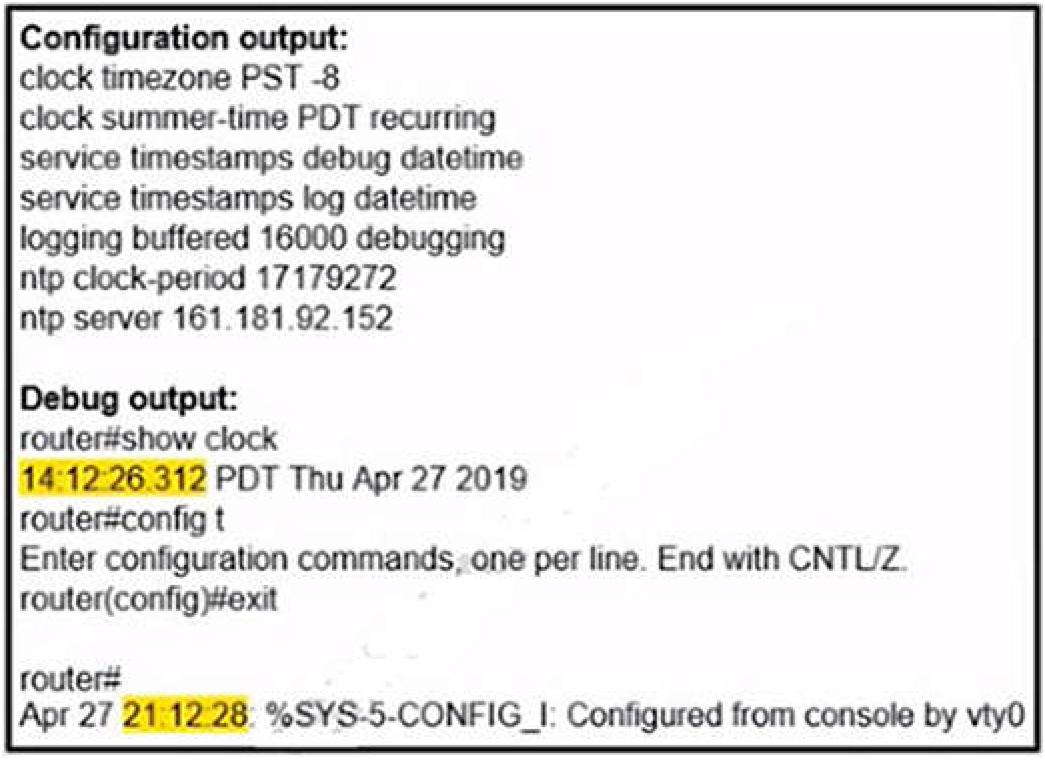
QUESTION 137
When configuring Control Plane Policing on a router to protect it from malicious traffic, an engineer observes that the configured routing protocols start flapping on that device. Which action in the Control Plane Policy prevents this problem in a production environment while achieving the security objective?

A. Set the conform-action and exceed-action to transmit initially to test the ACLs and transmit rates and apply the Control Plane Policy in the output direction
B. Set the conform-action and exceed-action to transmit initially to test the ACLs and transmit rates and apply the Control Plane Policy in the input direction
C. Set the conform-action to transmit and exceed-action to drop to test the ACLs and transmit rates and apply the Control Plane Policy m the input direction
D. Set the conform-action to transmit and exceed-action to drop to test the ACLs and transmit rates and apply the Control Plane Policy m the output direction

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 138
Refer to the exhibit. A network administrator configured NTP on a Cisco router to get synchronized time for system and logs from a unified time source The configuration did not work as desired Which service must be enabled to resolve the issue?



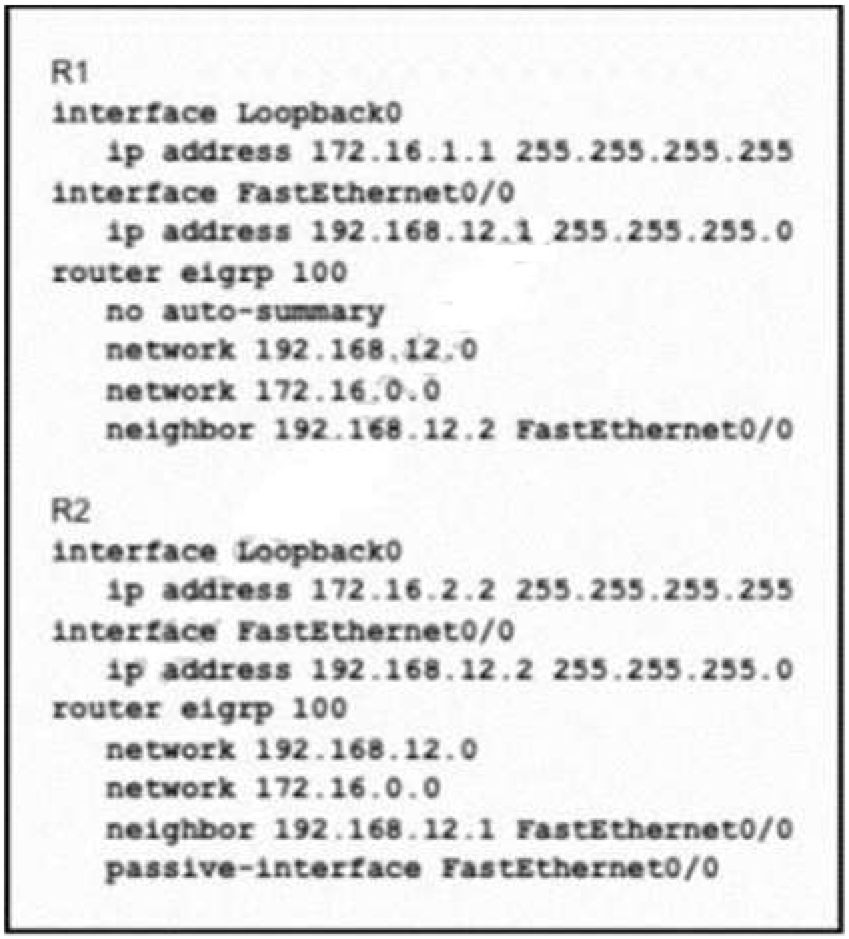
```
Configuration output:
clock timezone PST -8
clock summer-time PDT recurring
service timestamps debug datetime
service timestamps log datetime
logging buffered 16000 debugging
ntp clock-period 17179272
ntp server 161.181.92.152

Debug output:
router#show clock
14:12:26.312 PDT Thu Apr 27 2019
router#config t
Enter configuration commands, one per line. End with CNTL/Z.
router(config)#exit

router#
Apr 27 21:12:28: %SYS-5-CONFIG_I: Configured from console by vty0
```

A. Enter the service timestamps log datetime localtime global command.
B. Enter the service timestamps log datetime synchronize global command.
C. Enter the service timestamps log datetime console global command.
D. Enter the service timestamps log datetime clock-period global command

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
If a router is configured to get the time from a Network Time Protocol (NTP) server, the times in the router's log entries may be different from the time on the systemclock if the [localtime] option is not in the service timestamps log command. To solve this issue, add the [localtime] option to the service timestamps log command. Thetimes should now be synchronized between the system clock and the log message timestamps.

QUESTION 139
Refer to the exhibit. R1 and R2 cannot establish an EIGRP adjacency. Which action establishes EIGRP adjacency?



```
R1
interface Loopback0
   ip address 172.16.1.1 255.255.255.255
interface FastEthernet0/0
   ip address 192.168.12.1 255.255.255.0
router eigrp 100
   no auto-summary
   network 192.168.12.0
   network 172.16.0.0
   neighbor 192.168.12.2 FastEthernet0/0

R2
interface Loopback0
   ip address 172.16.2.2 255.255.255.255
interface FastEthernet0/0
   ip address 192.168.12.2 255.255.255.0
router eigrp 100
   network 192.168.12.0
   network 172.16.0.0
   neighbor 192.168.12.1 FastEthernet0/0
   passive-interface FastEthernet0/0
```

A. Remove the current autonomous system number on one of the routers and change to a different value.
B. Remove the passive-interface command from the R2 configuration so that it matches the R1 configuration.
C. Add the no auto-summary command to the R2 configuration so that it matches the R1 configuration.
D. Add the passive-interface command to the R1 configuration so that it matches the R2 configuration.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 140
Which two components are needed for a service provider to utilize the LVPN MPLS application? (Choose two.)

A. The P routers must be configured for MP-iBGP toward the PE routers
B. The P routers must be configured with RSVP.
C. The PE routers must be configured for MP-iBGP with other PE routers
D. The PE routers must be configured for MP-eBGP to connect to CEs
E. The P and PE routers must be configured with LDP or RSVP

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
+ IGP: OSPF, EIGRP, IS-IS on core facing and core links+ RSVP and/or LDP on core and/or core facing links ->
+ MP-iBGP on PE devices (for MPLS services), MP-BGP: Multiprotocol Border Gateway Protocol, used for MPLS L3 VPN ->

QUESTION 141
An engineer configured two routers connected to two different service providers using BGP with default attributes. One of the links is presenting high delay, which causes slowness in the network. Which BGP attribute must the engineer configure to avoid using the high-delay ISP link if the second ISP link is up?

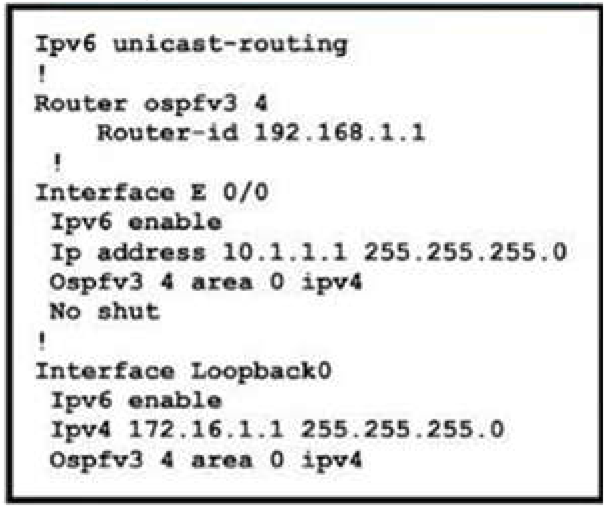
A. LOCAL_PREF
B. MED
C. WEIGHT
D. AS-PATH

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:

QUESTION 142
Refer to the exhibit. The network administrator configured the branch router for IPv6 on the E0/0 interface. The neighboring router is fully configured to meet requirements, but the neighbor relationship is not coming up. Which action fixes the problem on the branch router to bring the IPv6 neighbors up?



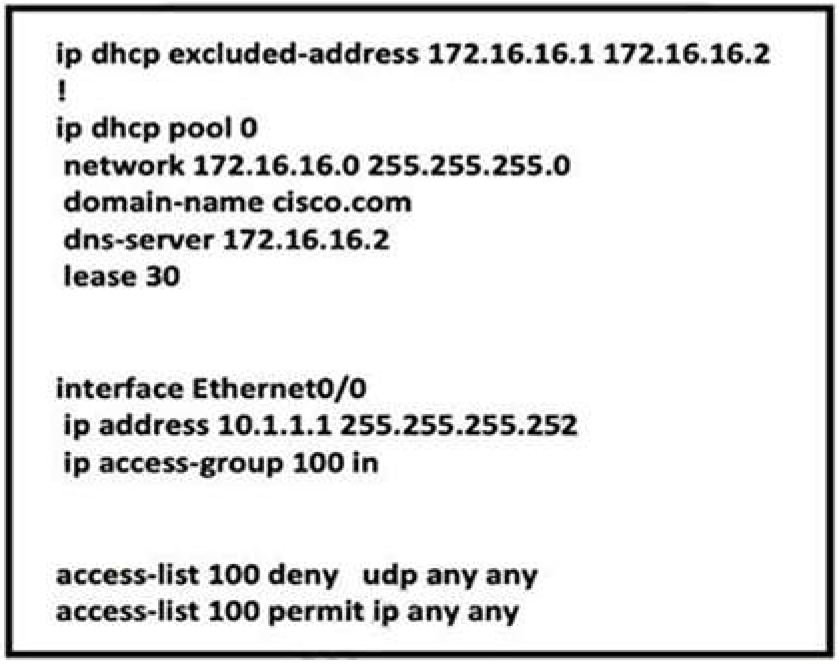
```
Ipv6 unicast-routing
!
Router ospfv3 4
    Router-id 192.168.1.1
 !
Interface E 0/0
 Ipv6 enable
 Ip address 10.1.1.1 255.255.255.0
 Ospfv3 4 area 0 ipv4
 No shut
!
Interface Loopback0
 Ipv6 enable
 Ipv4 172.16.1.1 255.255.255.0
 Ospfv3 4 area 0 ipv4
```

A. Enable the IPv4 address family under the router ospfv3 4 process by using the address-family ipv4 unicast command
B. Disable IPv6 on the E0/0 interface using the no ipv6 enable command
C. Enable the IPv4 address family under the E0/0 interface by using the address-family ipv4 unicast command
D. Disable OSPF for IPv4 using the no ospfv3 4 area 0 ipv4 command under the E0/0 interface

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Once again, Cisco changed the IOS configuration commands required for OSPFv3 configuration. The new OSPFv3 configuration uses the "ospfv3" keyword instead of the earlier "ipv6 router ospf" routing process command and "ipv6 ospf" interface commands.
The Open Shortest Path First version 3 (OSPFv3) address families feature enables both IPv4 and IPv6 unicast traffic to be supported. With this feature, users may have two processes per interface, but only one process per address family (AF).

QUESTION 143
Refer to Exhibit. Which two configurations allow clients to get dynamic ip addresses assigned?



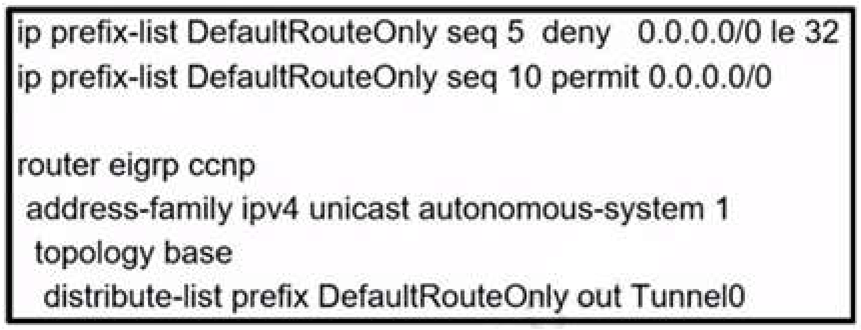
```
ip dhcp excluded-address 172.16.16.1 172.16.16.2
!
ip dhcp pool 0
 network 172.16.16.0 255.255.255.0
 domain-name cisco.com
 dns-server 172.16.16.2
 lease 30


interface Ethernet0/0
 ip address 10.1.1.1 255.255.255.252
 ip access-group 100 in


access-list 100 deny   udp any any
access-list 100 permit ip any any
```

A. Configure access-list 100 permit udp any any eq 61 as the first line
B. Configure access-list 100 permit udp any any eq 86 as the first line
C. Configure access-list 100 permit udp any any eq 68 as the first line
D. Configure access-list 100 permit udp any any eq 69 as the first line
E. Configure access-list 100 permit udp any any eq 67 as the first line

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
A DHCP server that receives a DHCPDISCOVER message may respond with a DHCPOFFER message on UDP port 68 (BootP client).
...
In the event that the DHCP server is not on the local subnet, the DHCP server will send the DHCPOFFER, as a unicast packet, on UDP port 67, back to the DHCP/BootPRelay Agent from which the DHCPDISCOVER came.

QUESTION 144
Refer to the exhibit. The administrator configured route advertisement to a remote low resources rooter to use only the default route to reach any network but failed. Which action resolves this issue?



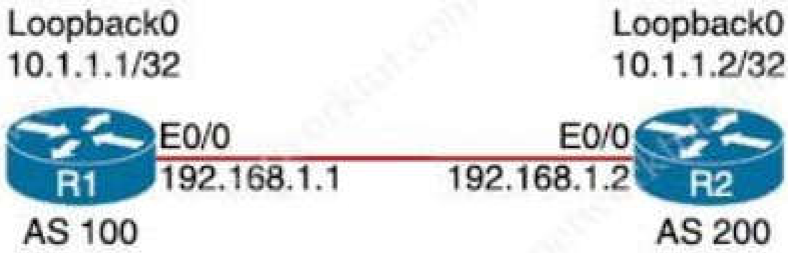
```
ip prefix-list DefaultRouteOnly seq 5  deny   0.0.0.0/0 le 32
ip prefix-list DefaultRouteOnly seq 10 permit 0.0.0.0/0

router eigrp ccnp
 address-family ipv4 unicast autonomous-system 1
  topology base
   distribute-list prefix DefaultRouteOnly out Tunnel0
```

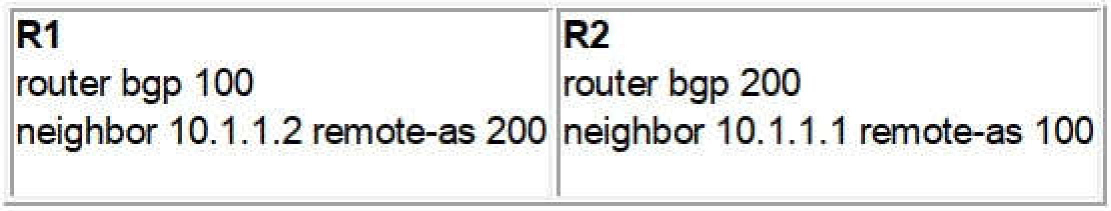
A. Change the direction of the distribute-list command from out to in.
B. Remove the line with the sequence number 5 from the prefix list.
C. Remove the prefix keyword from the distribute-list command.
D. Remove the line with the sequence number 10 from the prefix list.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 145
Refer to the exhibit. The neighbor relationship is not coming up. Which two sets of configurations bring the neighbors up? (Choose two)





R1	R2
router bgp 100 neighbor 10.1.1.2 remote-as 200	router bgp 200 neighbor 10.1.1.1 remote-as 100

A. R2
ip route 10.1.1.2 255.255.255.255 192.168.1.2
router bgp 100
neighbor 10.1.1.2 ttl-security hops 1
neighbor 10.1.1.2 update-source loopback 0

B. R1
ip route 10.1.1.2 255.255.255.255 192.168.1.2
router bgp 100
neighbor 10.1.1.2 disable-connected-check
neighbor 10.1.1.2 update-source loopback0

C. R2
ip route 10.1.1.1 255.255.255.255 192.168.1.1
router bgp 200
neighbor 10.1.1.1 disable-connected-check

```
neighbor 10.1.1.1 update-source loopback0
```

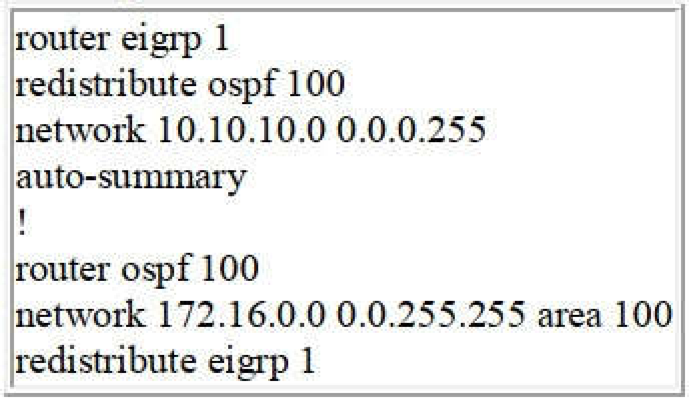
D. R2

```
ip route 10.1.1.1 255.255.255.255 192.168.1.1
router bgp 200
neighbor 10.1.1.1 ttl-security hops 1
neighbor 10.1.1.1 update-source loopback 0
```

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 146
Refer to the exhibit. Which option describes why the EIGRP neighbors of this router are not learning routes that are received from OSPF?



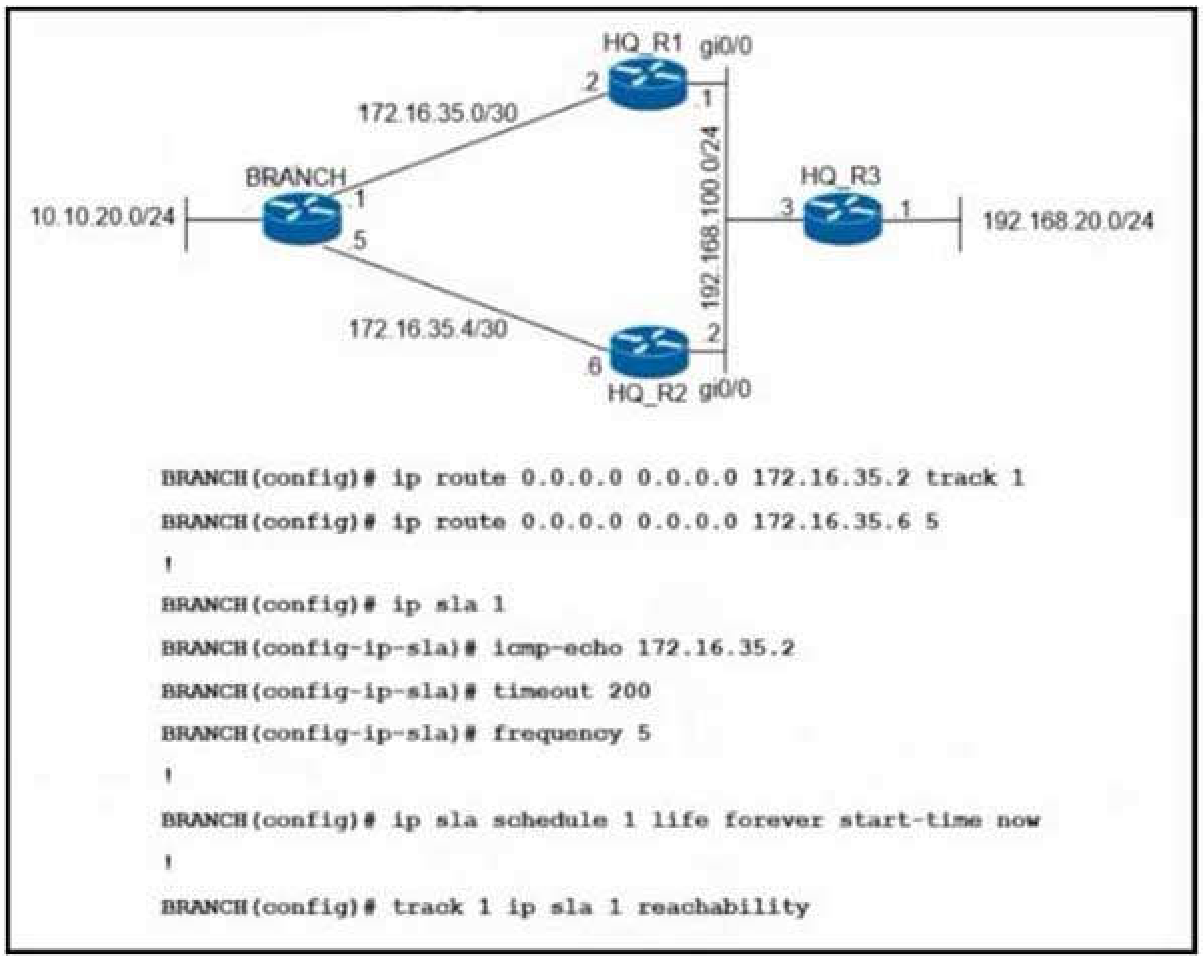
```
router eigrp 1
redistribute ospf 100
network 10.10.10.0 0.0.0.255
auto-summary
!
router ospf 100
network 172.16.0.0 0.0.255.255 area 100
redistribute eigrp 1
```

A. The subnet defined in OSPF is not part of area 0
B. Default metrics are not configured under EIGRP
C. There is no overlap in the subnets advertised
D. The routing protocols do not have the same AS number

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 147
Refer to the exhibit. An engineer has successfully set up a floating static route from the BRANCH router to the HQ network using HQ_R1 as the primary default gateway When the g0/0 goes down on HQ_R1, the branch network cannot reach the HQ network 192.168.20.0/24. Which set of configurations resolves the issue?



```
BRANCH(config)# ip route 0.0.0.0 0.0.0.0 172.16.35.2 track 1
BRANCH(config)# ip route 0.0.0.0 0.0.0.0 172.16.35.6 5
!
BRANCH(config)# ip sla 1
BRANCH(config-ip-sla)# icmp-echo 172.16.35.2
BRANCH(config-ip-sla)# timeout 200
BRANCH(config-ip-sla)# frequency 5
!
BRANCH(config)# ip sla schedule 1 life forever start-time now
!
BRANCH(config)# track 1 ip sla 1 reachability
```

A. HQ_R3(config)# ip sla responder
   HQ_R3(config)# ip sla responder icmp-echo 172.16.35.1
B. BRANCH(config)# ip sla 1
   BRANCH(config-ip-sla)# icmp-echo 192.168.100.2
C. HQ R3(config)# ip sla responder
   HQ R3(config)# ip sla responder icmp-echo 172.16.35.5
D. BRANCH(config)# ip sla 1
   BRANCH(config-ip-sla)# icmp-echo 192.168.100.1

Correct Answer: D
Section: (none)
Explanation

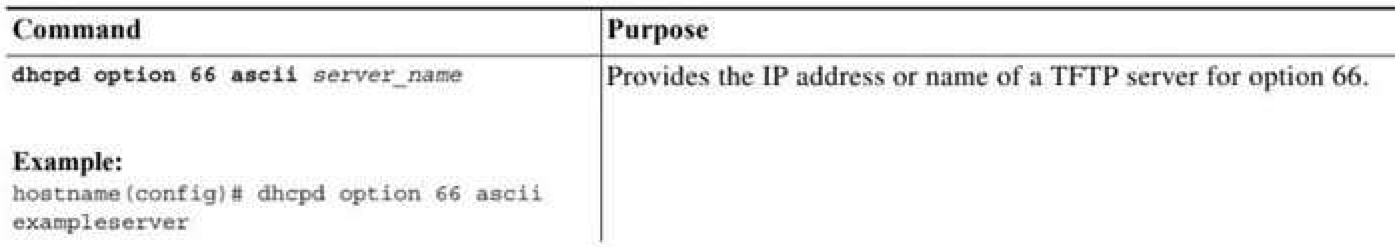
Explanation/Reference:

QUESTION 148
An engineer configured a DHCP server for Cisco IP phones to download its configuration from a TFTP server, but the IP phones failed to toad the configuration What must be configured to resolve the issue?

A. BOOTP port 67
B. DHCP option 66
C. BOOTP port 68
D. DHCP option 69

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

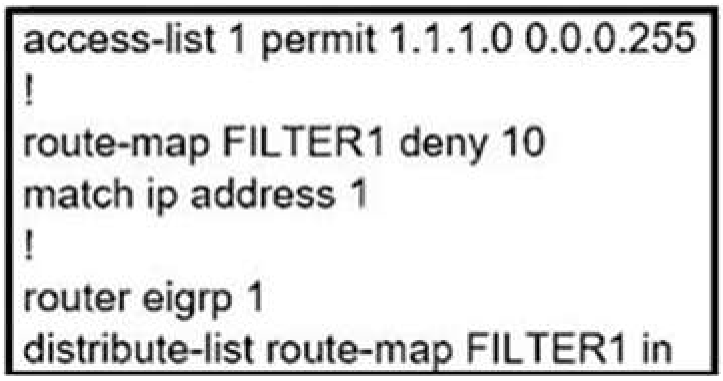


Command	Purpose
dhcpd option 66 ascii *server_name* **Example:** hostname(config)# dhcpd option 66 ascii exampleserver	Provides the IP address or name of a TFTP server for option 66.

DHCP options 3, 66, and 150 are used to configure Cisco IP Phones. Cisco IP Phones download their configuration from a TFTP server. When a Cisco IP Phone starts, ifit does not have both the IP address and TFTP server IP address preconfigured, it sends a request with option 150 or

66 to the DHCP server to obtain this information.+ DHCP option 150 provides the IP addresses of a list of TFTP servers.+ DHCP option 66 gives the IP address or the hostname of a single TFTP server.

QUESTION 149
Refer to the exhibit. Which action restores the routes from neighbors while still filtering 1.1.1.0/24?



```
access-list 1 permit 1.1.1.0 0.0.0.255
!
route-map FILTER1 deny 10
match ip address 1
!
router eigrp 1
distribute-list route-map FILTER1 in
```

A. Add a second line in the access list to permit any.
B. Modify the route map to permit the access list instead of deny it
C. Modify the access list to deny insteac of permit it.
D. Add a second sequence in the route map permit 20

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
We need to add a second sequence with the "route-map FILTER1 permit 20" (with no match conditions) so that all other conditions are permitted.

QUESTION 150
A DMVPN single hub topology is using IPsec + mGRE with OSPF. What should be configured on the hub to ensure it will be the designated router?

A. tunnel interface of the hub with ip nhrp ospf dr
B. OSPF priority to 0
C. route map to set the metrics of learned routes to 110
D. OSPF priority greater than 1

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
By default, the priority is 1 on all routers so we can set the OSPF priority of the hub to a value which is greater than 1 to make sure it would become the DR.

QUESTION 151
An engineer configured policy-based routing for a destination IP address that does not exist in the routing table. How is the packet treated through the policy for configuring the set ip default nexthop command?

A. Packets are not forwarded to the specific next hop.
B. Packets are forwarded based on the routing table.
C. Packets are forwarded based on a static route.
D. Packets are forwarded to the specific next hop.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The set ip default next-hop command verifies the existence of the destination IP address in the routing table, and...+ if the destination IP address exists, the command does not policy route the packet, but forwards the packet based on the routing table.+ if the destination IP address does not exist, the command policy routes the packet by sending it to the specified next hop.

QUESTION 152
What is the minimum time gap required by the local system before putting a BFD control packet on the wire?

A. Detect Mult
B. Required Min Echo RX Interval

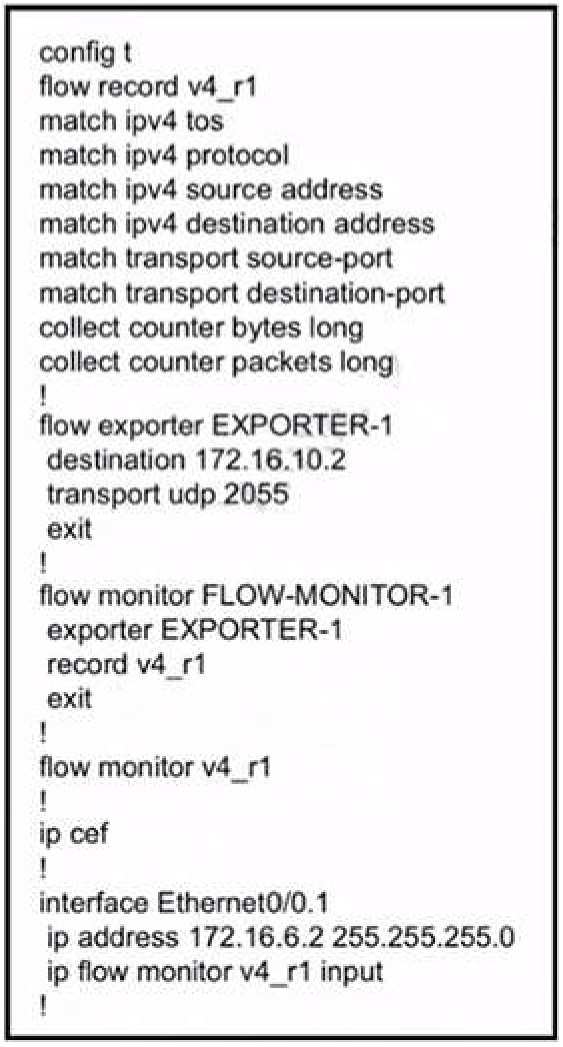
C. Desired Min TX Interval

D. Required Min RX Interval

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Desired Min TX Interval: This is the minimum interval, in microseconds, that the local system would like to use when transmitting BFD Control packets, less any jitterapplied. The value zero is reserved.
Required Min Echo RX Interval: This is the minimum interval, in microseconds, between received BFD Echo packets that this system is capable of supporting, less anyjitter applied by the sender. If this value is zero, the transmitting system does not support the receipt of BFD Echo packets.

QUESTION 153
Refer to the exhibit. The remote server is failing to receive the NetFlow data. Which action resolves the issue?



```
config t
flow record v4_r1
match ipv4 tos
match ipv4 protocol
match ipv4 source address
match ipv4 destination address
match transport source-port
match transport destination-port
collect counter bytes long
collect counter packets long
!
flow exporter EXPORTER-1
 destination 172.16.10.2
 transport udp 2055
 exit
!
flow monitor FLOW-MONITOR-1
 exporter EXPORTER-1
 record v4_r1
 exit
!
flow monitor v4_r1
!
ip cef
!
interface Ethernet0/0.1
 ip address 172.16.6.2 255.255.255.0
 ip flow monitor v4_r1 input
!
```

A. Modify the flow transport command transport udp 2055 to move under flow monitor profile.

B. Modify the interface command to ip flow monitor FLOW-MONITOR-1 input.

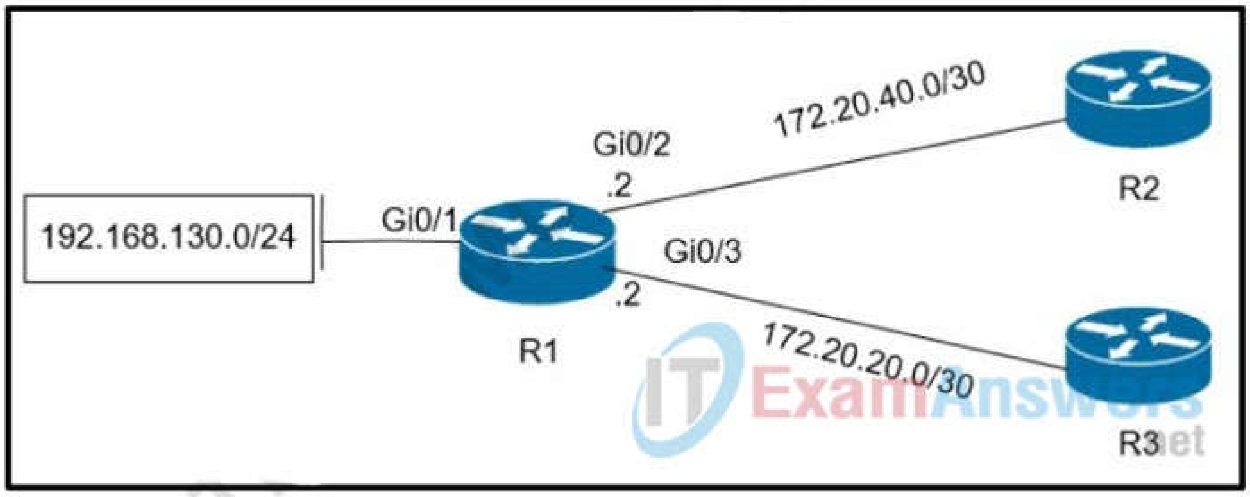
C. Modify the udp port under flow exporter profile to Ip transport udp 4739.

D. Modify the flow record command record v4_r1 to move under flow exporter profile.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
From the exhibit we see there are two flow monitors: the first one "FLOW-MONITOR-1" has been configured correctly but the second one "v4_r1" was left empty andinterface E0/0.1 is using it. So the remote server does not receive any NetFlow data.

QUESTION 154
Refer to the exhibit. Which configuration configures a policy on R1 to forward any traffic that is sourced from the 192.168.130.0/24 network to 17.20.20.0/30 network?



A. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/2
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.20.2
B. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/1
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.40.2
C. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/2
   ip policy route-map test
   ! r
   oute-map test permit 10
   match ip address 1
   set ip next-hop 172.20.20.1
D. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/1
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.40.1
E. access-list 1 permit 192.168.130.0 0.0.0.255
   !
   interface Gi0/1
   ip policy route-map test
   !
   route-map test permit 10
   match ip address 1
   set ip next-hop 172.20.20.1

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 155
What are two MPLS label characteristics? (Choose two.)

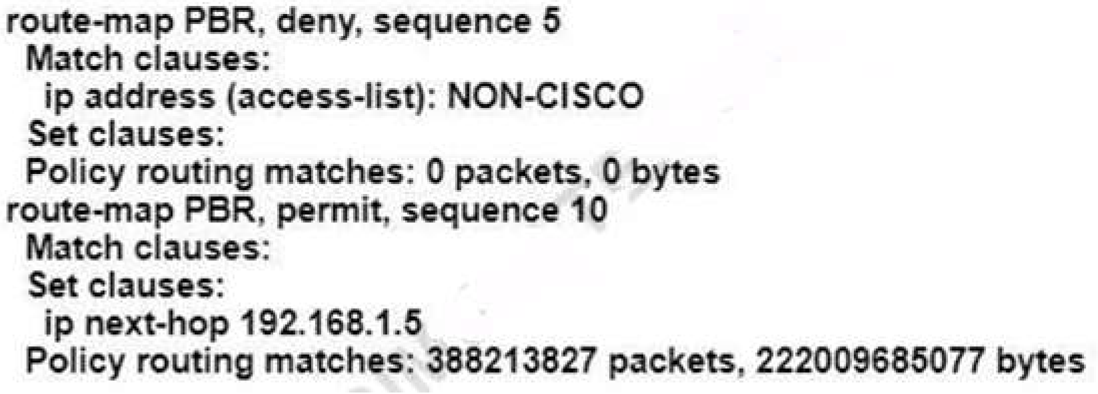
A. The label edge router swaps labels on the received packets.
B. Labels are imposed in packets after the Layer 3 header.
C. LDP uses TCP for reliable delivery of information.
D. An MPLS label is a short identifier that identifies a forwarding equivalence class.

E. A maximum of two labels can be imposed on an MPLS packet.

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 156
An engineer configured access list NON-CISCO in a policy to influence routes. What are the two effects of this route map configuration? (Choose two.)



```
route-map PBR, deny, sequence 5
  Match clauses:
    ip address (access-list): NON-CISCO
  Set clauses:
  Policy routing matches: 0 packets, 0 bytes
route-map PBR, permit, sequence 10
  Match clauses:
  Set clauses:
    ip next-hop 192.168.1.5
  Policy routing matches: 388213827 packets, 222009685077 bytes
```

A. Packets are not evaluated by sequence 10.
B. Packets are evaluated by sequence 10.
C. Packets are forwarded to the default gateway.
D. Packets are forwarded using normal route lookup.
E. Packets are dropped by the access list.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:
https://www.cisco.com/c/en/us/support/docs/ip/ip-routed-protocols/47121-pbr-cmds-ce.html

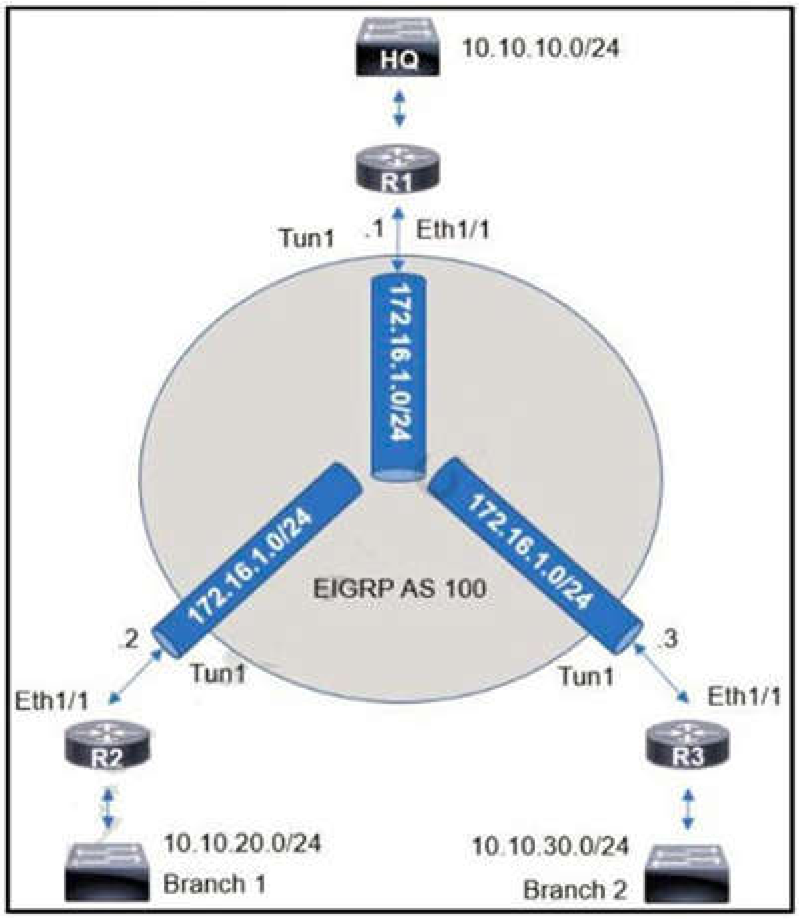
QUESTION 157
What are two characteristics of VRF instance? (Choose two.)

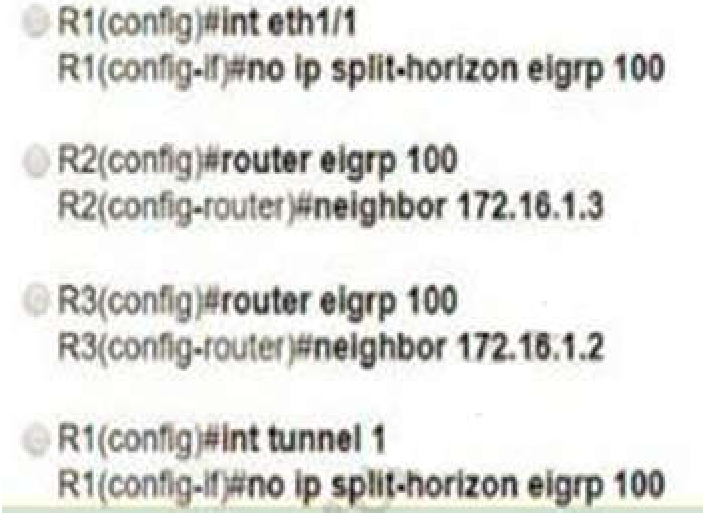
A. All VRFs share customers routing and CEF tables .
B. An interface must be associated to one VRF.
C. Each VRF has a different set of routing and CEF tables
D. It is defined by the VPN membership of a customer site attached to a P device.
E. A customer site can be associated to different VRFs

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 158
An engineer sets up a DMVPN connection to connect branch 1 and branch 2 to HQ branch 1 and branch 2 cannot communicate with each other. Which change must be made to resolve this issue?





○ R1(config)#**int eth1/1**
R1(config-if)#**no ip split-horizon eigrp 100**

○ R2(config)#**router eigrp 100**
R2(config-router)#**neighbor 172.16.1.3**

○ R3(config)#**router eigrp 100**
R3(config-router)#**neighbor 172.16.1.2**

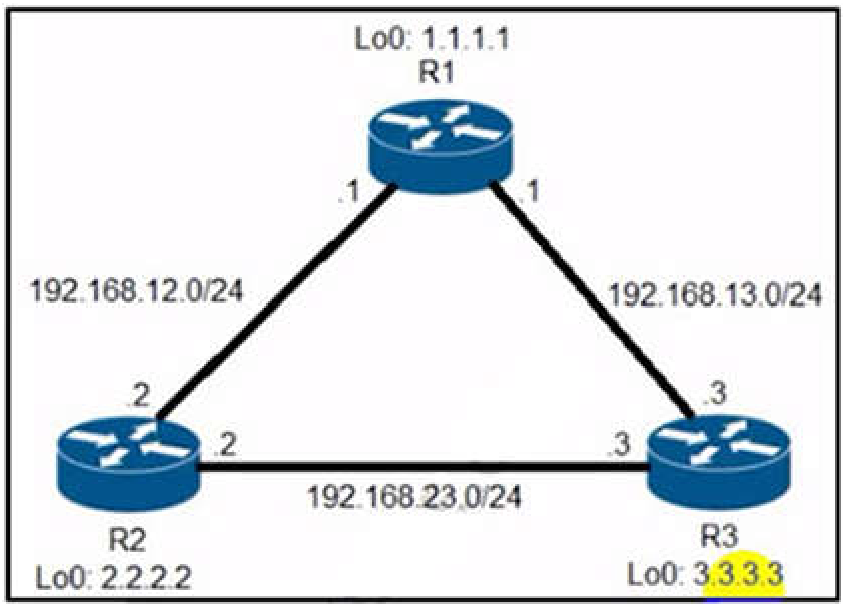
○ R1(config)#**int tunnel 1**
R1(config-if)#**no ip split-horizon eigrp 100**

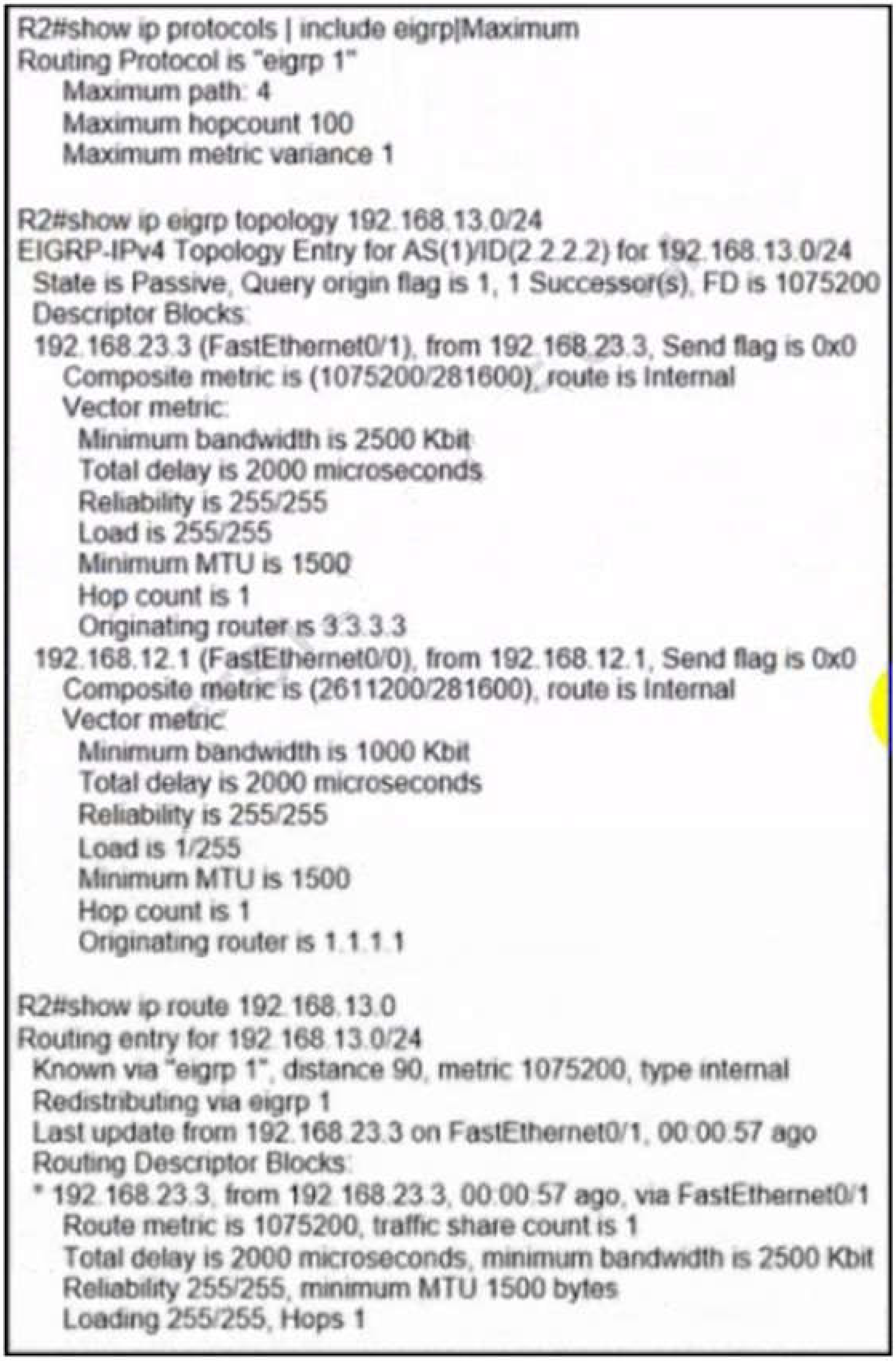
A. Option A
B. Option B
C. Option C
D. Option D

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
R1(config)#int tunnel 1
R1(config-if) no ip split-horizon eigrp 100

QUESTION 159
Refer to the exhibit. R2 has two paths to reach 192.168.13.0/24. but traffic is sent only through R3. Which action allows traffic to use both paths?


Lo0: 1.1.1.1
R1
.1
.1
192.168.12.0/24
192.168.13.0/24
.2
.3
.2
.3
192.168.23.0/24
R2
Lo0: 2.2.2.2
R3
Lo0: 3.3.3.3



```
R2#show ip protocols | include eigrp|Maximum
Routing Protocol is "eigrp 1"
    Maximum path: 4
    Maximum hopcount 100
    Maximum metric variance 1

R2#show ip eigrp topology 192.168.13.0/24
EIGRP-IPv4 Topology Entry for AS(1)/ID(2.2.2.2) for 192.168.13.0/24
  State is Passive, Query origin flag is 1, 1 Successor(s), FD is 1075200
  Descriptor Blocks:
  192.168.23.3 (FastEthernet0/1), from 192.168.23.3, Send flag is 0x0
    Composite metric is (1075200/281600), route is Internal
    Vector metric:
      Minimum bandwidth is 2500 Kbit
      Total delay is 2000 microseconds
      Reliability is 255/255
      Load is 255/255
      Minimum MTU is 1500
      Hop count is 1
      Originating router is 3.3.3.3
  192.168.12.1 (FastEthernet0/0), from 192.168.12.1, Send flag is 0x0
    Composite metric is (2611200/281600), route is Internal
    Vector metric:
      Minimum bandwidth is 1000 Kbit
      Total delay is 2000 microseconds
      Reliability is 255/255
      Load is 1/255
      Minimum MTU is 1500
      Hop count is 1
      Originating router is 1.1.1.1

R2#show ip route 192.168.13.0
Routing entry for 192.168.13.0/24
  Known via "eigrp 1", distance 90, metric 1075200, type internal
  Redistributing via eigrp 1
  Last update from 192.168.23.3 on FastEthernet0/1, 00:00:57 ago
  Routing Descriptor Blocks:
  * 192.168.23.3, from 192.168.23.3, 00:00:57 ago, via FastEthernet0/1
    Route metric is 1075200, traffic share count is 1
    Total delay is 2000 microseconds, minimum bandwidth is 2500 Kbit
    Reliability 255/255, minimum MTU 1500 bytes
    Loading 255/255, Hops 1
```

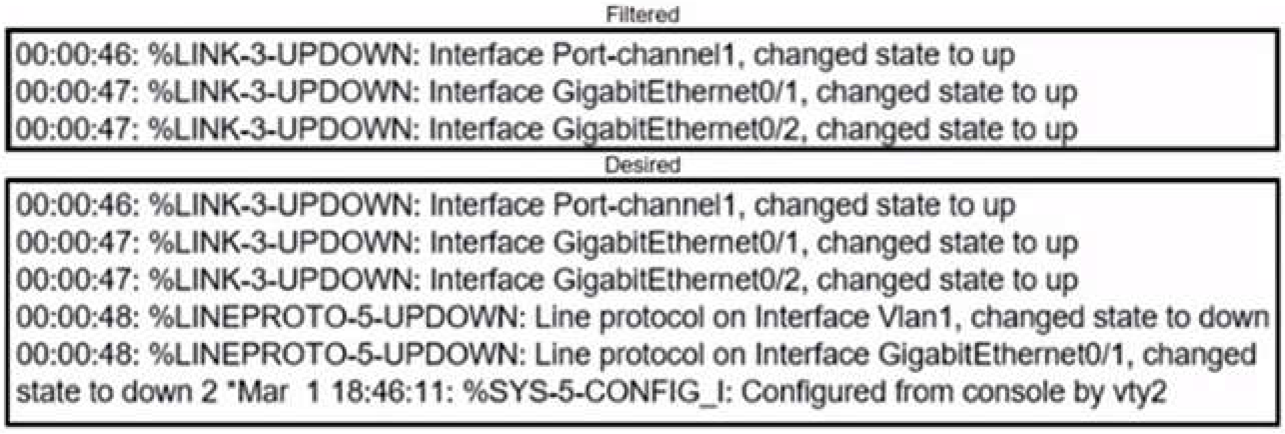
A. Configure the bandwidth 2000 command under interface FastEthernet0/0 on R2.
B. Configure the variance 4 command under the EIGRP process on R2.
C. Configure the delay 1 command under interface FastEthernet0/0 on R2.
D. Configure the variance 2 command under the EIGRP process on R2

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
From the output of the "show ip eigrp topology ..." command, we notice network 192.168.13.0/24 was learned via two routes:+ From 192.168.23.3 (R3) with FD = 1075200 and AD = 281600+ From 192.168.12.1 (R1) with FD = 2611200 and AD = 281600 From the output of the "show ip route ..." command, we learned that the best (and chosen) path is via 192.168.23.3 (R3).
To use both paths (called unequal cost load balancing) with EIGRP, the second path via R1 must satisfy the feasibility condition. The feasibility condition states that, theAdvertised Distance (AD) of a route must be lower than the feasible distance of the current successor route.

In this case, the second path satisfies the feasible condition as its AD (281600) is smaller than the FD (1075200) of the best path. Therefore we can configure loadbalancing with "variance" command.
In other words, EIGRP will install all paths with metric < variance * best_metric into the local routing table, provided that it meets the feasibility condition to preventrouting loop. Therefore we can calculate the variance > metric / best_metric = 2611200 / 1075200 =2.4.
So with a variance greater than 2 (and must be an integer), we can load balance traffic to network 192.168.13.0/24.

QUESTION 160
Refer to the exhibits. An engineer filtered messages based on severity to minimize log messages. After applying the filter, the engineer noticed that it filtered required messages as well. Which action must the engineer take to resolve the issue?



Filtered

```
00:00:46: %LINK-3-UPDOWN: Interface Port-channel1, changed state to up
00:00:47: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to up
00:00:47: %LINK-3-UPDOWN: Interface GigabitEthernet0/2, changed state to up
```

Desired

```
00:00:46: %LINK-3-UPDOWN: Interface Port-channel1, changed state to up
00:00:47: %LINK-3-UPDOWN: Interface GigabitEthernet0/1, changed state to up
00:00:47: %LINK-3-UPDOWN: Interface GigabitEthernet0/2, changed state to up
00:00:48: %LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to down
00:00:48: %LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1, changed
state to down 2 *Mar  1 18:46:11: %SYS-5-CONFIG_I: Configured from console by vty2
```

A. Configure syslog level 2.
B. Configure syslog level 3.
C. Configure syslog level 4.
D. Configure syslog level 5.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

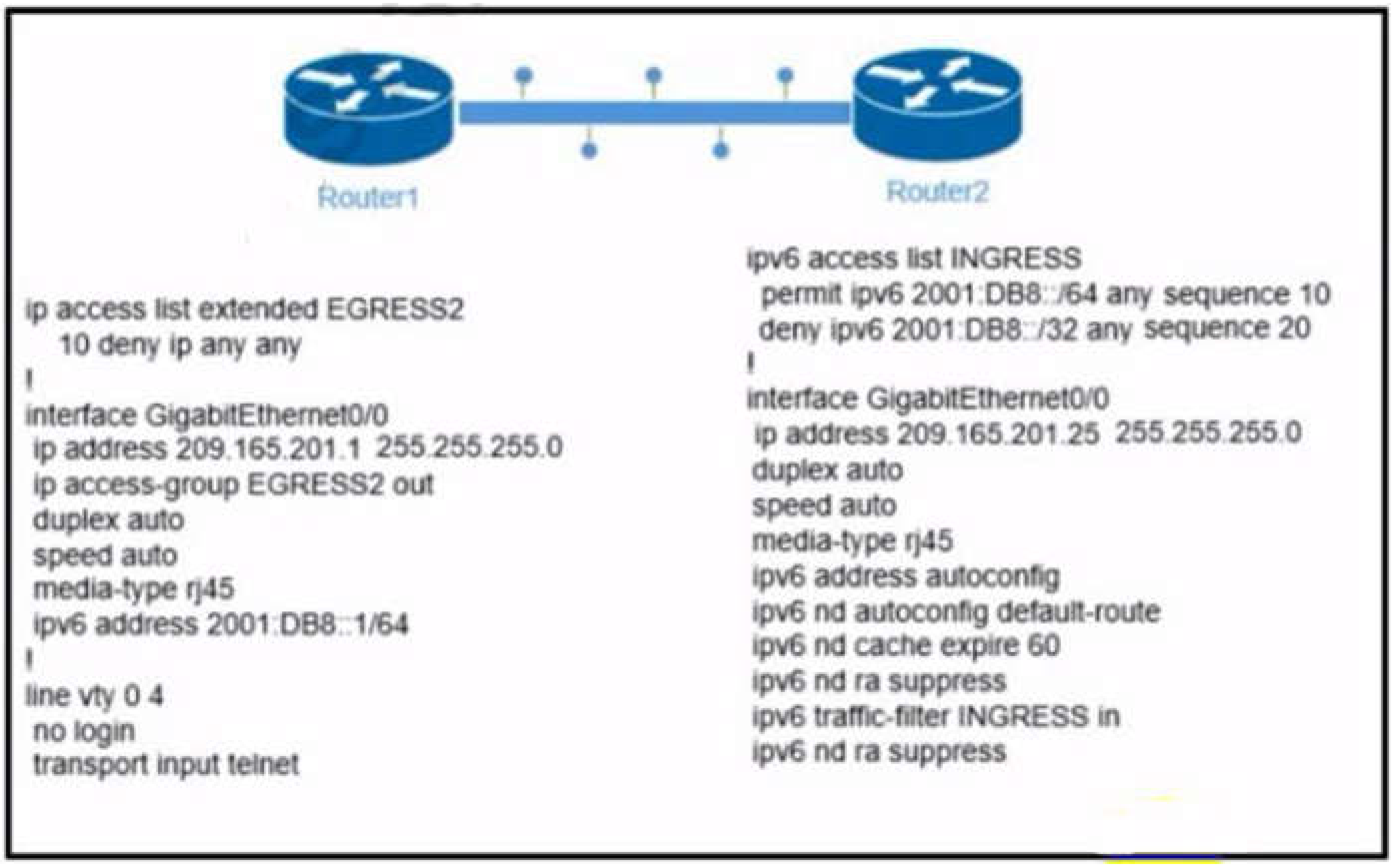
QUESTION 161
An engineer must configure a Cisco router to initiate secure connections from the router to other devices in the network but kept failing. Which two actions resolve the issue? (Choose two.)

A. Configure a source port for the SSH connection to initiate
B. Configure a TACACS+ server and enable it
C. Configure transport input ssh command on the console
D. Configure a domain name
E. Configure a crypto key to be generated

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
Follow these guidelines when configuring the switch as an SSH server or SSH client:
+ An RSA key pair generated by a SSHv1 server can be used by an SSHv2 server, and the reverse.
+ If the SSH server is running on a stack master and the stack master fails, the new stack master uses the RSA key pair generated by the previous stack master
+ If you get CLI error messages after entering the crypto key generate rsa global configuration command, an RSA key pair has not been generated. Reconfigure thehostname and domain, and then enter the crypto key generate rsa command.
+ When generating the RSA key pair, the message No host name specified might appear. If it does, you must configure a hostname by using the hostname globalconfiguration command.
+ When generating the RSA key pair, the message No domain specified might appear. If it does, you must configure an IP domain name by using the ip domain-nameglobal configuration command.
+ When configuring the local authentication and authorization authentication method, make sure that AAA is disabled on the console.

QUESTION 162
Refer to the exhibit. The engineer configured and connected Router2 to Router1. The link came up but could not establish a Telnet connection to Router1 IPv6 address of 2001:DB8::1. Which configuration allows Router2 to establish a Telnet connection to Router1?



```
ip access list extended EGRESS2
   10 deny ip any any
!
interface GigabitEthernet0/0
 ip address 209.165.201.1  255.255.255.0
 ip access-group EGRESS2 out
 duplex auto
 speed auto
 media-type rj45
 ipv6 address 2001:DB8::1/64
!
line vty 0 4
 no login
 transport input telnet
```

```
ipv6 access list INGRESS
  permit ipv6 2001:DB8::/64 any sequence 10
  deny ipv6 2001:DB8::/32 any sequence 20
!
interface GigabitEthernet0/0
 ip address 209.165.201.25  255.255.255.0
 duplex auto
 speed auto
 media-type rj45
 ipv6 address autoconfig
 ipv6 nd autoconfig default-route
 ipv6 nd cache expire 60
 ipv6 nd ra suppress
 ipv6 traffic-filter INGRESS in
 ipv6 nd ra suppress
```

A. jpv6 unicast-routing
B. permit ICMPv6 on access list INGRESS for Router2 to obtain IPv6 address
C. permit ip any any on access list EGRESS2 on Router1
D. IPv6 address on GigabitEthernet0/0

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

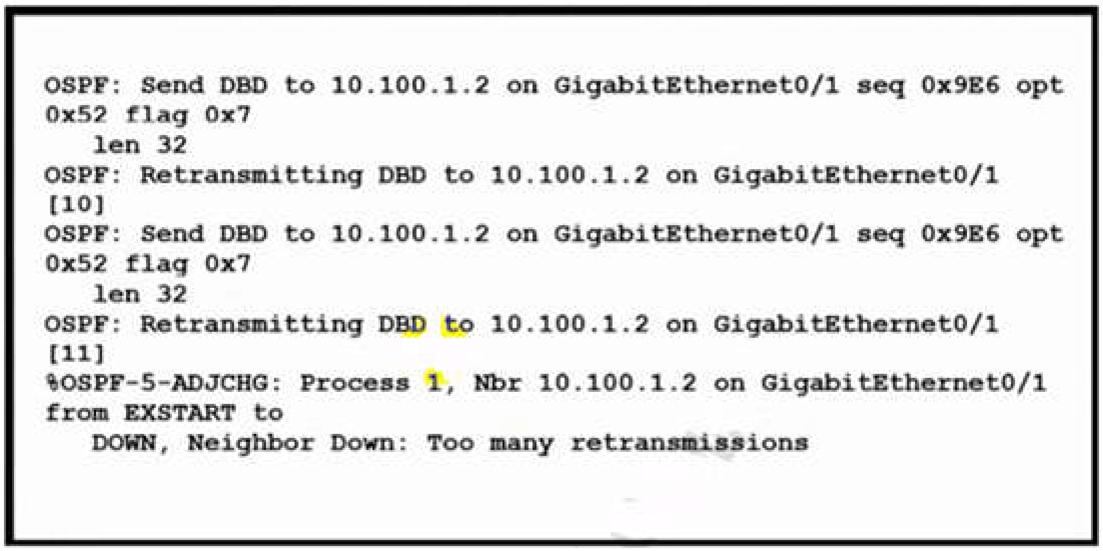
QUESTION 163
Which Ipv6 first-hop security feature helps to minimize denial of service attacks?

A. IPv6 Router Advertisement Guard
B. IPv6 Destination Guard
C. DHCPv6 Guard
D. IPv6 MAC address filtering

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The Destination Guard feature helps in minimizing denial-of-service (DoS) attacks. It performs address resolutions only for those addresses that are active on the link,and requires the FHS binding table to be populated with the help of the IPv6 snooping feature.The feature enables the filtering of IPv6 traffic based on the destinationaddress, and blocks the NDP resolution for destination addresses that are not found in the binding table. By default, the policy drops traffic coming for an unknowndestination.

QUESTION 164
Refer to the exhibit. The OSPF neighbor relationship is not coming up What must be configured to restore OSPF neighbor adjacency?



```
OSPF: Send DBD to 10.100.1.2 on GigabitEthernet0/1 seq 0x9E6 opt
0x52 flag 0x7
   len 32
OSPF: Retransmitting DBD to 10.100.1.2 on GigabitEthernet0/1
[10]
OSPF: Send DBD to 10.100.1.2 on GigabitEthernet0/1 seq 0x9E6 opt
0x52 flag 0x7
   len 32
OSPF: Retransmitting DBD to 10.100.1.2 on GigabitEthernet0/1
[11]
%OSPF-5-ADJCHG: Process 1, Nbr 10.100.1.2 on GigabitEthernet0/1
from EXSTART to
   DOWN, Neighbor Down: Too many retransmissions
```

A. OSPF on the remote router
B. matching hello timers
C. use router ID
D. matching mtu values

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 165
In which two ways does the IPv6 First-Hop Security Binding Table operate? (Choose two.)

A. by the recovery mechanism to recover the binding table in the event of a device reboot
B. by IPv6 routing protocols to securely build neighborships without the need of authentication
C. by IPv6 HSRP to make sure neighbors are authenticated before being used as gateways
D. by various IPv6 guard features to validate the data link layer address
E. by storing hashed keys for IPsec tunnels for the built-in IPsec features

Correct Answer: AD
Section: (none)
Explanation

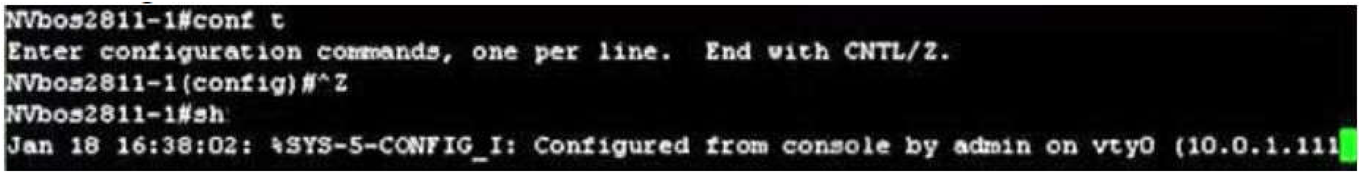
Explanation/Reference:
Overview of the IPv6 First-Hop Security Binding Table A database table of IPv6 neighbors connected to the device is created from information sources such as NDP snooping. This database, or binding table, is used by variousIPv6 guard features to validate the link-layer address (LLA), the IPv4 or IPv6 address, and the prefix binding of the neighbors to prevent spoofing and redirect attacks.
IPv6 First-Hop Security Binding Table Recovery MechanismThe IPv6 first-hop security binding table recovery mechanism enables the binding table to recover in the event of a device reboot.

QUESTION 166
An engineer is troubleshooting on the console session of a router and turns on multiple debug commands. The console screen is filled with scrolling debug messages that none of the commands can be verified if entered correctly or display any output. Which action allows the engineer to see entered console commands while still continuing the analysis of the debug messages?

A. Configure the logging synchronous command
B. Configure the no logging console debugging command globally
C. Configure the logging synchronous level all command
D. Configure the term no mon command globally

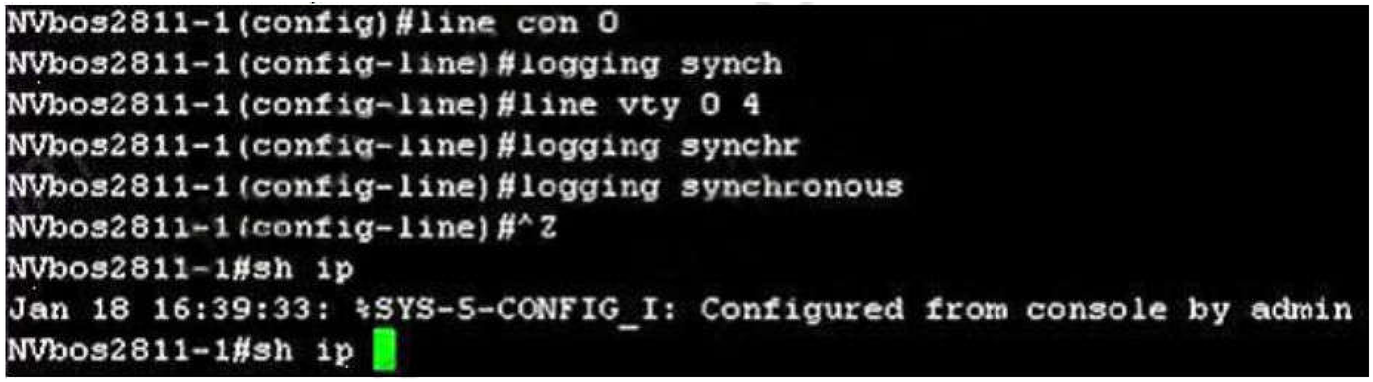
Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Let's see how the "logging synchronous" command affect the typing command:
Without this command, a message may pop up and you may not know what you typed if that message is too long. When trying to erase (backspace) your command, you realize you are erasing the message instead.



```
NVbos2811-1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
NVbos2811-1(config)#^Z
NVbos2811-1#sh
Jan 18 16:38:02: %SYS-5-CONFIG_I: Configured from console by admin on vty0 (10.0.1.111
```

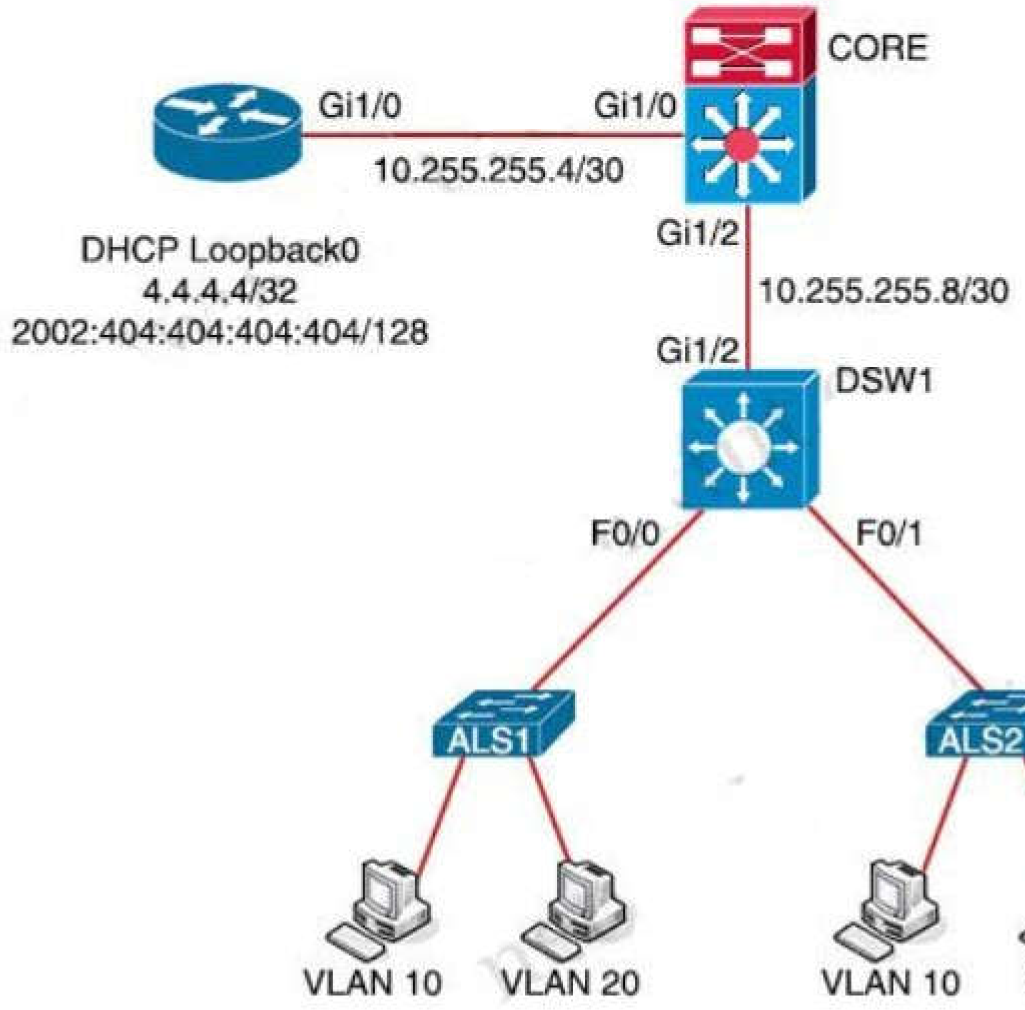
With this command enabled, when a message pops up you will be put to a new line with your typing command which is very



```
NVbos2811-1(config)#line con 0
NVbos2811-1(config-line)#logging synch
NVbos2811-1(config-line)#line vty 0 4
NVbos2811-1(config-line)#logging synchr
NVbos2811-1(config-line)#logging synchronous
NVbos2811-1(config-line)#^Z
NVbos2811-1#sh ip
Jan 18 16:39:33: %SYS-5-CONFIG_I: Configured from console by admin
NVbos2811-1#sh ip
```

QUESTION 167

Refer to the exhibit. Router DHCP is configured to lease IPv4 and IPv6 addresses to clients on ALS1 and ALS2. Clients on ALS2 receive IPv4 and IPv6 addresses. Clients on ALS1 receive IPv4 addresses. Which configuration on DSW1 allows clients on ALS1 to receive IPv6 addresses?



DSW1#**sh run int f0/0**
Building configuration...
Current configuration : 174 bytes
!
interface FastEthernet 0/0
ip address 10.4.10.1 255.255.255.0
ip helper-address 4.4.4.4
duplex auto
speed auto
ipv6 address 2002:A04:A01::A04:A01/120
ipv6 enable
end

A. DSW1(dhcp-config)# default-router 2002:A04:A01::A04:A01
B. DSW1(config)# ipv6 dhcp relay destination 2002:404:404::404:404 GigabitEthernet 1/2

C. DSW1(config)#ipv6 route 2002:404:404::404:404/128 FastEthernet 1/0
D. DSW1(config-if)# ipv6 helper address 2002:404:404::404:404

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

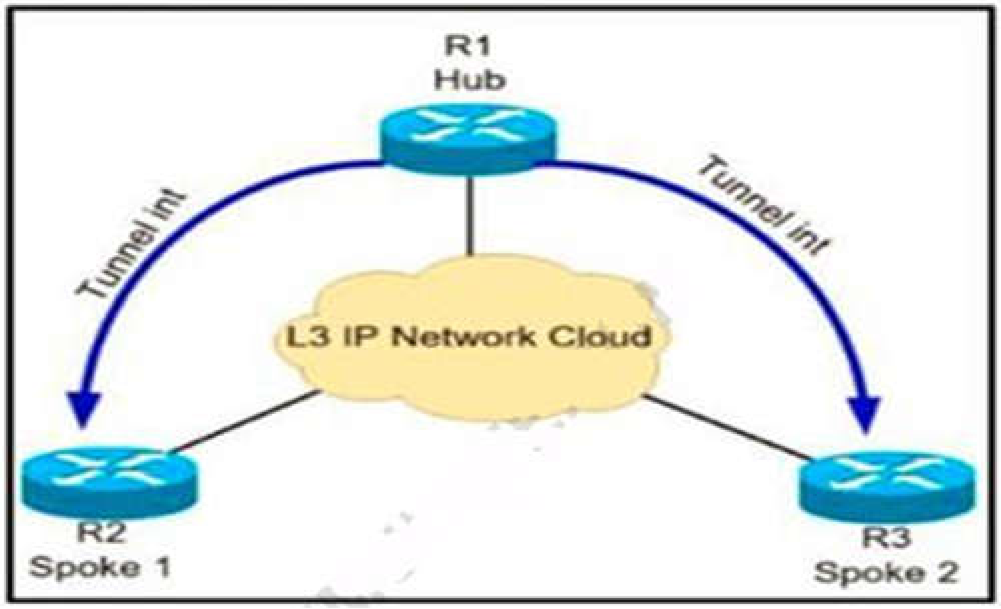
QUESTION 168
What are two purposes of using IPv4 and VPNv4 address-family configurations in a Layer 3 MPLS VPN? (Choose two.)

A. RD is prepended to the IPv4 route to make it unique.
B. The VPNv4 address consists of a 64-bit route distinguisher that is prepended to the IPv4 prefix.
C. MP-BGP is used to allow overlapping IPv4 addresses between customers to advertise through the network.
D. The IPv4 address is needed to tag the MPLS label.
E. The VPNv4 address is used to advertise the MPLS VPN label.

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
VPNv4 address consists of 64-bit Route Distinguisher (RD) prepended to IPv4 prefix. This is to make routes unique that are in different VRFs.

QUESTION 169
Refer to Exhibit. A network administrator has successfully configured DMVPN topology between a hub and two spoke routers. Which two configuration commands should establish direct communications between spoke 1 and spoke 2 without going through the hub? (Choose two).

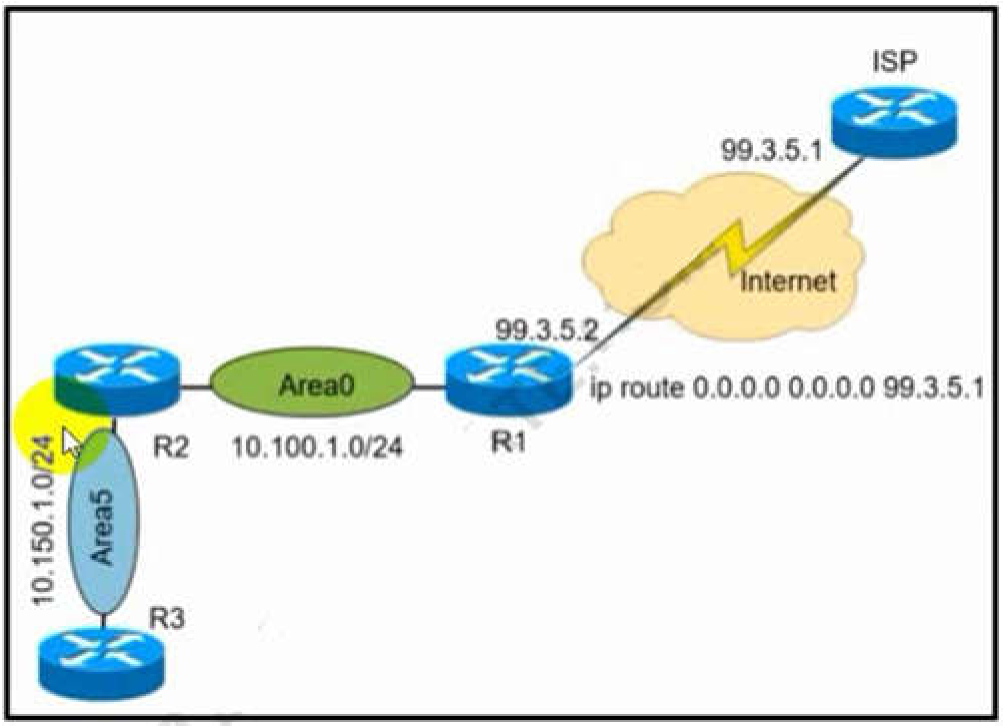


A. At the hub router, configure the ip nhrp shortcut command.
B. At the spoke routers, configure the ip nhrp spoke-tunnel command.
C. At the hub router, configure the ip nhrp redirect command
D. At the spoke routers, configure the ip nhrp shortcut command.
E. At the hub router, configure the ip nhrp spoke-tunnel command

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
To configure Spoke to Spoke communication we can configure DMVPN Phase II or Phase III. But in Phase II, the first few packets would go through Hub. In order tototally ignore the hub, we have to
use DMVPN Phase III:
DMVPN Phase III is same as Phase 2 but removes some restrictions and complexities of Phase 2. Also allows greater variety of DMVPN network designs we use:
+ ip nhrp redirect in hub: tells the initiator spoke to look for a better path to the destination spoke than through the Hub. Upon receiving the NHRP redirect message thespokes communicate with each other over the hub and they have their NHRP replies for the NHRP Resolution Requests that they sent out.
+ ip nhrp shortcut in spokes: overwrite the CEF table on the spoke. It basically overrides the next-hop value for a remote spoke network from the default initial hubtunnel IP address to the NHRP resolved remote spoke tunnel IP address)

QUESTION 170
Refer to the exhibit. A network administrator redistributed the default static route into OSPF toward all internal routers to reach to Internet. Which set of commands restores reachability to the Internet by internal routers?

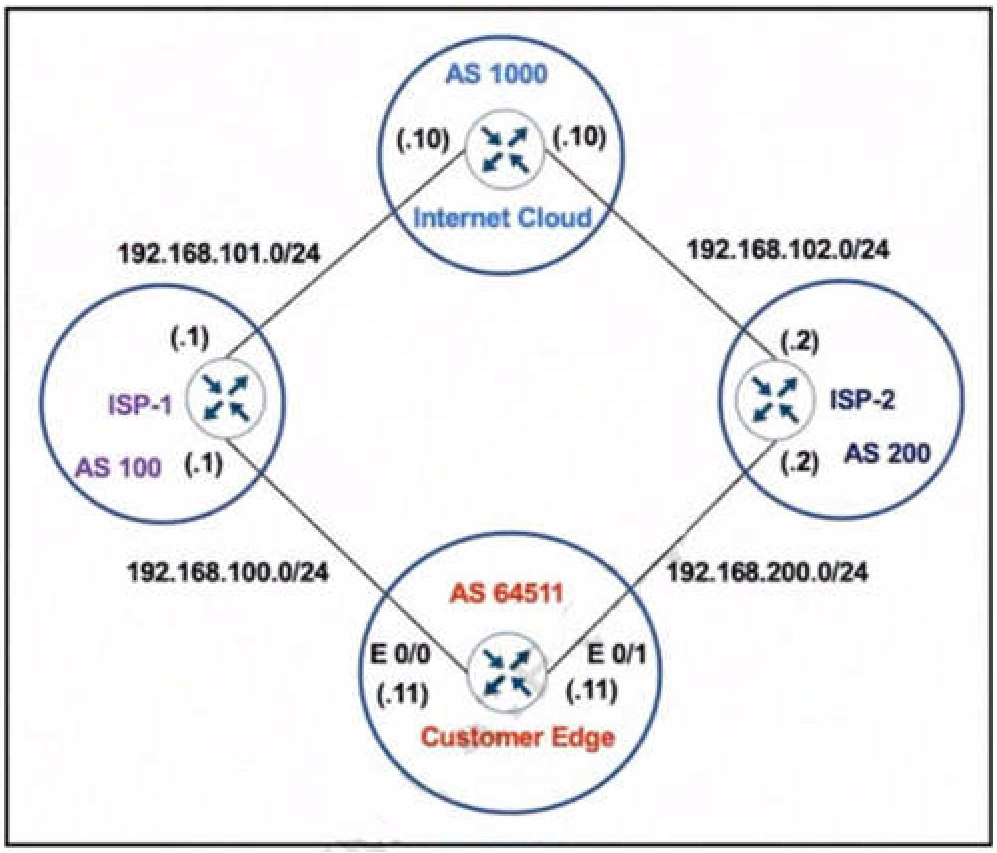


A. router ospf 1
   default-information originate
B. router ospf 1
   network 0.0.0.0 0.0.0.0 area 0
C. router ospf 1
   redistribute connected 0.0.0.0
D. router ospf 1
   redistribute static subnets

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 171
Refer to the exhibit.



The network administrator has configured the Customer Edge router (AS 64511) to send only summarized routes toward ISP-1 (AS 100) and ISP-2 (AS 200).

```
router bgp 64511
network 172.16.20.0 mask 255.255.255.0
network 172.16.21.0 mask 255.255.255.0
network 172.16.22.0 mask 255.255.255.0
network 172.16.23.0 mask 255.255.255.0
aggregate-address 172.16.20.0 255.255.252.0
```

After this configuration. ISP-1 and ISP-2 continue to receive the specific routes and the summary route. Which configuration resolves the issue?

A.
```
router bgp 64511
aggregate-address 172.16.20.0 255.255.252.0 summary-only
```

B.
```
router bgp 64511
neighbor 192.168.100.1 summary-only
neighbor 192.168.200.2 summary-only
```

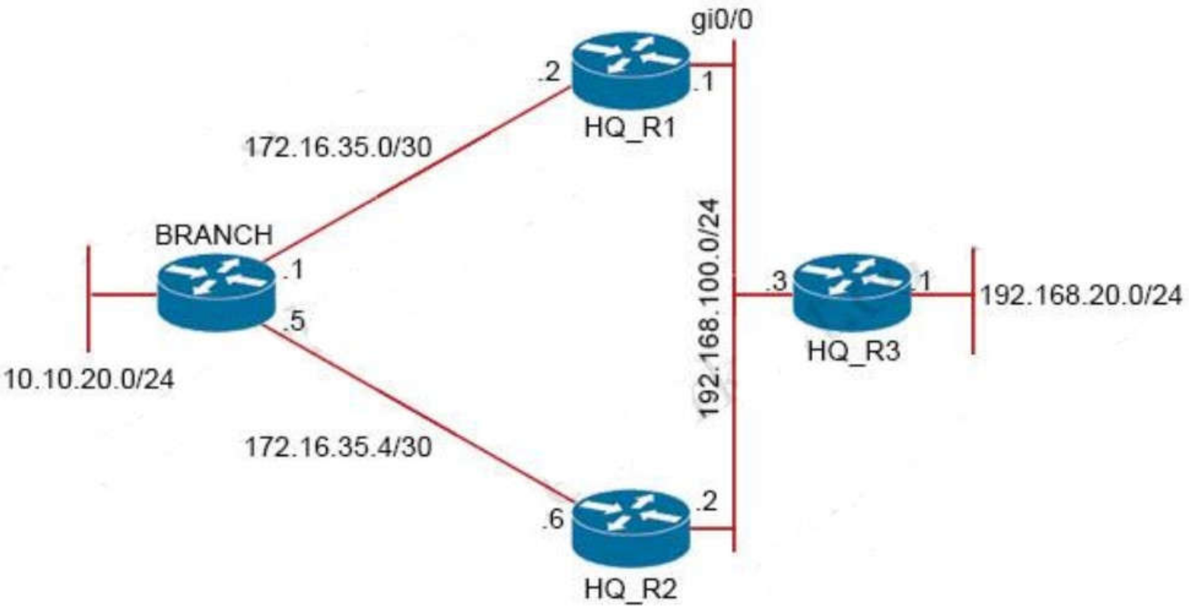
C.
```
interface E 0/0
ip bgp suppress-map BLOCK_SPECIFIC
!
interface E 0/1
ip bgp suppress-map BLOCK_SPECIFIC
!
ip prefix-list PL_BLOCK_SPECIFIC permit 172.16.20.0/22 ge 24
!
route-map BLOCK_SPECIFIC permit 10
match ip address prefix-list PL_BLOCK_SPECIFIC
```

D.
```
ip prefix-list PL_BLOCK_SPECIFIC deny 172.16.20.0/22 ge 22
ip prefix-list PL BLOCK SPECIFIC permit 172.16.20.0/22
!
route-map BLOCK_SPECIFIC permit 10
match ip address prefix-list PL_BLOCK_SPECIFIC
!
router bgp 64511
aggregate-address 172.16.20.0 255 255.252.0 suppress-map BLOCKSPECIFIC
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
When the aggregate-address command is used within BGP routing, the aggregated address is advertised, along with the more specific routes. The exception to this rule is through the use of the summary-only command. The “summary-only” keyword suppresses the more specific routes and announces only the summarized route.

QUESTION 172
Refer to Exhibit. Traffic from the branch network should route through HQ R1 unless the path is unavailable. An engineer tests this functionality by shutting down interface on the BRANCH router toward HQ_R1 router but 192.168.20.0/24 is no longer reachable from the branch router. Which set of configurations resolves the issue?



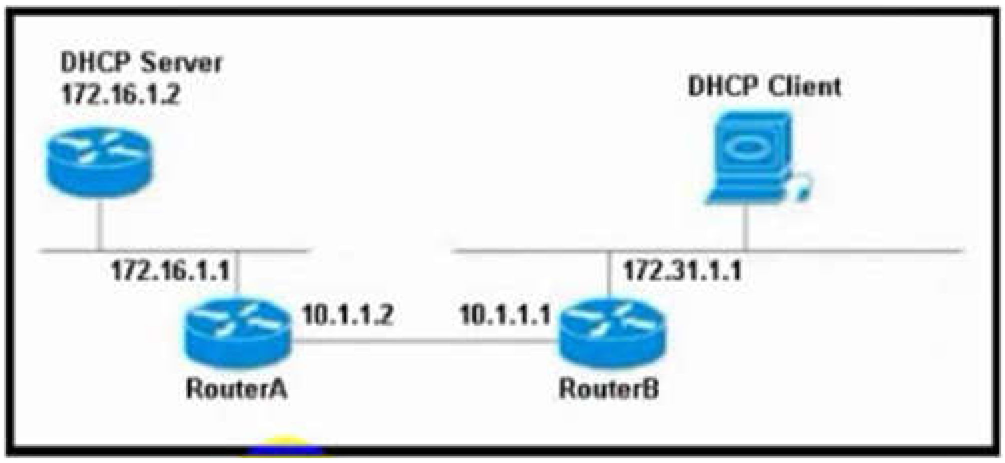
```
BRANCH(config)# ip route 0.0.0.0 0.0.0.0 172.16.35.2 track 1
BRANCH(config)# ip route 0.0.0.0 0.0.0.0 172.16.35.6 5
!
BRANCH(config)# ip sla 1
BRANCH(config-ip-sla)# icmp-echo 172.16.35.6
BRANCH(config-ip-sla)# timeout 200
BRANCH(config-ip-sla)# frequency 5
!
BRANCH(config)#ip sla schedule 1 life forever start-time now
!
BRANCH(config)# track 1 ip sla 1 reachability
```

A. HQ_R1(config)# ip sla responder
   HQ_R1(config)# ip sla responder icmp-echo 172.16.35.2
B. BRANCH(config)# ip sla 1
   BRANCH(config-ip-sla)# icmp-echo 172.16.35.1
C. HQ_R2(config)# ip sla responder
   HQ_R2(config)# ip sla responder icmp-echo 172.16.35.5
D. BRANCH(config)# ip sla 1
   BRANCH(config-ip-sla)#icmp-echo 172.16.35.2

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
In the configuration above, the engineer has made a mistake as he was tracking 172.16.35.6 (the backup path) instead of tracking the main path (172.16.35.2). Therefore,when he shut down the main path, the track 1 was still up so traffic still went through the main path -> it failed. To fix this issue, we just need to correct the tracking interface of the main path.

QUESTION 173
Refer to the exhibit.



The DHCP client is unable to receive an IP address from the DHCP server RouterB is configured as follows:

```
Interface fastethernet 0/0
description Client DHCP ID 394482431
Ip address 172 31 11 255 255.255 0
!
ip route 172.16.1.0 255 255 255.0 10.1.1.2
```

Which command is required on the fastethernet 0/0 interface of RouterB to resolve this issue?

A. RouterB(config-if)# ip helper-address 172.31.1.1
B. RouterB(config-if)# ip helper-address 255.255 255 255
C. RouterB(config-if)# ip helper-address 172.16.1.1
D. RouterB(config-if)# ip helper-address 172.16.1.2

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 174
What are two functions of MPLS Layer 3 VPNs? (Choose two.)

A. LDP and BGP can be used for Pseudowire signaling.
B. It is used for transparent point-to-multipoint connectivity between Ethernet links/sites.
C. BGP is used for signaling customer VPNv4 routes between PE nodes.

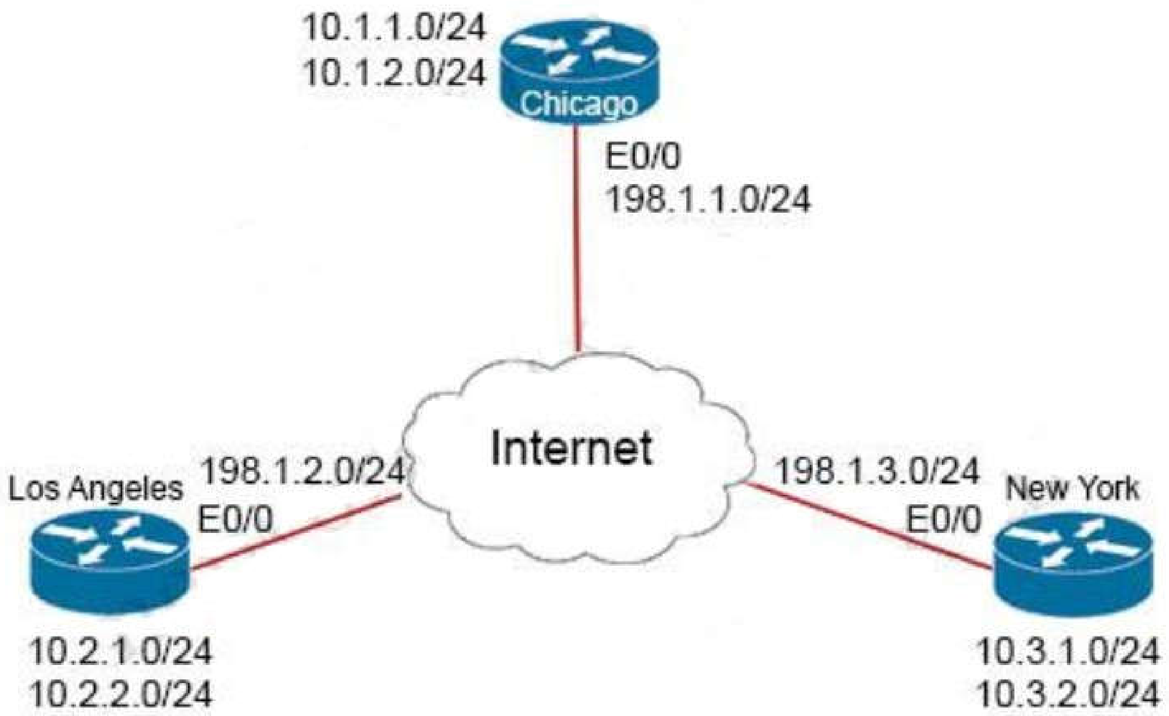
D. A packet with node segment ID is forwarded along with shortest path to destination.

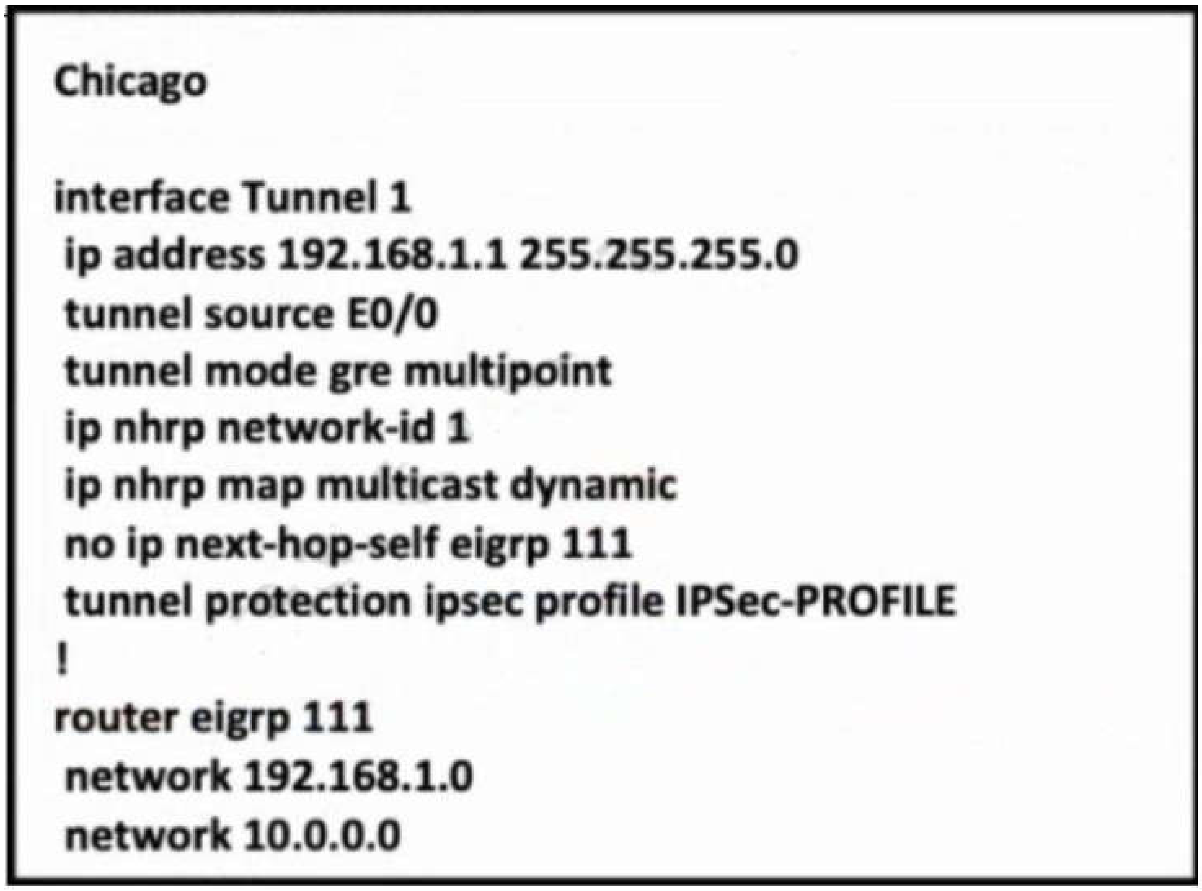
E. Customer traffic is encapsulated in a VPN label when it is forwarded in MPLS network.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
MPLS Layer-3 VPNs provide IP connectivity among CE sites
* MPLS VPNs enable full-mesh, hub-andspoke, and hybrid IP connectivity
* CE sites connect to the MPLS network via IP peering across PE-CE links
* MPLS Layer-3 VPNs are implemented via VRFs on PE edge nodes
* VRFs providing customer routing and forwarding segmentation
* BGP used for signaling customer VPN (VPNv4) routes between PE nodes
* To ensure traffic separation, customer traffic is encapsulated in an additional VPN label when forwarded in MPLS network
* Key applications are layer-3 business VPN services, enterprise network segmentation, and segmented layer-3 Data Center access

QUESTION 175
Refer to the exhibit. The Los Angeles and New York routers are receiving routes from Chicago but not from each other Which configuration fixes the issue?





```
Chicago

interface Tunnel 1
 ip address 192.168.1.1 255.255.255.0
 tunnel source E0/0
 tunnel mode gre multipoint
 ip nhrp network-id 1
 ip nhrp map multicast dynamic
 no ip next-hop-self eigrp 111
 tunnel protection ipsec profile IPSec-PROFILE
!
router eigrp 111
 network 192.168.1.0
 network 10.0.0.0
```

A. interface Tunnel1
   no ip split-horizon eigrp 111

B. interface Tunnel1
   Ip next-hop-self elgrp 111

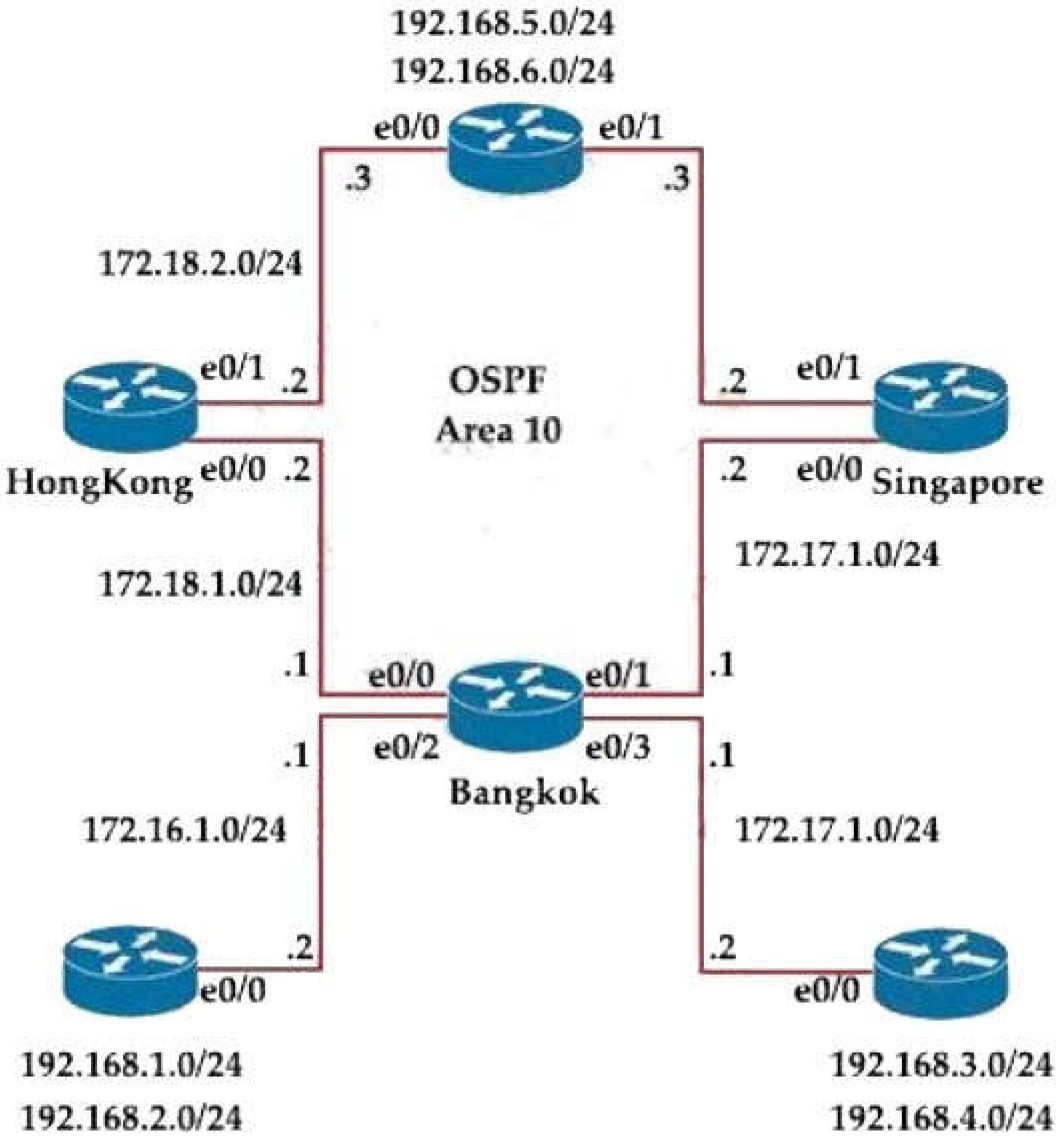
C. interface Tunnel1
   tunnel mode Ipsec Ipv4

D. interface Tunnel1
   tunnel protection ipsec profile IPSec-PROFILE

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
In this topology, Chicago router (Hub) will receive advertisements from Los Angeles (Spoke1) router on its tunnel interface. The problem here is that it also has a connection with New York (Spoke2) on that same tunnel interface. If we don't disable EIGRP split-horizon, then the Hub will not relay routes from Spoke1 to Spoke2 and the other way around. That is because it received those routes on interface Tunnel1 and therefore it cannot advertise back out that same interface (splithorizon rule). Therefore we must disable split-horizon on the Hub router to make sure the Spokes know about each other.

QUESTION 176
Refer to the exhibit. Bangkok is using ECMP to reach to the 192.168.5.0/24 network. The administrator must configure Bangkok in such a way that Telnet traffic from 192.168.3.0/24 and 192.168.4.0/24 networks uses the HongKong router as the preferred router. Which set of configurations accomplishes this task?



A.
```
access-list 101 permit ip 192.168.3.0 0.0.0.255 192.168.5.0 0.0.0.255
access-list 101 permit ip 192.168.4.0 0.0.0.255 192.168.5.0 0.0.0.255
!
route-map PBR1 permit 10
match ip address 101
set ip next-hop 172.18.1.2
 !
interface Ethernet0/3
ip policy route-map PBR1
```

B. access-list 101 permit tcp 192.168.3.0 0.0.0.255 192.168.5.0 0.0.0.255 eq 23
access-list 101 permit tcp 192.168.4.0 0.0.0.255 192.168.5.0 0.0.0.255 eq 23
!
route-map PBR1 permit 10
match ip address 101
set ip next-hop 172.18.1.2
!
interface Ethernet0/1
ip policy route-map PBR1

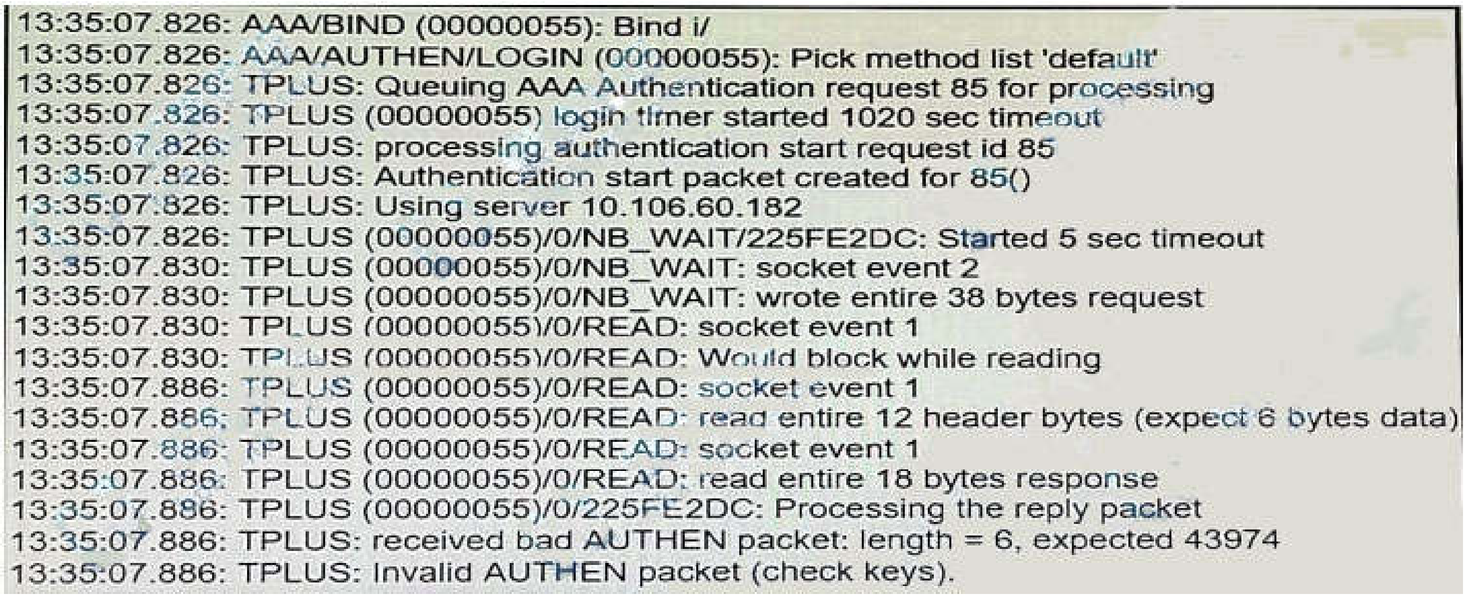
C. access-list 101 permit tcp 192.168.3.0 0.0.0.255 192.168.5.0 0.0.0.255 eq 23
access-list 101 permit tcp 192.168.4.0 0.0.0.255 192.168.5.0 0.0.0.255 eq 23
!
route-map PBR1 permit 10
match ip address 101
set ip next-hop 172.18.1.2
!
interface Ethernet0/3
ip policy route-map PBR1

D. access-list 101 permit ip 192.168.3.0 0.0.0.255 192.168.5.0 0.0.0.255
access-list 101 permit ip 192.168.4.0 0.0.0.255 192.168.5.0 0.0.0.255
!
route-map PBR1 permit 10
match ip address 101
set ip next-hop 172.18.1.2
!
interface Ethernet0/1
ip policy route-map PBR1

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
We need to use Policy Based Routing (PBR) here on Bangkok router to match the traffic from 192.168.3.0/24 & 192.168.4.0/24 and "set ip next-hop" to HongKong router(172.18.1.2 in this case).
Note: Please notice that we have to apply the PBR on incoming interface e0/3 to receive traffic from 192.168.3.0/24 and 192.168.4.0/24.

QUESTION 177
Refer to the exhibit. Which action resolves the authentication problem?



```
13:35:07.826: AAA/BIND (00000055): Bind i/
13:35:07.826: AAA/AUTHEN/LOGIN (00000055): Pick method list 'default'
13:35:07.826: TPLUS: Queuing AAA Authentication request 85 for processing
13:35:07.826: TPLUS (00000055) login timer started 1020 sec timeout
13:35:07.826: TPLUS: processing authentication start request id 85
13:35:07.826: TPLUS: Authentication start packet created for 85()
13:35:07.826: TPLUS: Using server 10.106.60.182
13:35:07.826: TPLUS (00000055)/0/NB_WAIT/225FE2DC: Started 5 sec timeout
13:35:07.830: TPLUS (00000055)/0/NB_WAIT: socket event 2
13:35:07.830: TPLUS (00000055)/0/NB_WAIT: wrote entire 38 bytes request
13:35:07.830: TPLUS (00000055)/0/READ: socket event 1
13:35:07.830: TPLUS (00000055)/0/READ: Would block while reading
13:35:07.886: TPLUS (00000055)/0/READ: socket event 1
13:35:07.886: TPLUS (00000055)/0/READ: read entire 12 header bytes (expect 6 bytes data)
13:35:07.886: TPLUS (00000055)/0/READ: socket event 1
13:35:07.886: TPLUS (00000055)/0/READ: read entire 18 bytes response
13:35:07.886: TPLUS (00000055)/0/225FE2DC: Processing the reply packet
13:35:07.886: TPLUS: received bad AUTHEN packet: length = 6, expected 43974
13:35:07.886: TPLUS: Invalid AUTHEN packet (check keys).
```

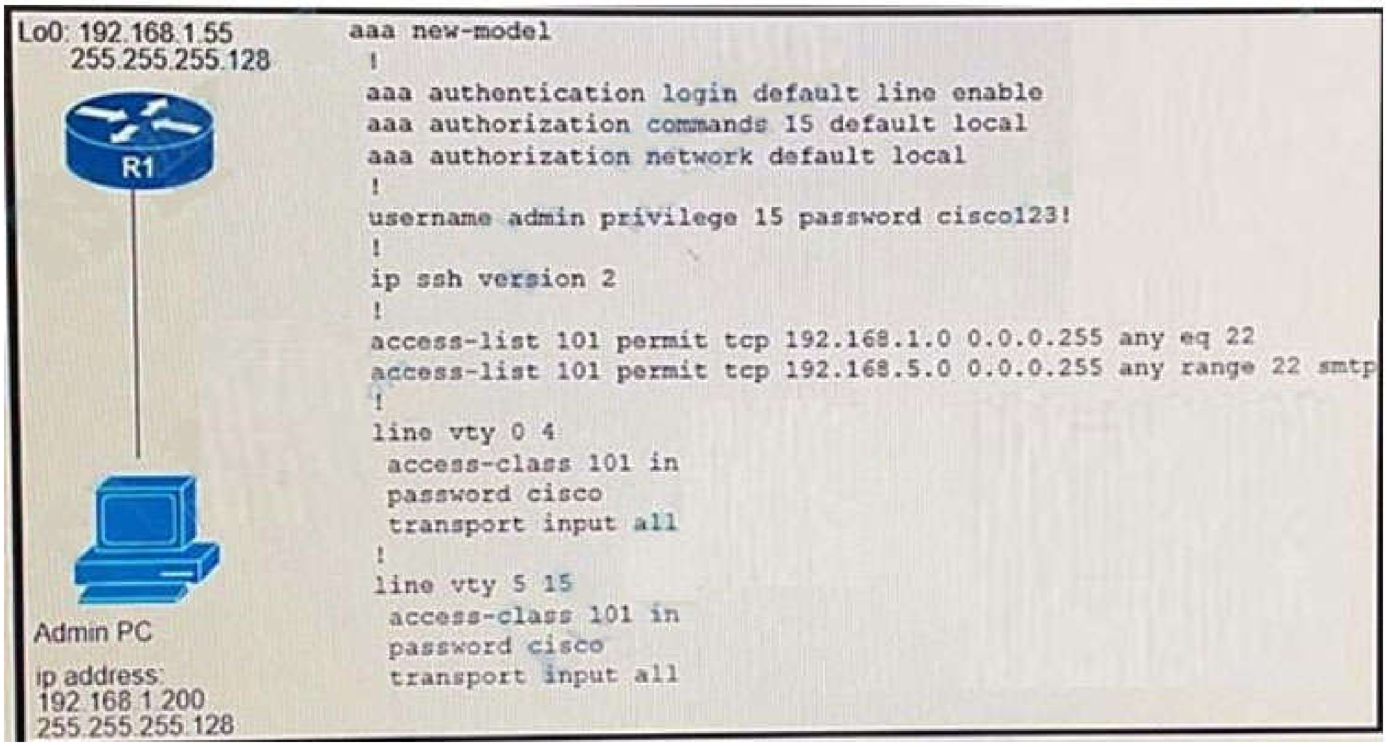
A. Configure the user name on the TACACS+ server
B. Configure the UDP port 1812 to be allowed on the TACACS+ server
C. Confiqure the TCP port 49 to be reachable by the router
D. Configure the same password between the TACACS+ server and router.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
From the last line of the output, we notice that the result was "Invalid AUTHEN packet". Therefore something went wrong with the username or password.

QUESTION 178

Refer to the exhibit.The administrator successfully logs into R1 but cannot access privileged mode commands.what should be configured to resolve the issue ?



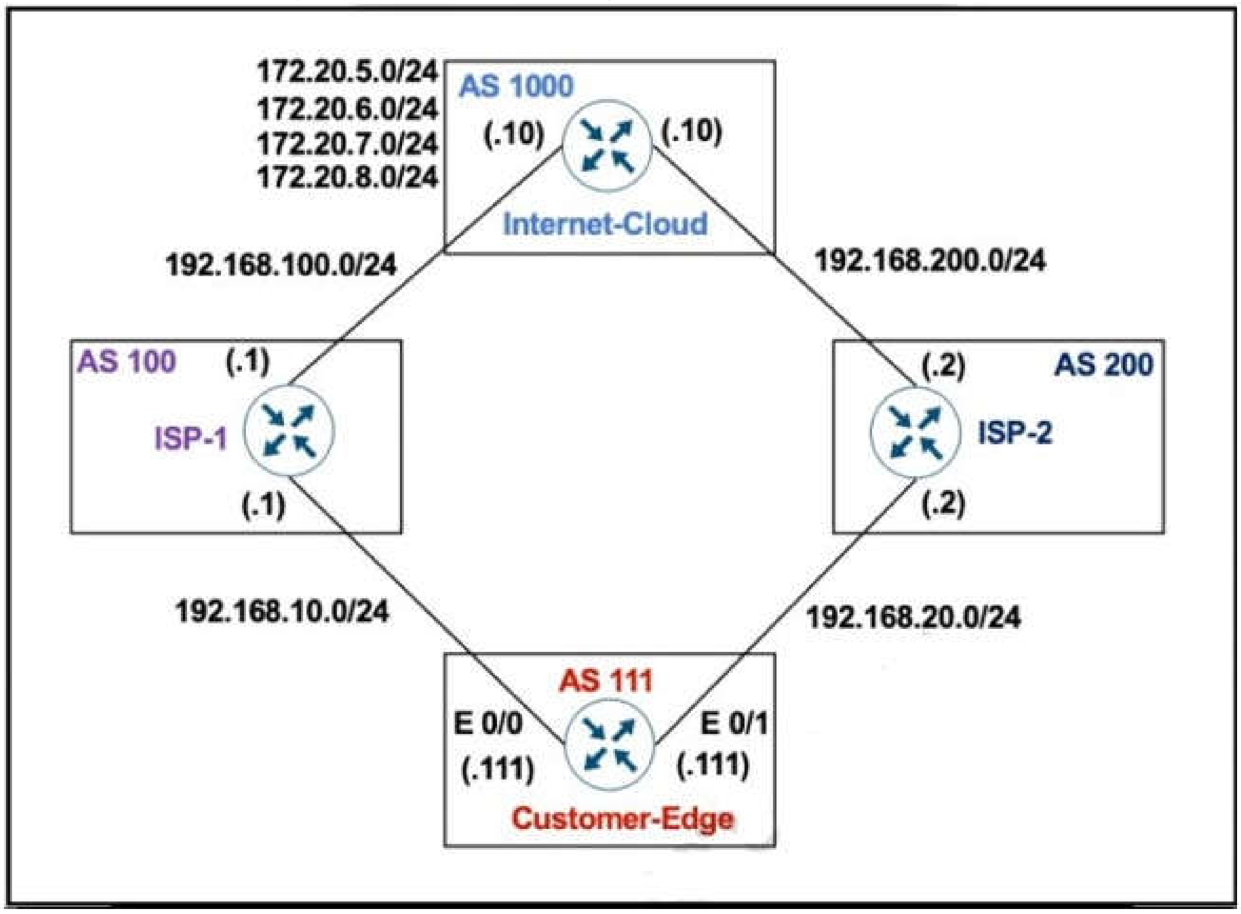
```
aaa new-model
 !
 aaa authentication login default line enable
 aaa authorization commands 15 default local
 aaa authorization network default local
 !
 username admin privilege 15 password cisco123!
 !
 ip ssh version 2
 !
 access-list 101 permit tcp 192.168.1.0 0.0.0.255 any eq 22
 access-list 101 permit tcp 192.168.5.0 0.0.0.255 any range 22 smtp
 !
 line vty 0 4
  access-class 101 in
  password cisco
  transport input all
 !
 line vty 5 15
  access-class 101 in
  password cisco
  transport input all
```

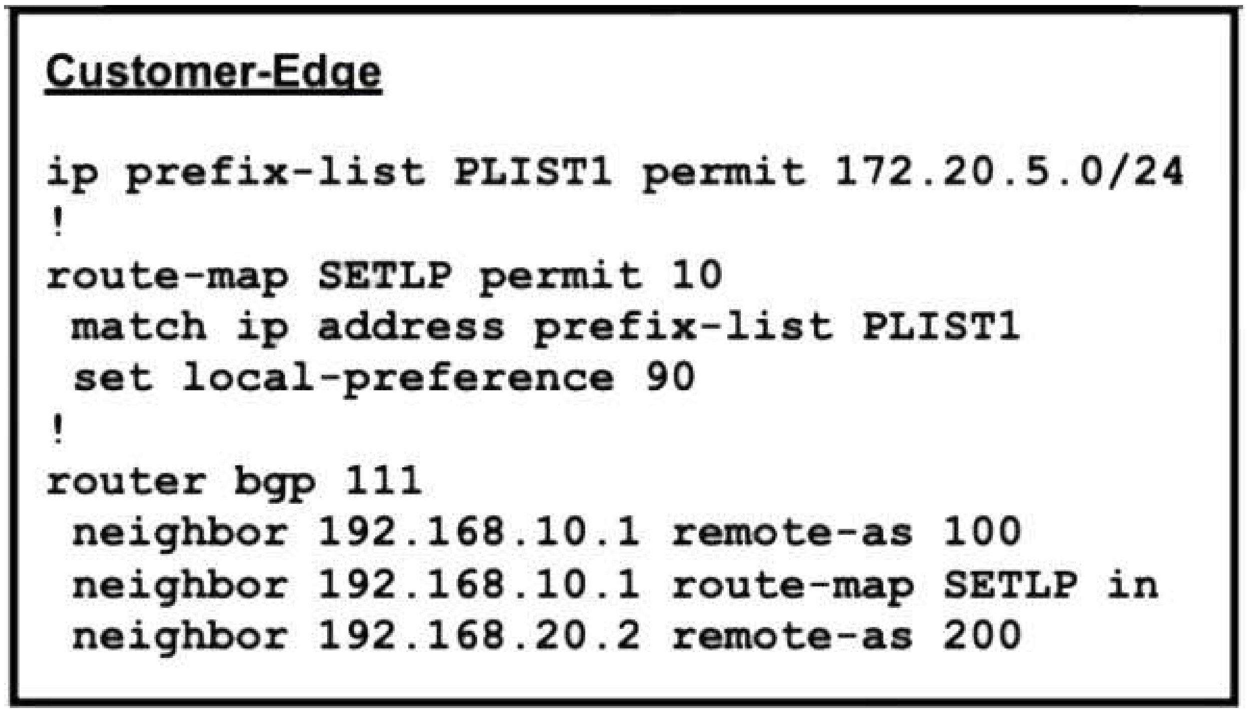
A. aaa authorization reverse-access
B. secret cisco 123! at the end of the username command instead of password cisco123!
C. matching password on vty lines as cisco123!
D. enable secret or enable password commands to enter into privileged mode

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 179
Refer to the exhibit. AS 111 wanted to use AS 200 as the preferred path for 172.20.5.0/24 and AS 100 as the backup. After the configuration, AS 100 is not used for any other routes. Whichconfiguration resolves the issue?





```
Customer-Edge

ip prefix-list PLIST1 permit 172.20.5.0/24
!
route-map SETLP permit 10
 match ip address prefix-list PLIST1
 set local-preference 90
!
router bgp 111
 neighbor 192.168.10.1 remote-as 100
 neighbor 192.168.10.1 route-map SETLP in
 neighbor 192.168.20.2 remote-as 200
```

A. route-map SETLP permit 10
   match ip address prefix-list PLIST1
   set local-preference 110
   route-map SETLP permit 20

B. route-map SETLP permit 10
   match ip address prefix-list PLIST1
   set local-preference 99
   route-map SETLP permit 20

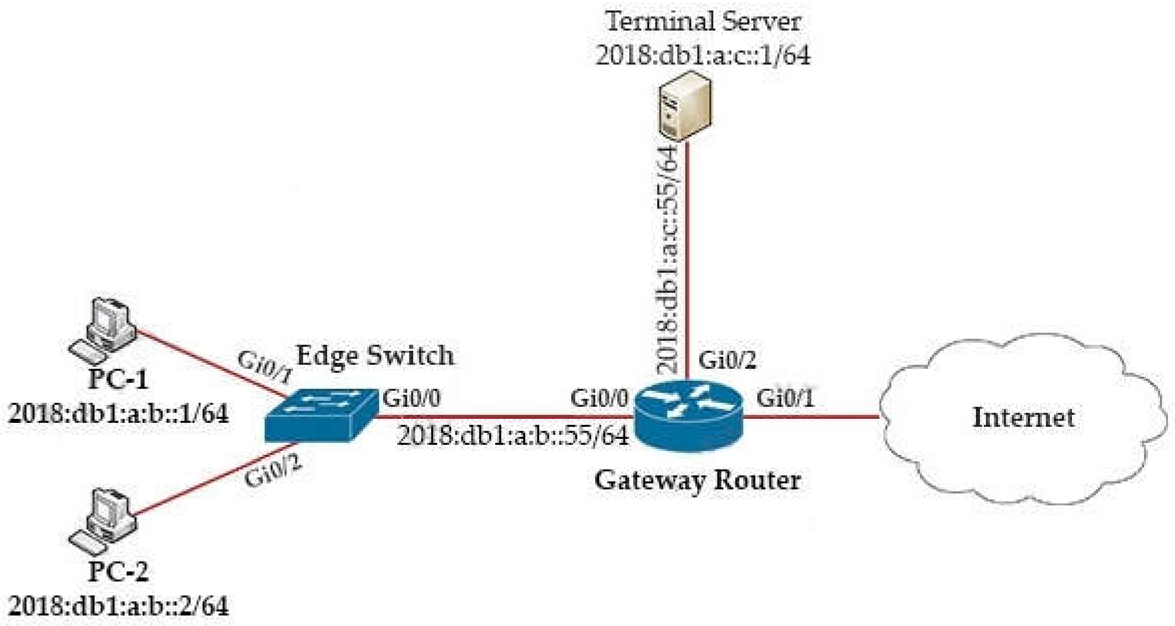
C. router bgp 111
   no neighbor 192.168.10.1 route-map SETLP in
   neighbor 192.168.20.2 route-map SETLP in

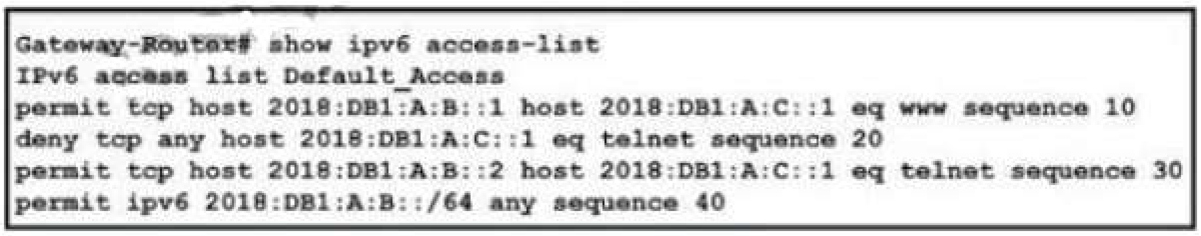
D. router bgp 111
   no neighbor 192.169.10.1 route-map SETLP in
   neighbor 192.168.10.1 route-map SETLP out

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
There is an implicit deny all at the end of any route-map so all other traffic that does not match 172.20.5.0/24 would be dropped. Therefore we have to add a permitsequence at the end of the route-map to allow other traffic.
The default value of Local Preference is 100 and higher value is preferred so we have to set the local preference of AS100 lower than that of AS200.

QUESTION 180
Refer to the exhibit. PC-2 failed to establish a Telnet connection to the terminal server. Which configuration resolves the issue?





```
Gateway-Router# show ipv6 access-list
IPv6 access list Default_Access
permit tcp host 2018:DB1:A:B::1 host 2018:DB1:A:C::1 eq www sequence 10
deny tcp any host 2018:DB1:A:C::1 eq telnet sequence 20
permit tcp host 2018:DB1:A:B::2 host 2018:DB1:A:C::1 eq telnet sequence 30
permit ipv6 2018:DB1:A:B::/64 any sequence 40
```

A. Gateway-Router(config)#ipv6 access-list Default_Access
Gateway-Router(config-ipv6-acl)#sequence 15 permit tcp host 2018:DB1:A:B::2 host 2018:DB1:A:C::1 eq telnet

B. Gateway-Router(config)#ipv6 access-list Default_Access
Gateway-Router(config-ipv6-acl)#permit tcp host 2018:D81:A:B::2 host 2018:DB1:A:C::1 eq telnet

C. Gateway-Router(config)#ipv6 access-list Default_Access
Gateway-Router(config-ipv6-acl)#no sequence 20
Gateway-Router(config-ipv6-acl)#sequence 5 permit tcp host 2018:DB1:A:B::2 host 2018:DB1:A:C::1 eq telnet

D. Gateway-Router(config)#ipv6 access-list Default_Access
Gateway-Router(config-ipv6-acl)#sequence 25 permit tcp host 2018:DB1:A:B::2 host 2018:DB1:A:C::1 eq telnet

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 181
A customer reports to the support desk that they cannot print from their PC to the local printer id:401987778. Which tool must be used to diagnose the issue using Cisco DNA Center Assurance?

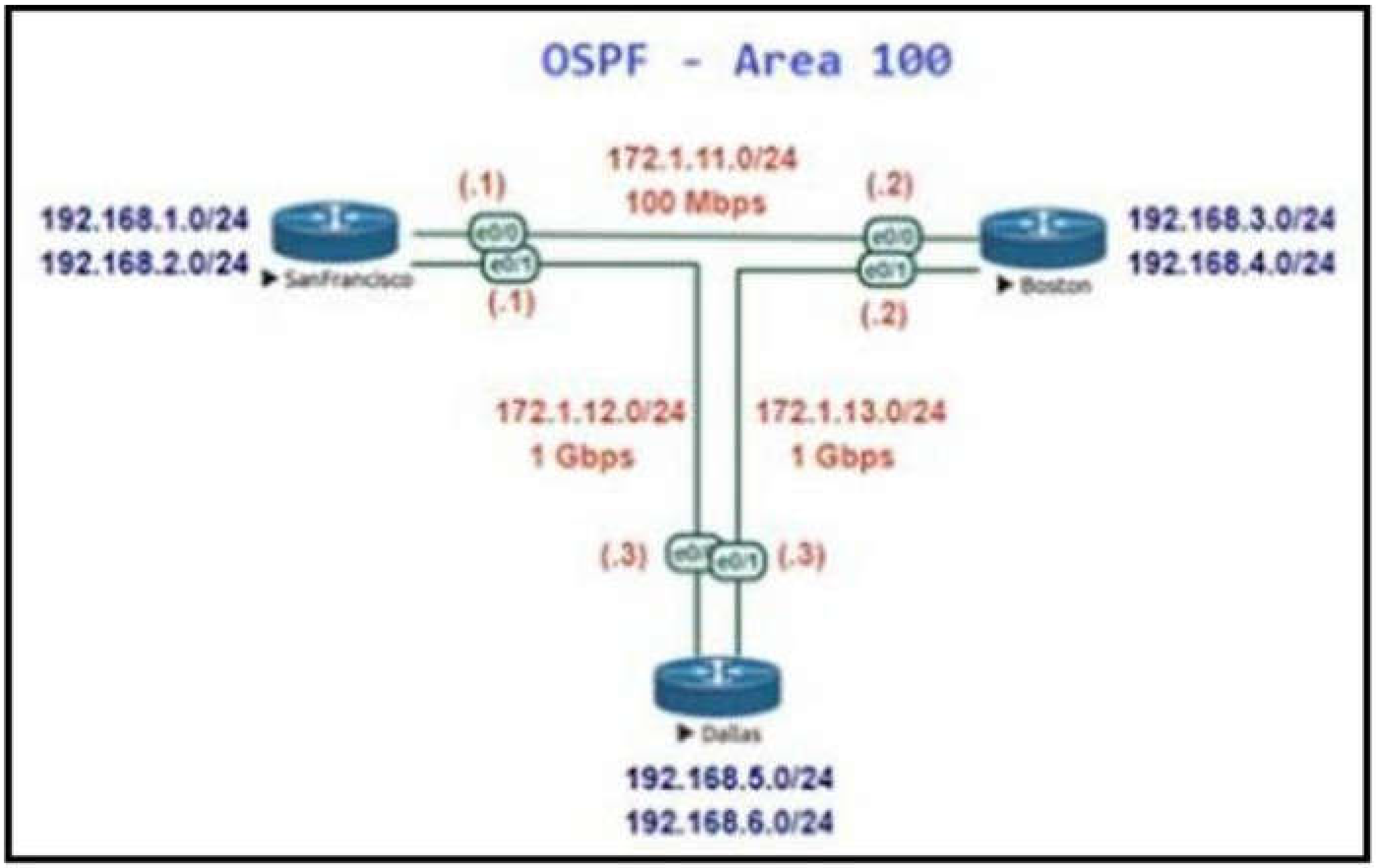
A. application trace
B. path trace
C. ACL trace
D. device trace

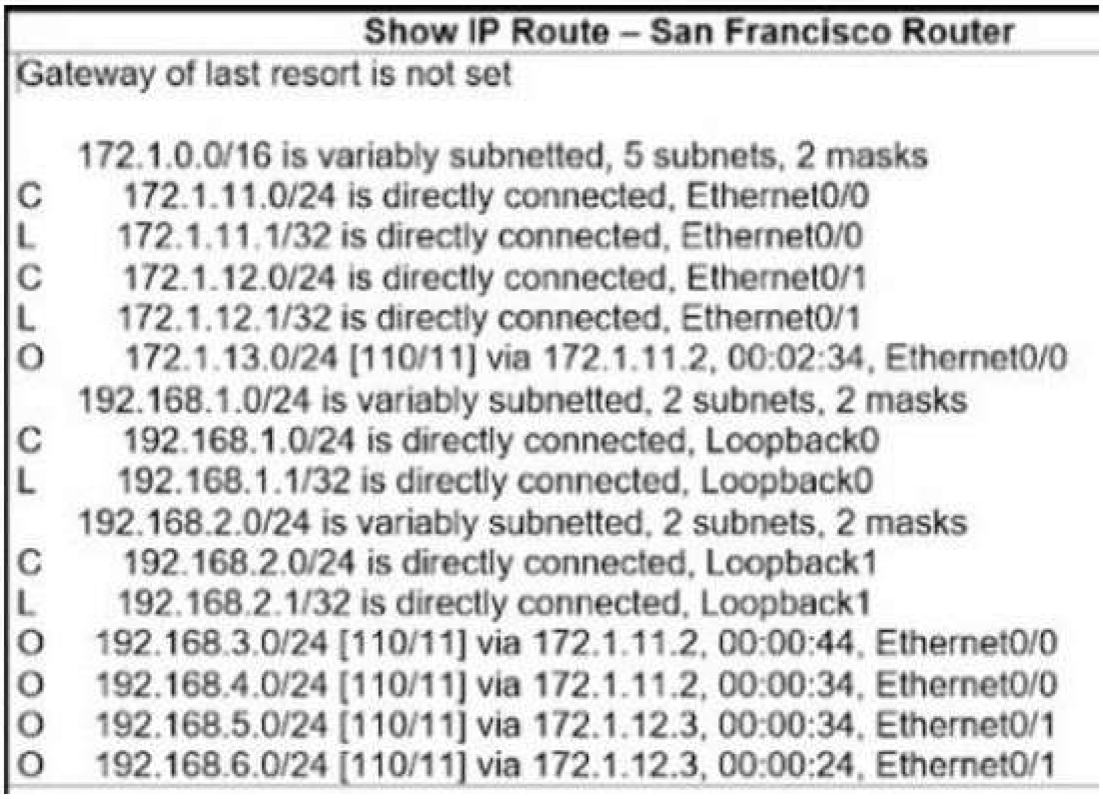
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 182

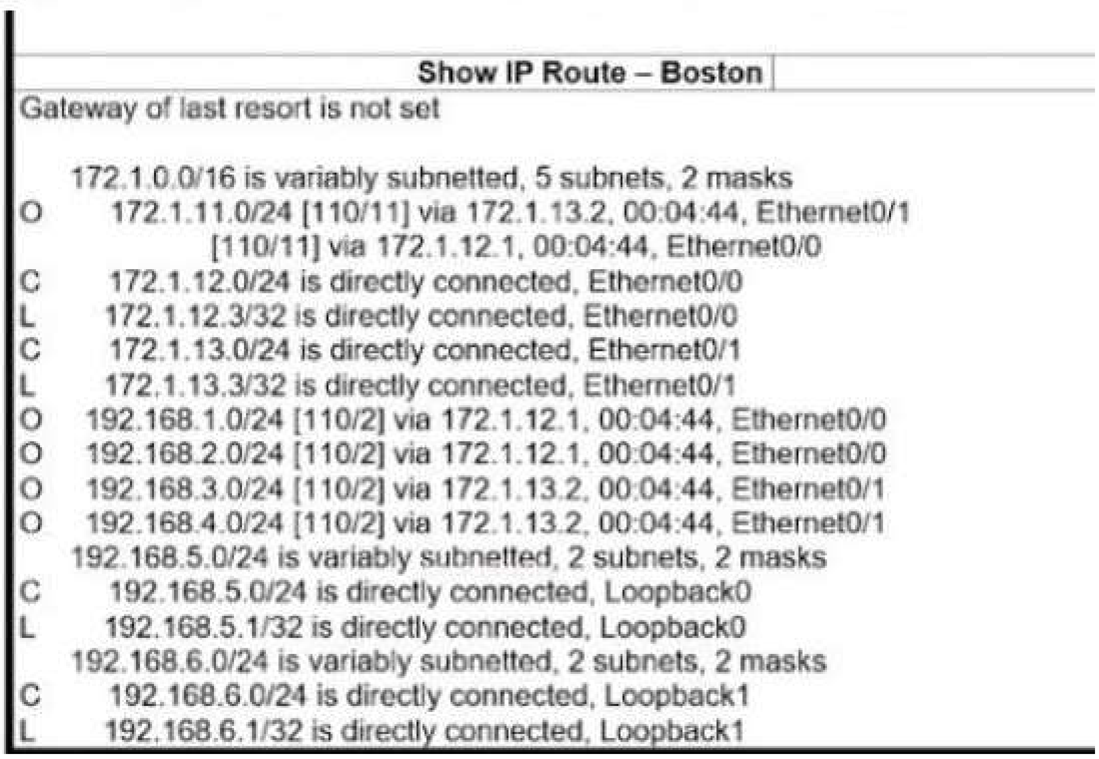
Refer to the exhibit. SanFrancisco and Boston routers are choosing slower links to reach each other despite the direct links being up Which configuration fixes the issue?



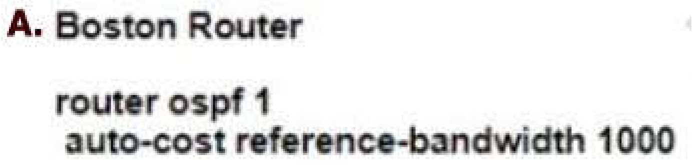


Show IP Route – San Francisco Router

```
Gateway of last resort is not set

     172.1.0.0/16 is variably subnetted, 5 subnets, 2 masks
C       172.1.11.0/24 is directly connected, Ethernet0/0
L       172.1.11.1/32 is directly connected, Ethernet0/0
C       172.1.12.0/24 is directly connected, Ethernet0/1
L       172.1.12.1/32 is directly connected, Ethernet0/1
O       172.1.13.0/24 [110/11] via 172.1.11.2, 00:02:34, Ethernet0/0
     192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.1.0/24 is directly connected, Loopback0
L       192.168.1.1/32 is directly connected, Loopback0
     192.168.2.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.2.0/24 is directly connected, Loopback1
L       192.168.2.1/32 is directly connected, Loopback1
O    192.168.3.0/24 [110/11] via 172.1.11.2, 00:00:44, Ethernet0/0
O    192.168.4.0/24 [110/11] via 172.1.11.2, 00:00:34, Ethernet0/0
O    192.168.5.0/24 [110/11] via 172.1.12.3, 00:00:34, Ethernet0/1
O    192.168.6.0/24 [110/11] via 172.1.12.3, 00:00:24, Ethernet0/1
```

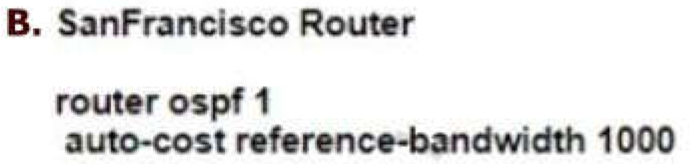


```
                         Show IP Route – Boston
Gateway of last resort is not set

     172.1.0.0/16 is variably subnetted, 5 subnets, 2 masks
O       172.1.11.0/24 [110/11] via 172.1.13.2, 00:04:44, Ethernet0/1
                      [110/11] via 172.1.12.1, 00:04:44, Ethernet0/0
C       172.1.12.0/24 is directly connected, Ethernet0/0
L       172.1.12.3/32 is directly connected, Ethernet0/0
C       172.1.13.0/24 is directly connected, Ethernet0/1
L       172.1.13.3/32 is directly connected, Ethernet0/1
O    192.168.1.0/24 [110/2] via 172.1.12.1, 00:04:44, Ethernet0/0
O    192.168.2.0/24 [110/2] via 172.1.12.1, 00:04:44, Ethernet0/0
O    192.168.3.0/24 [110/2] via 172.1.13.2, 00:04:44, Ethernet0/1
O    192.168.4.0/24 [110/2] via 172.1.13.2, 00:04:44, Ethernet0/1
     192.168.5.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.5.0/24 is directly connected, Loopback0
L       192.168.5.1/32 is directly connected, Loopback0
     192.168.6.0/24 is variably subnetted, 2 subnets, 2 masks
C       192.168.6.0/24 is directly connected, Loopback1
L       192.168.6.1/32 is directly connected, Loopback1
```



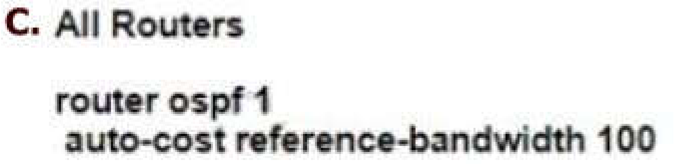
A. Boston Router

```
router ospf 1
 auto-cost reference-bandwidth 1000
```



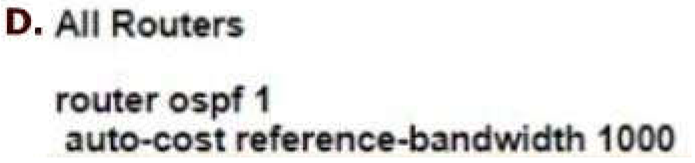
B. SanFrancisco Router

```
router ospf 1
 auto-cost reference-bandwidth 1000
```



C. All Routers

```
router ospf 1
 auto-cost reference-bandwidth 100
```



D. All Routers

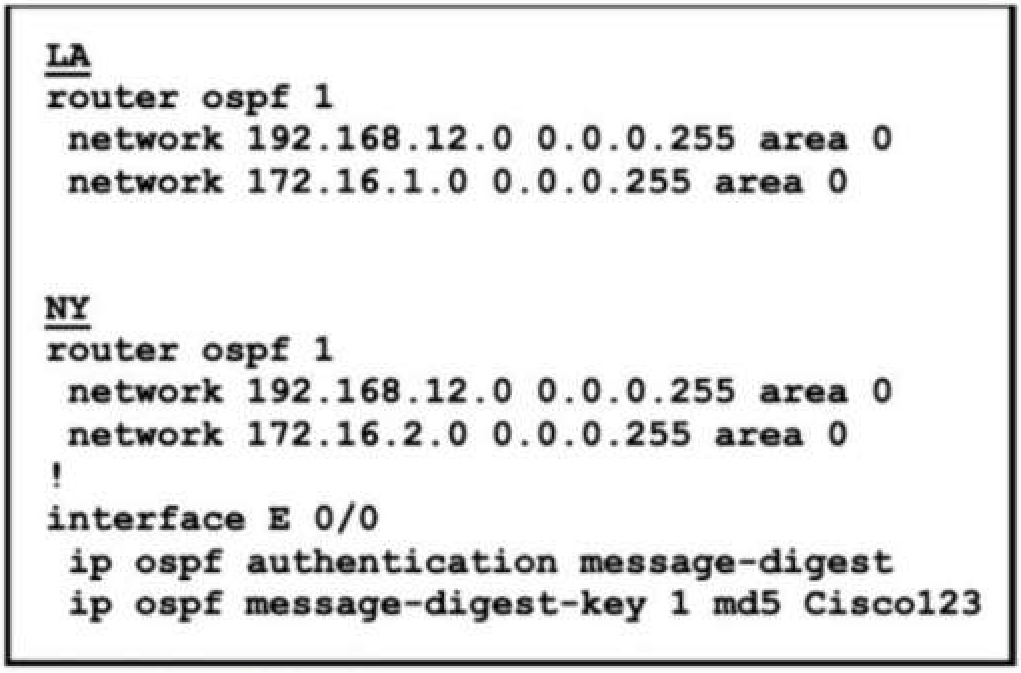
```
router ospf 1
 auto-cost reference-bandwidth 1000
```

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 183
Refer to the exhibit. The neighbor relationship is not coming up. Which two configurations bring the adjacency up? (Choose two)



```
LA
router ospf 1
 network 192.168.12.0 0.0.0.255 area 0
 network 172.16.1.0 0.0.0.255 area 0


NY
router ospf 1
 network 192.168.12.0 0.0.0.255 area 0
 network 172.16.2.0 0.0.0.255 area 0
!
interface E 0/0
 ip ospf authentication message-digest
 ip ospf message-digest-key 1 md5 Cisco123
```

A. NY
router ospf 1
area 0 authentication message-digest

B. LA
router ospf 1
area 0 authentication message-digest

C. NY
interface E0/0
no ip ospf message-digest-key 1 md5 Cisco123
ip ospf authentication-key Cisco123

D. LA
interface E0/0
ip ospf authentication-key Cisco123

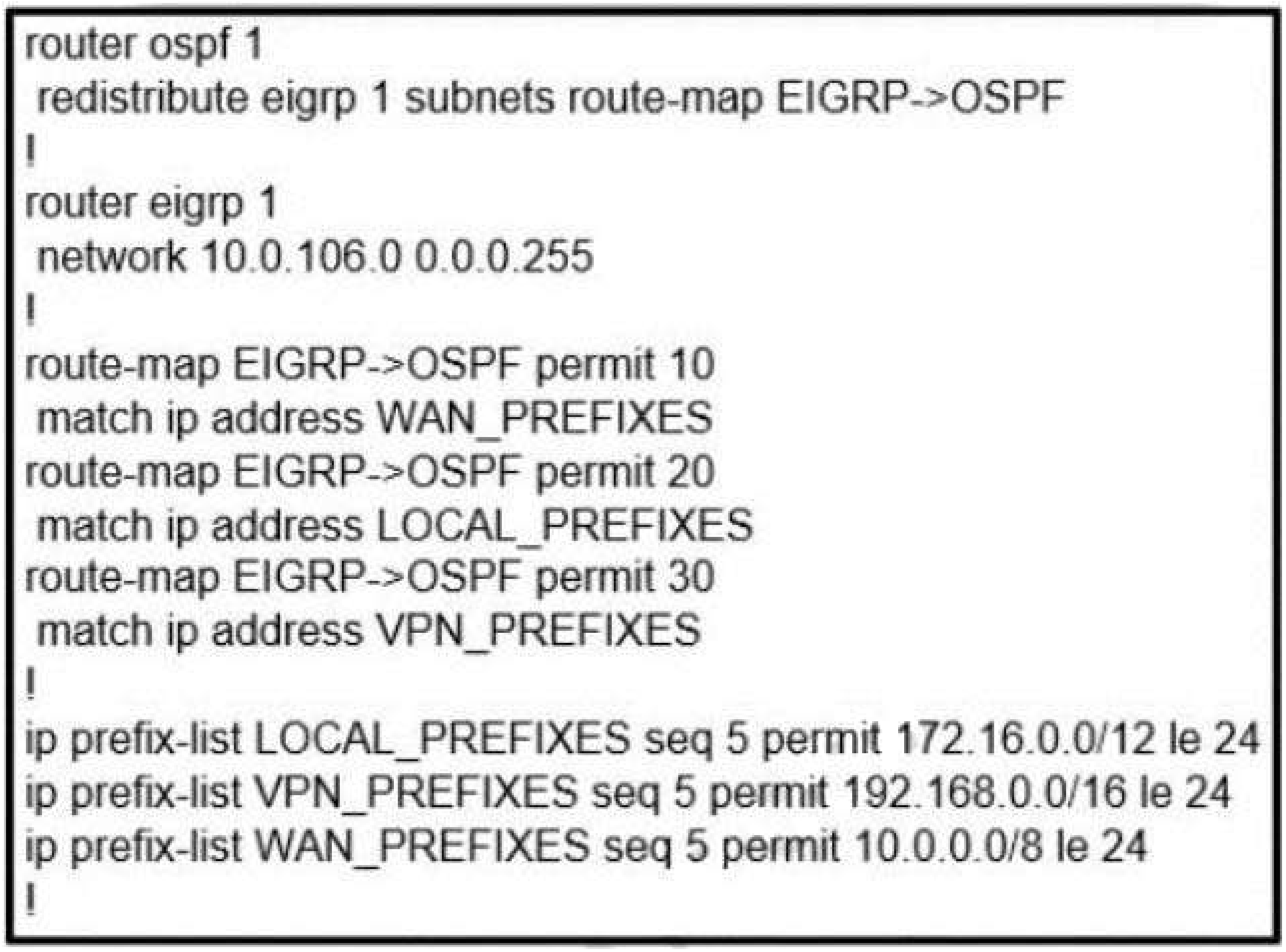
E. LA
interface E0/0
ip ospf message-digest-key 1 md5 Cisco123

Correct Answer: BE
Section: (none)
Explanation

Explanation/Reference:
The configuration on NY router is good for OSPF authentication. So we must enable OSPF authentication on LA router with the following commands:

```
router ospf 1
area 0 authentication message-digest
interface E0/0
ip ospf message-digest-key 1 md5 Cisco123
```

QUESTION 184
Refer to the exhibit. The network administrator configured redistribution on an ASBR to reach to all WAN networks but failed Which action resolves the issue?



```
router ospf 1
 redistribute eigrp 1 subnets route-map EIGRP->OSPF
!
router eigrp 1
 network 10.0.106.0 0.0.0.255
!
route-map EIGRP->OSPF permit 10
 match ip address WAN_PREFIXES
route-map EIGRP->OSPF permit 20
 match ip address LOCAL_PREFIXES
route-map EIGRP->OSPF permit 30
 match ip address VPN_PREFIXES
!
ip prefix-list LOCAL_PREFIXES seq 5 permit 172.16.0.0/12 le 24
ip prefix-list VPN_PREFIXES seq 5 permit 192.168.0.0/16 le 24
ip prefix-list WAN_PREFIXES seq 5 permit 10.0.0.0/8 le 24
!
```

A. The route map must have the keyword prefix-list to evaluate the prefix list entries

B. The OSPF process must have a metric when redistributing prefixes from EIGRP.

C. The route map EIGRP->OSPF must have the 10.0.106.0/24 entry to exist in one of the three prefix lists to pass

D. EIGRP must redistribute the 10.0.106.0/24 route instead of using the network statement

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
In order to use a prefix-list in a route-map, we must use the keyword "prefix-list" in the "match" statement. . For example:
match ip address prefix-list WAN_PREFIXES
Without this keyword, the router will try to find an access-list with the same name instead.

QUESTION 185
How does an MPLS Layer 3 VPN function?

A. set of sites use multiprotocol BGP at the customer site for aggregation

B. multiple customer sites interconnect through service provider network to create secure tunnels between customer edge devices

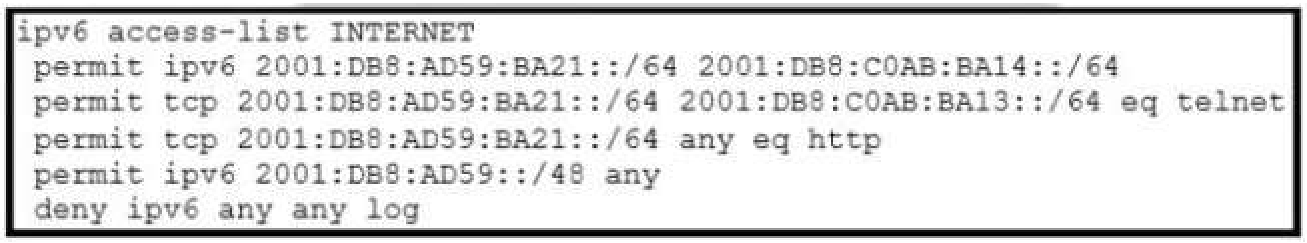
C. set of sites interconnect privately over the Internet for security

D. multiple customer sites interconnect through a service provider network using customer edge to provider edge connectivity

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
A Multiprotocol Label Switching(MPLS) Layer 3 Virtual Private Network (VPN) consists of a set of sites that are interconnected by means of an MPLS provider core network. At each customer site, one or more customer edge (CE) routers attach to one or more provider edge (PE) routers.
Reference: b-l3vpn-cg-asr9000-65x_chapter_010.pdf

QUESTION 186
Refer to the exhibit. When monitoring an IPv6 access list, an engineer notices that the ACL does not have any hits and is causing unnecessary traffic to pass through the interface Which command must be configured to resolve the issue?



```
ipv6 access-list INTERNET
 permit ipv6 2001:DB8:AD59:BA21::/64 2001:DB8:C0AB:BA14::/64
 permit tcp 2001:DB8:AD59:BA21::/64 2001:DB8:C0AB:BA13::/64 eq telnet
 permit tcp 2001:DB8:AD59:BA21::/64 any eq http
 permit ipv6 2001:DB8:AD59::/48 any
 deny ipv6 any any log
```

A. access-class INTERNET in
B. ipv6 traffic-filter INTERNET in
C. ipv6 access-class INTERNET in
D. ip access-group INTERNET in

Correct Answer: C
Section: (none)
Explanation

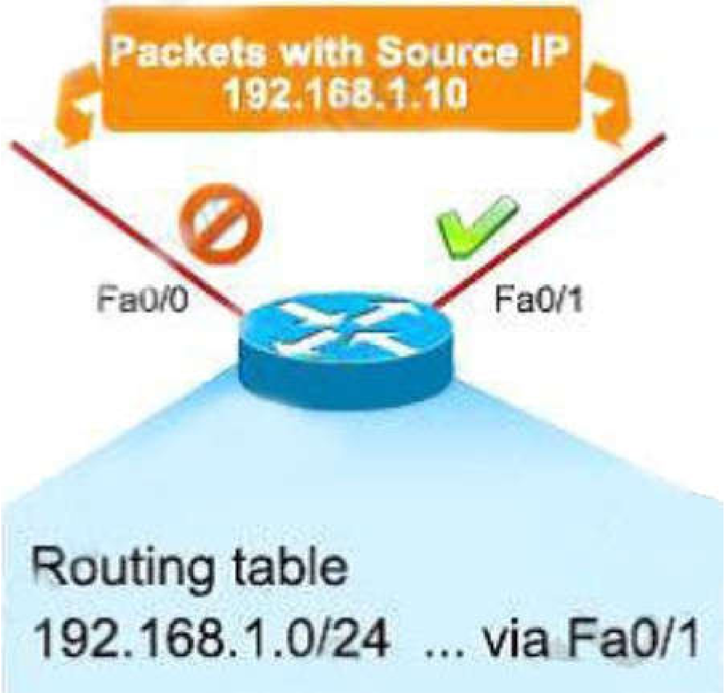
Explanation/Reference:

QUESTION 187
An engineer configured Reverse Path Forwarding on an interface and noticed that the routes are dropped when a route lookup fails on that interface for a prefix that is available in the routing table. Which interface configuration resolves the issue?

A. ip verify unicast source reachable-via rx
B. ip verify unicast source reachable-via any
C. ip verify unicast source reachable-via allow-default
D. ip verify unicast source reachable-via 12-src

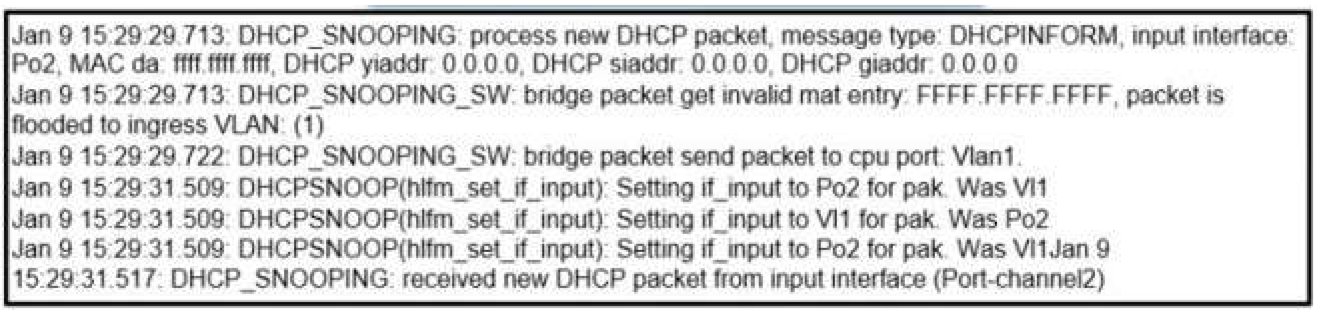
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
According to this question, uRPF is running in strict mode because packets are dropped even when that route exists in the routing table. Maybe packets are dropped because the receiving interface is different from the interface the local router uses to send packets to that destination.
The ip verify unicast source reachable-via rx command enables Unicast RPF in strict mode.
To enable loose mode, administrators can use the any option (ip verify unicast source reachable-via any). In loose mode, it doesn't matter if we use this interface to reach the source or not.



The allow-default option allows the use of the default route in the source verification process.

QUESTION 188
Refer to the Exhibit. A network administrator enables DHCP snooping on the Cisco Catalyst 3750-X switch and configures the uplink port (Port-channel2) as a trusted port. Clients are not receiving an IP address, but when DHCP snooping is disabled, clients start receiving IP addresses. Which global command resolves the issue?



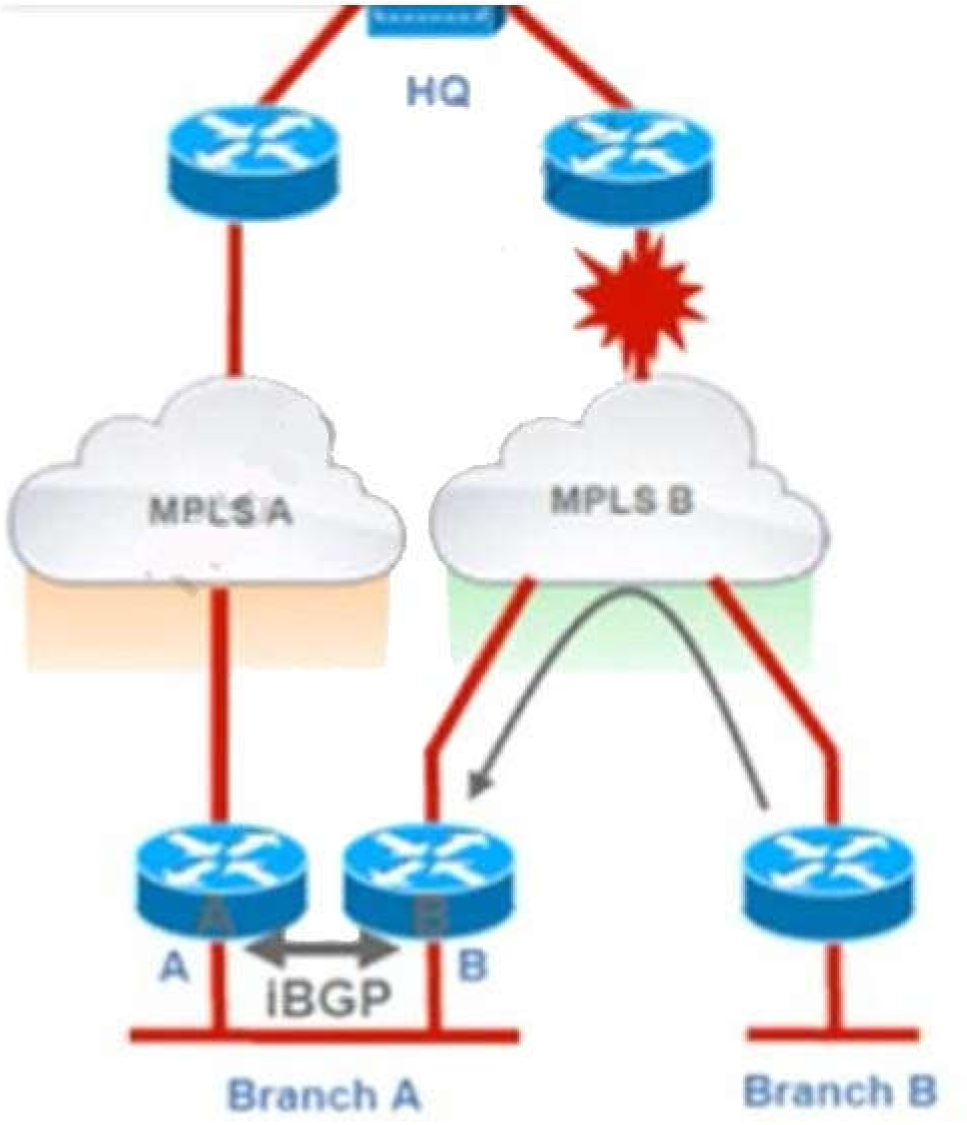
```
Jan 9 15:29:29.713: DHCP_SNOOPING: process new DHCP packet, message type: DHCPINFORM, input interface:
Po2, MAC da: ffff.ffff.ffff, DHCP yiaddr: 0.0.0.0, DHCP siaddr: 0.0.0.0, DHCP giaddr: 0.0.0.0
Jan 9 15:29:29.713: DHCP_SNOOPING_SW: bridge packet get invalid mat entry: FFFF.FFFF.FFFF, packet is
flooded to ingress VLAN: (1)
Jan 9 15:29:29.722: DHCP_SNOOPING_SW: bridge packet send packet to cpu port: Vlan1.
Jan 9 15:29:31.509: DHCPSNOOP(hlfm_set_if_input): Setting if_input to Po2 for pak. Was Vl1
Jan 9 15:29:31.509: DHCPSNOOP(hlfm_set_if_input): Setting if_input to Vl1 for pak. Was Po2
Jan 9 15:29:31.509: DHCPSNOOP(hlfm_set_if_input): Setting if_input to Po2 for pak. Was Vl1Jan 9
15:29:31.517: DHCP_SNOOPING: received new DHCP packet from input interface (Port-channel2)
```

A. No ip dhcp snooping information option
B. ip dhcp snooping
C. ip dhcp relay information trust portchannel2
D. ip dhcp snooping trust

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
https://community.cisco.com/t5/switching/dhcp-snooping-clients-not-getting-ip-address/td-p/1749969

QUESTION 189
Refer to the exhibit. Troubleshoot and ensure that branch B only ever uses the MPLS B network to reach HQ. Which action achieves this requirement?



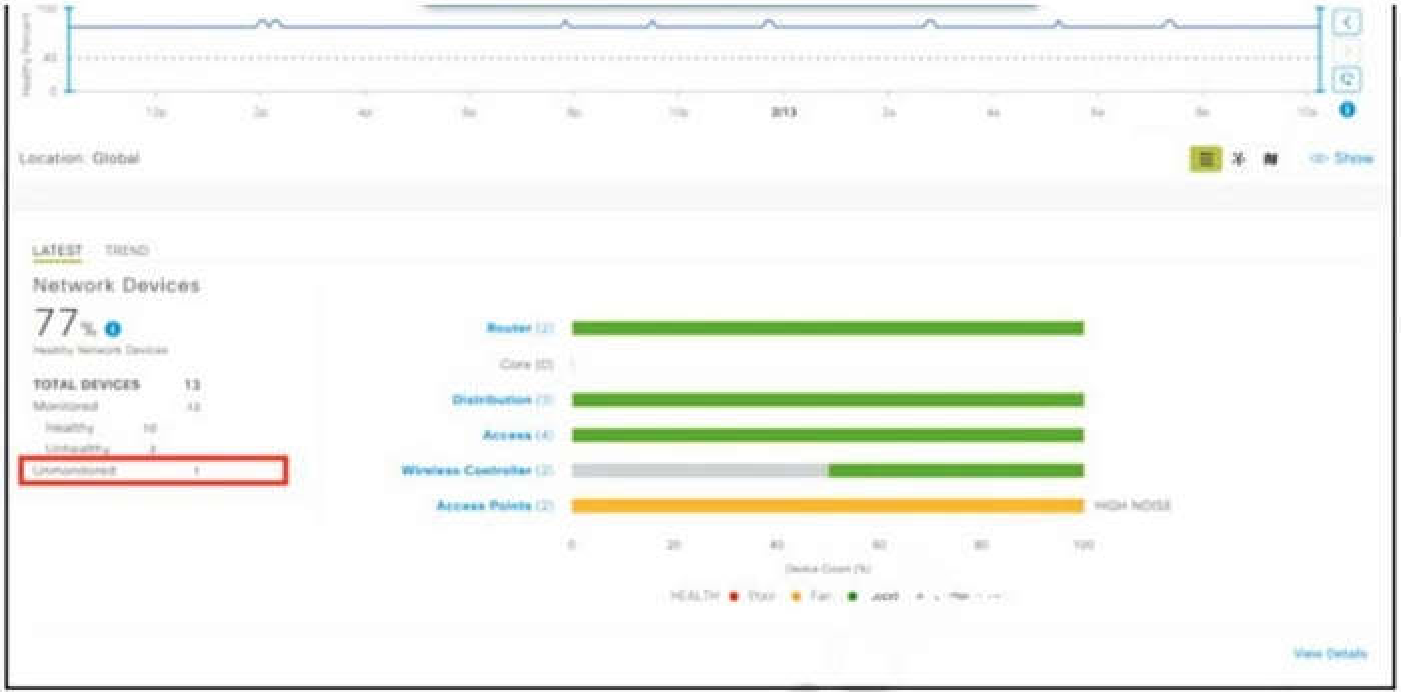
A. Introduce an AS path filter on branch A routers so that only local prefixes are advertised into BGP
B. increase the local preference for all HQ prefixes received at branch B from the MPLS B network to be higher than the local preferences used on the MPLS A network
C. Introduce AS path prepending on the branch A MPLS B network connection so that any HQ advertisements from branch A toward the MPLS B network are prepended three times
D. Modify the weight of all HQ prefixes received at branch B from the MPLS B network to be higher than the weights used on the MPLS A network

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
If we modify the weight, increase local preference or use AS path prepending then we can only make MPLS B prefer over MPLS A.

But when MPLS B is down then MPLS A will be used which does not meet the requirement of this question. Only with AS path filtering we can deny prefixes from certain AS and make sure branch B never uses MPLS A to reach HQ.

QUESTION 190
Refer to the Exhibit. A network administrator added one router in the Cisco DNA Center and checked its discovery and health from the Network Health Dashboard. The network administratorobserved that the router is still showing up as unmonitored. What must be configured on the router to mount it in the Cisco DNA Center?



A. Configure router with NetFlow data
B. Configure router with the telemetry data
C. Configure router with routing to reach Cisco DNA Center
D. Configure router with SNMPv2c or SNMPv3 traps

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Unmonitored: Unmonitored devices are devices for which Assurance did not receive any telemetry data during the specified time range.

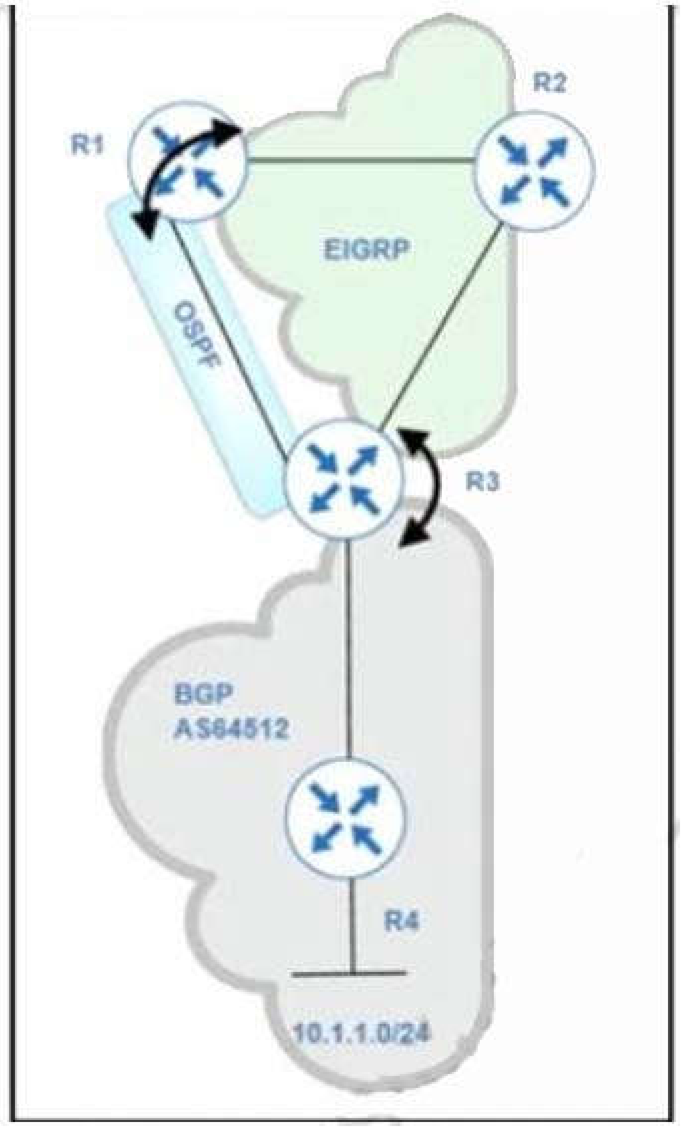
QUESTION 191
What does the PE router convert the Ipv4 prefix to within an MPLS VPN?

A. 48-bit route combining the IP and PE router-id
B. VPN-IPv4 prefix combined with the 64-bit route distinguisher
C. prefix that combines the ASN, PE router-id and IP prefix
D. eBGP path association between the PE and CE sessions

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The IP prefix is a member of the IPv4 address family. After the PE device learns the IP prefix, the PE converts it into a VPN-IPv4 prefix by combining it with an 8-byte route distinguisher (RD). The generated prefix is a member of the VPN-IPv4 address family. It uniquely identifies the customer address, even if the customer site is using globally nonunique (unregistered private) IP addresses. The route distinguisher used to generate the VPN-IPv4 prefix is specified by a configuration command associated with the virtual routing and forwarding (VRF) instance on the PE device.

QUESTION 192
Refer to the exhibit. Routing protocols are mutually redistributed on R3 and R1. Users report intermittent connectivity to services hosted on the 10.1.1.0/24 prefix. Significant routing update changes are noticed on R3 when the show ip route profile command is run. How must the services be stabilized?



A. The issue with using BGP must be resolved by using another protocol and redistributing it into EIGRP on R3
B. The routing loop must be fixed by reducing the admin distance of iBGP from 200 to 100 on R3
C. The routing loop must be fixed by reducing the admin distance of OSPF from 110 to 80 on R3
D. The issue with using iBGP must be fixed by running eBGP between R3 and R4

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
After redistribution, R3 learns about network 10.1.1.0/24 via two paths:+ Internal BGP (IBGP): advertised from R4 with AD of 200 (and metric of 0)+ OSPF: advertised from R1 with AD of 110 (O E2) (and metric of 20)Therefore R3 will choose the path with the lower AD via OSPF But this is a looped path which is received from R3 -> R2 -> R1 -> R3. So when the advertised route from R4 is expired, the looped path is also expired soon and R3 willreinstall the main path from R4. This is the cause of intermittent connectivity.In order to solve this issue, we can lower the AD of iBGP to a value which is lower than 110 so that it is preferred over OSPF-advertised route.

QUESTION 193
Which configuration feature should be used to block rogue router advertisements instead of using the IPv6 Router Advertisement Guard feature?

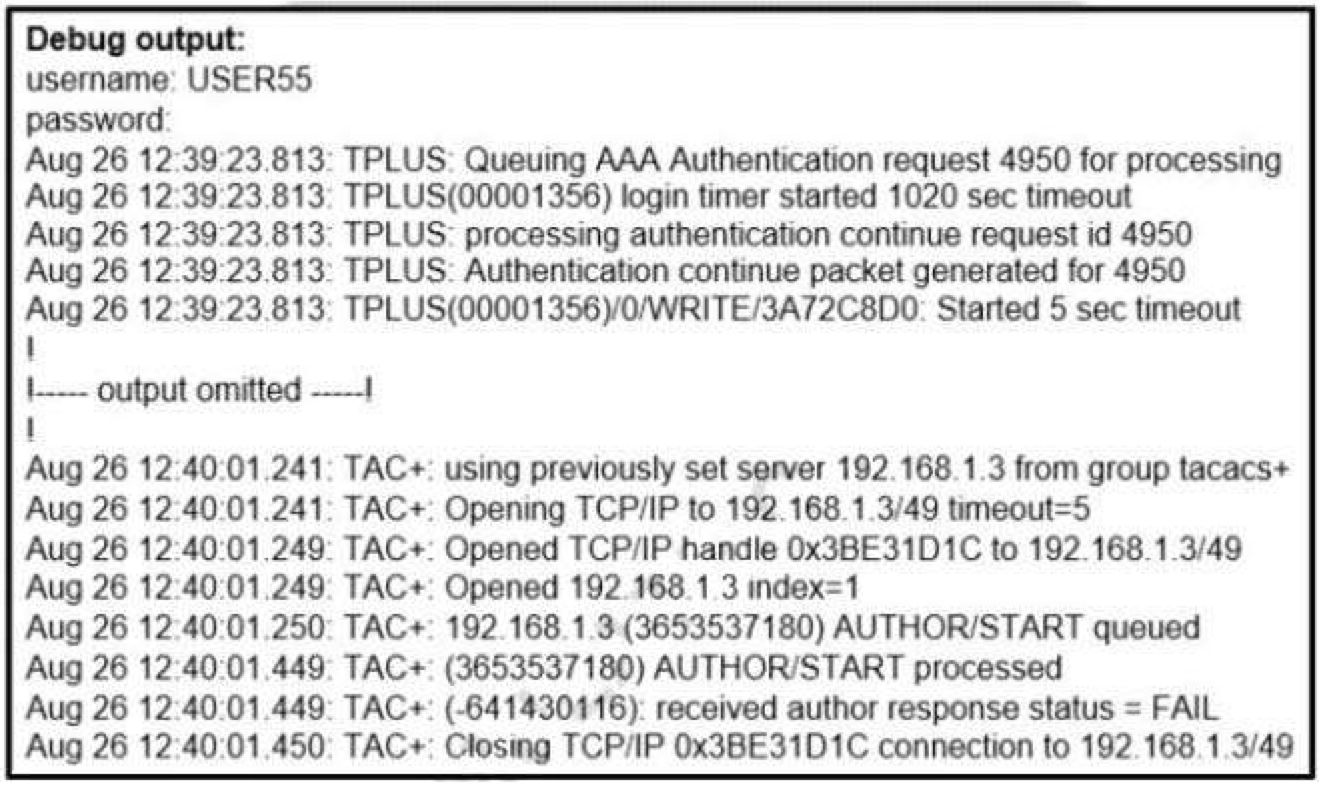
A. VACL blocking broadcast frames from nonauthorized hosts
B. PVLANs with promiscuous ports associated to route advertisements and isolated ports for nodes
C. PVLANs with community ports associated to route advertisements and isolated ports for nodes
D. IPv4 ACL blocking route advertisements from nonauthorized hosts

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The IPv6 Router Advertisement Guard feature provides support for allowing the network administrator to block or reject unwanted or rogue router advertisement guard messages that arrive at the network device platform. Router Advertisements are used by devices to announce themselves on the link. The IPv6 Router Advertisement Guard feature analyzes these router advertisements and filters out router

advertisements that are sent by unauthorized devices.
Certain switch platforms can already implement some level of rogue RA filtering by the administrator configuring Access Control Lists (ACLs) that block RA ICMP messages that might be inbound on “user” ports.

QUESTION 194
Refer to the exhibit. A network administrator logs into the router using TACACS+ username and password credentials, but the administrator cannot run any privileged commands Which action resolves the issue?



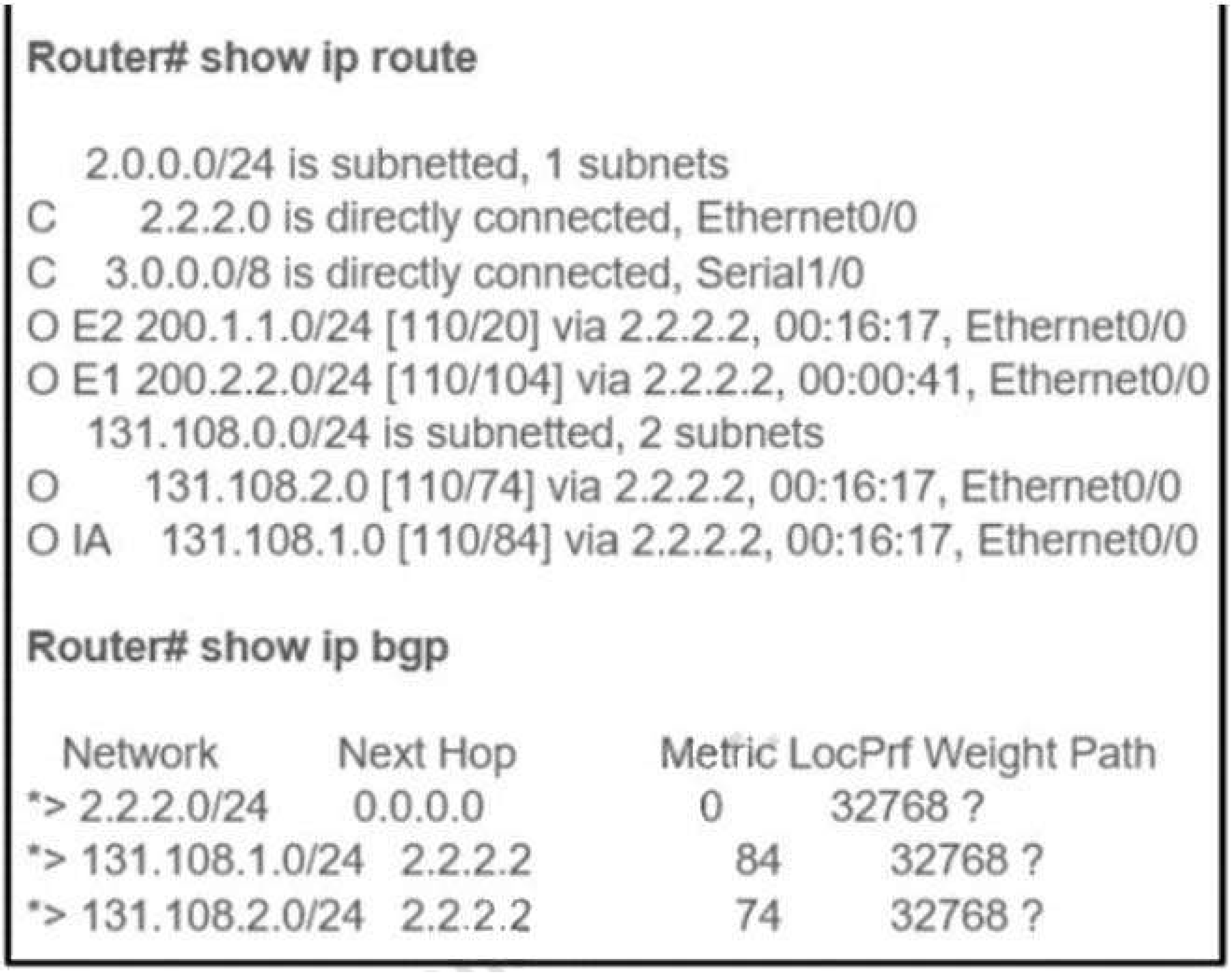
```
Debug output:
username: USER55
password:
Aug 26 12:39:23.813: TPLUS: Queuing AAA Authentication request 4950 for processing
Aug 26 12:39:23.813: TPLUS(00001356) login timer started 1020 sec timeout
Aug 26 12:39:23.813: TPLUS: processing authentication continue request id 4950
Aug 26 12:39:23.813: TPLUS: Authentication continue packet generated for 4950
Aug 26 12:39:23.813: TPLUS(00001356)/0/WRITE/3A72C8D0: Started 5 sec timeout
!
!----- output omitted -----!
!
Aug 26 12:40:01.241: TAC+: using previously set server 192.168.1.3 from group tacacs+
Aug 26 12:40:01.241: TAC+: Opening TCP/IP to 192.168.1.3/49 timeout=5
Aug 26 12:40:01.249: TAC+: Opened TCP/IP handle 0x3BE31D1C to 192.168.1.3/49
Aug 26 12:40:01.249: TAC+: Opened 192.168.1.3 index=1
Aug 26 12:40:01.250: TAC+: 192.168.1.3 (3653537180) AUTHOR/START queued
Aug 26 12:40:01.449: TAC+: (3653537180) AUTHOR/START processed
Aug 26 12:40:01.449: TAC+: (-641430116): received author response status = FAIL
Aug 26 12:40:01.450: TAC+: Closing TCP/IP 0x3BE31D1C connection to 192.168.1.3/49
```

A. Configure TACACS+ synchronization with the Active Directory admin group
B. Configure the username from a local database
C. Configure full access for the username from TACACS+ server
D. Configure an authorized IP address for this user to access this router

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 195
Refer to the exhibit. The OSPF routing protocol is redistributed into the BGP routing protocol, but not all the OSPF routes are distributed into BGP Which action resolves the issue?



```
Router# show ip route

    2.0.0.0/24 is subnetted, 1 subnets
C       2.2.2.0 is directly connected, Ethernet0/0
C    3.0.0.0/8 is directly connected, Serial1/0
O E2 200.1.1.0/24 [110/20] via 2.2.2.2, 00:16:17, Ethernet0/0
O E1 200.2.2.0/24 [110/104] via 2.2.2.2, 00:00:41, Ethernet0/0
    131.108.0.0/24 is subnetted, 2 subnets
O       131.108.2.0 [110/74] via 2.2.2.2, 00:16:17, Ethernet0/0
O IA    131.108.1.0 [110/84] via 2.2.2.2, 00:16:17, Ethernet0/0

Router# show ip bgp

  Network          Next Hop          Metric LocPrf Weight Path
*> 2.2.2.0/24      0.0.0.0              0        32768 ?
*> 131.108.1.0/24  2.2.2.2               84         32768 ?
*> 131.108.2.0/24  2.2.2.2               74         32768 ?
```

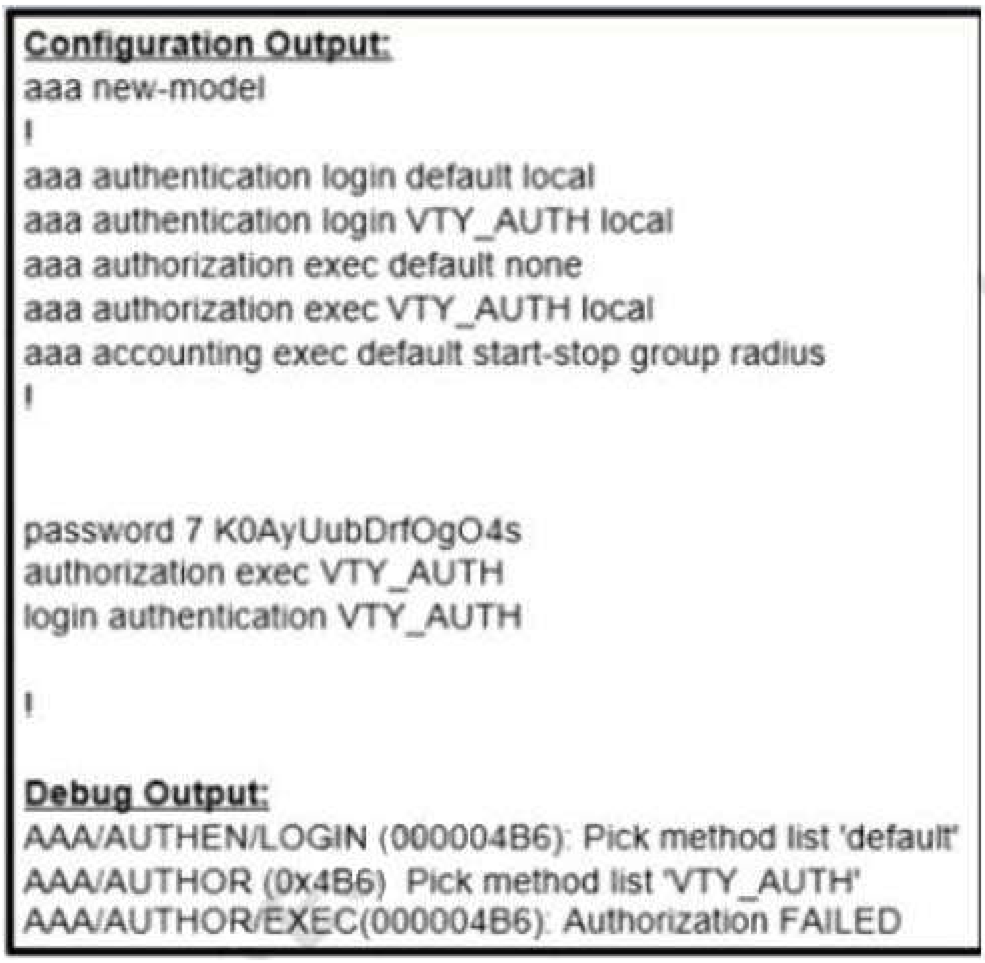
A. Include the word external in the redistribute command
B. Use a route-map command to redistribute OSPF external routes defined in an access list
C. Include the word internal external in the redistribute command
D. Use a route-map command to redistribute OSPF external routes defined in a prefix list.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
If you configure the redistribution of OSPF into BGP without keywords, only OSPF intra-area and inter-area routes are redistributed into BGP, by default. You can use the internal keyword along with the redistribute command under router bgp to redistribute OSPF intra- and inter-area routes.
Use the external keyword along with the redistribute command under router bgp to redistribute OSPF external routes into BGP.
-> In order to redistribute all OSPF routes into BGP, we must use both internal and external keywords. The full command would be (suppose we are using OSPF 1):
redistribute ospf 1 match internal external
Note: The configuration shows match internal external 1 external 2. This is normal because OSPF automatically appends "external 1 external 2" in the configuration. In other words, keyword external = external 1 external 2. External 1 = O E1 and External 2 = O E2.

Reference: Cisco

QUESTION 196
Refer to the exhibit. Which action resolves the failed authentication attempt to the router?



Configuration Output:

```
aaa new-model
!
aaa authentication login default local
aaa authentication login VTY_AUTH local
aaa authorization exec default none
aaa authorization exec VTY_AUTH local
aaa accounting exec default start-stop group radius
!


password 7 K0AyUubDrfOgO4s
authorization exec VTY_AUTH
login authentication VTY_AUTH

!
```

Debug Output:

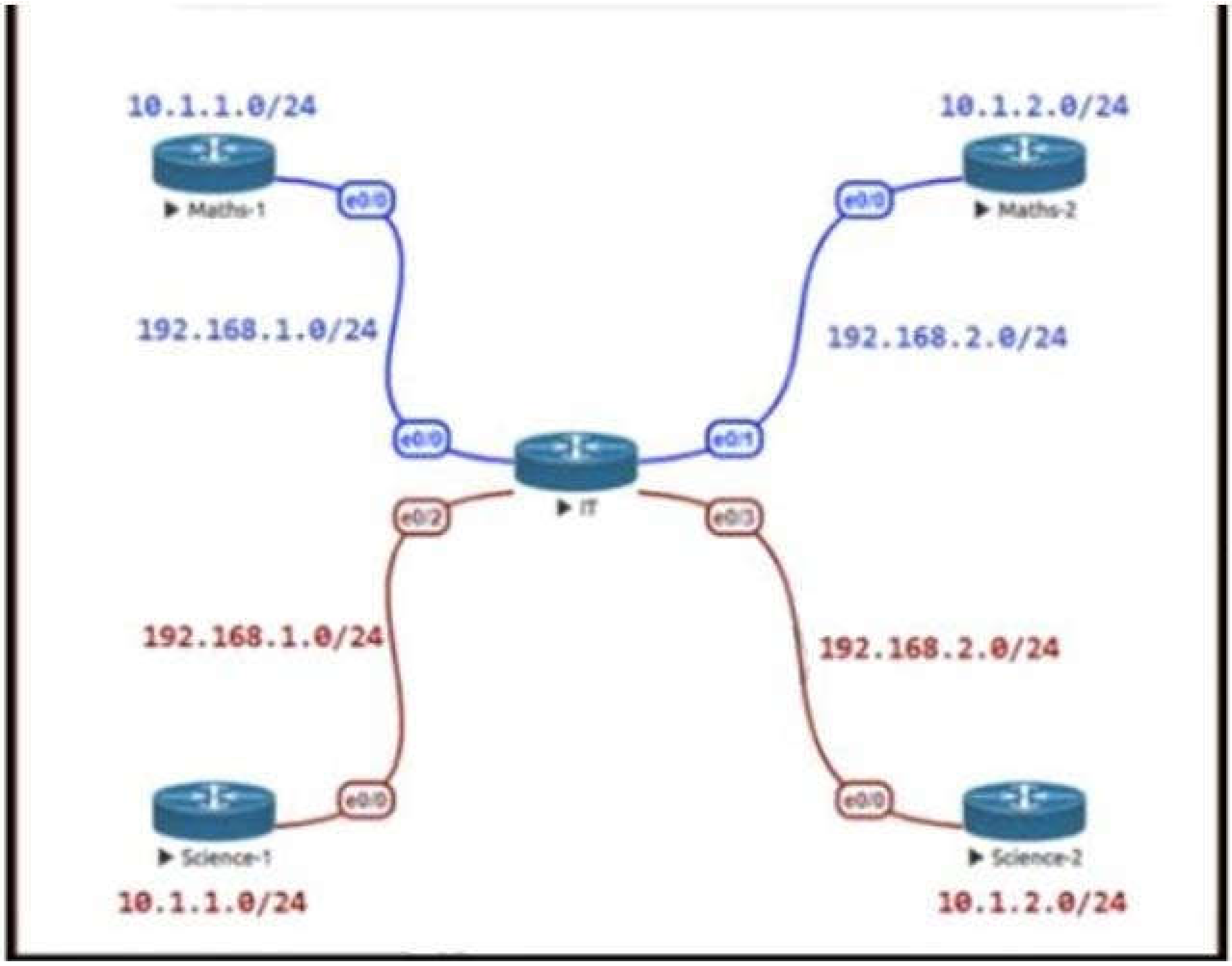
```
AAA/AUTHEN/LOGIN (000004B6): Pick method list 'default'
AAA/AUTHOR (0x4B6) Pick method list 'VTY_AUTH'
AAA/AUTHOR/EXEC(000004B6): Authorization FAILED
```

A. Configure aaa authorization login command on line vty 0 4
B. Configure aaa authorization login command on line console 0
C. Configure aaa authorization console global command
D. Configure aaa authorization console command on line vty 0 4

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
In the debug output, we see that the Authorization (not Authentication) failed so we need to correct the authorization. In order to enable authorization, we must use the global command "aaa authorization console" first.
Reference: cisco

QUESTION 197
Refer to the exhibit. The Math and Science departments connect through the corporate IT router but users in the Math department must not be able to reach the Science department and vice versa Which configuration accomplishes this task?



A. vrf definition Science
address-family ipv4
!
interface E 0/2
vrf forwarding Science
ip address 192.168.1.1 255.255.255.0
no shut
!
interface E 0/3
vrf forwarding Science
ip address 192.168.2.1 255.255.255.0
no shut

B. vrf definition Science
address family ipv4
!
interface E 0/2
ip address 192.168.1.1 255.255.255.0
no shut
!
interface E 0/3
ip address 192.168.2.1 255.255.255.0
no shut

C. vrf definition Science
!
interface E 0/2
ip address 192.168.1.1 255.255.255.0
no shut
!
interface E 0/3
ip address 192.168.2.1 255.255.255.0
no shut

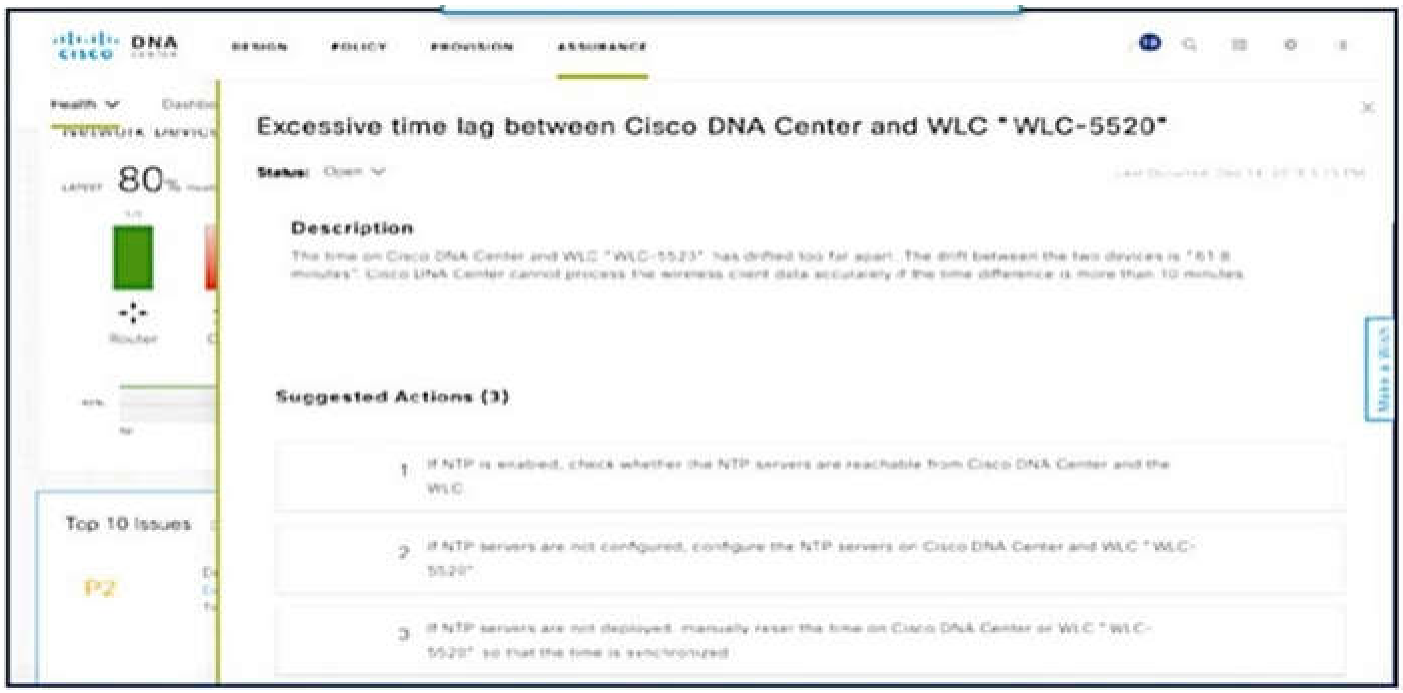
D. vrf definition Science
address-family ipv4
!
interface E 0/2
ip address 192.168.1.1 255.255.255.0
vrf forwarding Science
no shut
!
interface E 0/3
ip address 192.168.2.1 255.255.255.0

vrf forwarding Science
no shut

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 198
Refer to the exhibit. NTP is configured across the network infrastructure and Cisco DNA Center. An NTP issue was reported on the Cisco DNA Center at 17:15. Which action resolves the issue?



Excessive time lag between Cisco DNA Center and WLC "WLC-5520"

Status: Open

Description

The time on Cisco DNA Center and WLC "WLC-5523" has drifted too far apart. The drift between the two devices is "61.8 minutes". Cisco DNA Center cannot process the wireless client data accurately if the time difference is more than 10 minutes.

Suggested Actions (3)

1 If NTP is enabled, check whether the NTP servers are reachable from Cisco DNA Center and the WLC

2 If NTP servers are not configured, configure the NTP servers on Cisco DNA Center and WLC "WLC-5520"

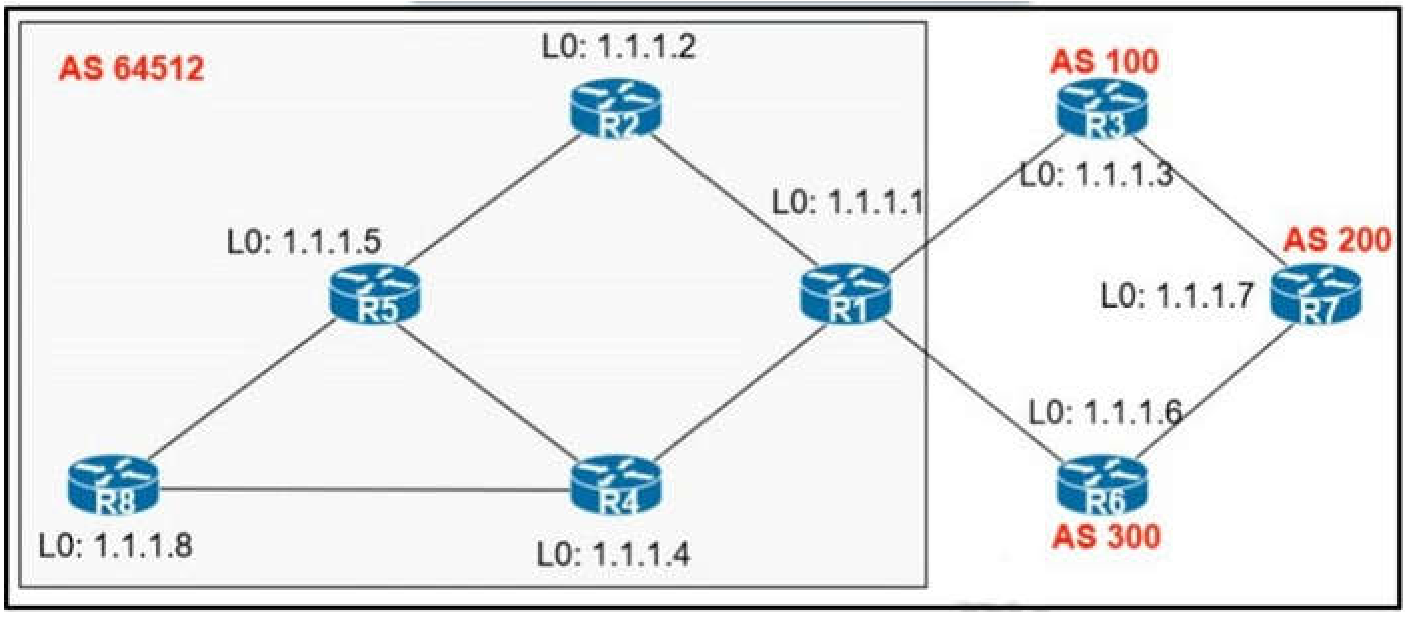
3 If NTP servers are not deployed, manually reset the time on Cisco DNA Center or WLC "WLC-5520" so that the time is synchronized

A. Check and resolve reachability between the WLC and the NTP server
B. Reset the NTP server to resolve any synchronization issues tor all devices
C. Check and resolve reachability between Cisco DNA Center and the NTP server
D. Check and configure NTP on the WLC and synchronize with Cisco DNA Center

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Excessive time lag between Cisco DNA Center and device: The time difference between Cisco DNA Center and the device IP Address has drifted too far apart. CiscoDNA Center cannot process the device data accurately if the time difference is more than 3 minutes.

QUESTION 199
Refer to the exhibit. An engineer configured R2 and R5 as route reflectors and noticed that not all routes are sent to R1 to advertise to the eBGP peers. Which iBGP routers must be configured as route reflectors to advertise all routes to restore reachability across all networks?



A. R1 and R4
B. R1 and R5
C. R4 and R5
D. R2 and R5

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
When R2 & R5 are route reflectors (RRs), routes from R4 & R8 are advertised to R5 and R5 advertises to R2. But R2 would drop them as R2 is also a RR. Thereforesome routes are missing on R1 to advertise to eBGP peers.

Good reference: https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2015/pdf/TECRST-2310.pdf Route reflectors (RR) must be fully iBGP meshed so we cannot configure RR on both R1 and R5.
We should choose routers at the center of the topology RRs, in this case R4 & R5.

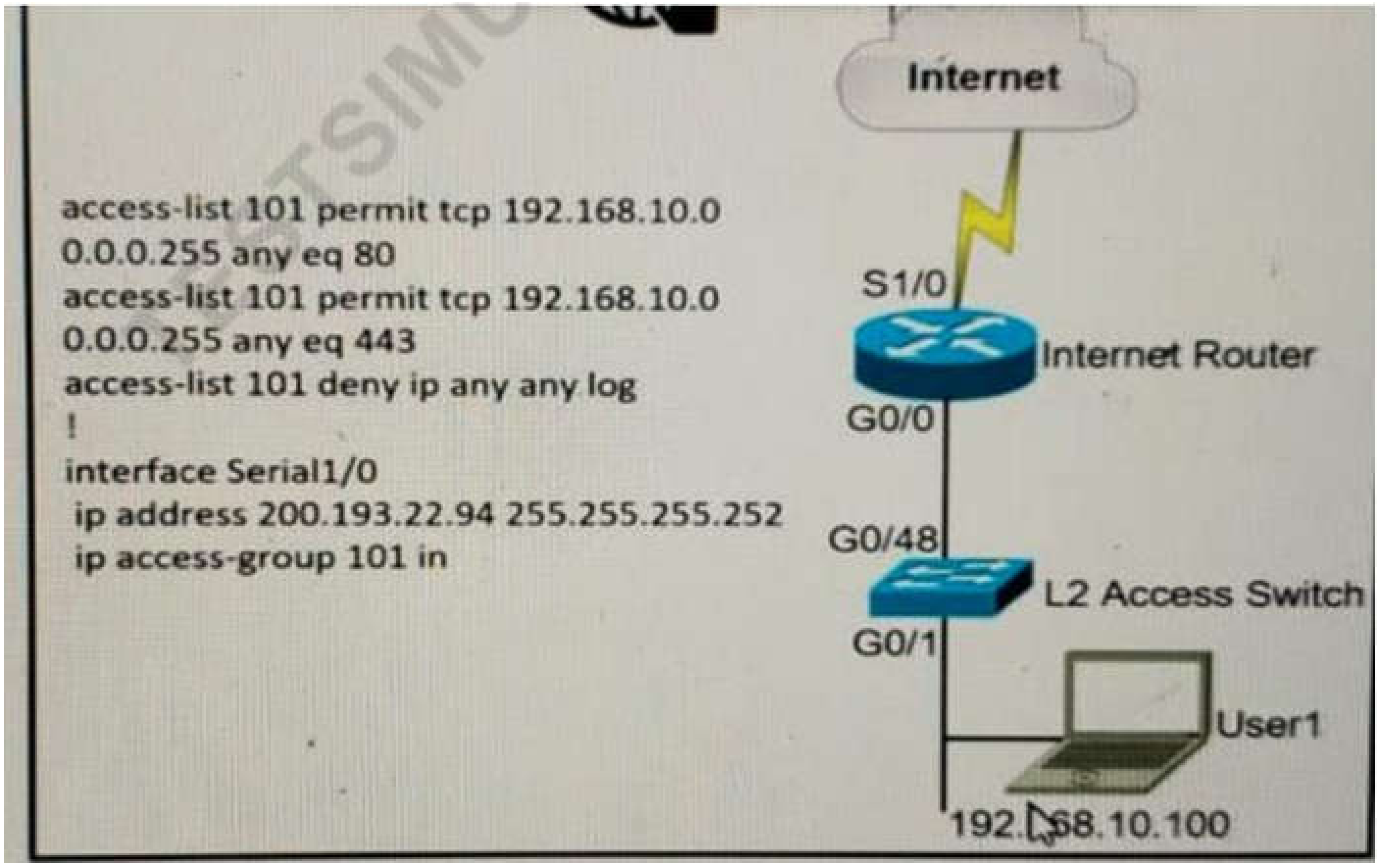
QUESTION 200
When determining if a system is capable of support, what is the minimum time spacing required for a BFD control packet to receive once a control packet is arrived?

A. Desired Min TX Interval
B. Detect Mult
C. Required Min RX Interval
D. Required Min Echo RX Interval

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 201
A network administrator is tasked to permit http and https traffic only toward the internet from the User1 laptop to adhere to company's security policy. The administrator can still ping to www.cisco.com Which interface should the access list 101 be applied to resolve this issue?



```
access-list 101 permit tcp 192.168.10.0
0.0.0.255 any eq 80
access-list 101 permit tcp 192.168.10.0
0.0.0.255 any eq 443
access-list 101 deny ip any any log
!
interface Serial1/0
 ip address 200.193.22.94 255.255.255.252
 ip access-group 101 in
```

A. Interface G0/48 in the incoming direction
B. Interface G0/0 in the outgoing direction.
C. Interface S1/0 in the outgoing direction.
D. Interface G0/0 in the incoming direction.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

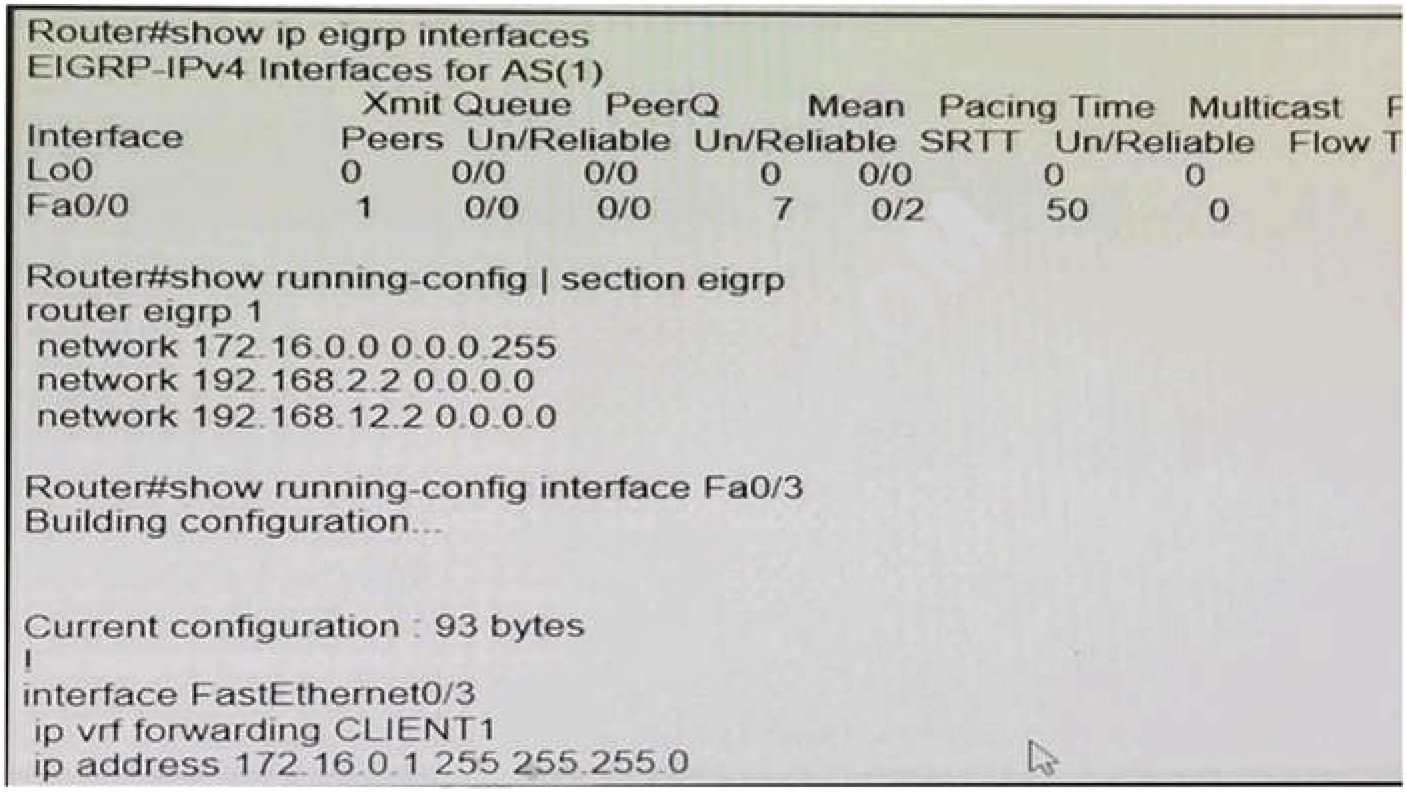
QUESTION 202
Which two protocols work in the control plane of P routers across the MPLS cloud? (choose two)

A. LSP
B. RSVP
C. ECMP
D. LDP
E. MPLS OAM

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 203
Refer to the exhibit. While troubleshooting an EIGRP neighbor adjacency problem, the network engineer notices that the interface connected to the neighboring router is not participating in the EIGRP process. Which action resolves the issues?



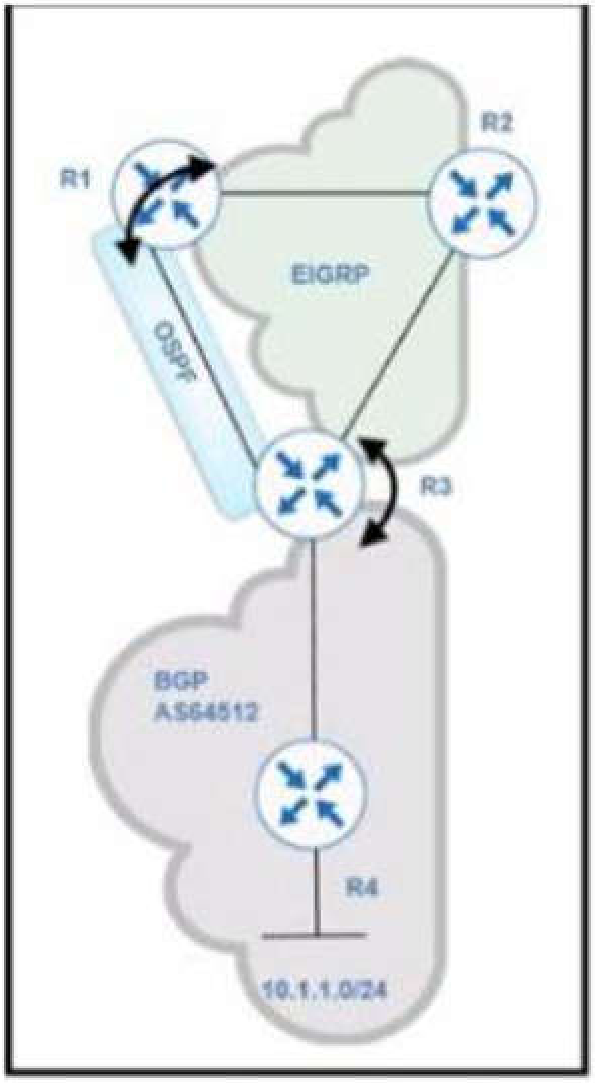
```
Router#show ip eigrp interfaces
EIGRP-IPv4 Interfaces for AS(1)
                       Xmit Queue   PeerQ       Mean   Pacing Time   Multicast   F
Interface       Peers  Un/Reliable  Un/Reliable SRTT   Un/Reliable   Flow T
Lo0               0       0/0        0/0         0      0/0           0           0
Fa0/0             1       0/0        0/0         7      0/2           50          0

Router#show running-config | section eigrp
router eigrp 1
 network 172.16.0.0 0.0.0.255
 network 192.168.2.2 0.0.0.0
 network 192.168.12.2 0.0.0.0

Router#show running-config interface Fa0/3
Building configuration...


Current configuration : 93 bytes
!
interface FastEthernet0/3
 ip vrf forwarding CLIENT1
 ip address 172.16.0.1 255.255.255.0
```

A. Configure the network command to network 172.16.0.1 0.0.0.0
B. Configure the network command under EIGRP address family vrf CLIENT1
C. Configure EIGRP metrics on interface FastEthernet0/3
D. Configure the network command under EIGRP address family ipv4

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 204
Refer to the exhibit BGP and EIGRP are mutually redistributed on R3, and EIGRP and OSPF are mutually redistributed on R1. Users report packet loss and interruption of service to applications hosted on the 10.1.1.0/24 prefix. An engineer tested the link from R3 to R4 with no packet loss present but has noticed frequent routing changes on R3 when running the debug ip route command. Which action stabilizes the service?



A. Reduce frequent OSPF SPF calculations on R3 that cause a high CPU and packet loss on traffic traversing R3.
B. Tag the 10.1.1.0/24 prefix and deny the prefix from being redistributed into OSPF on R1.
C. Repeat the test from R4 using ICMP ping on the local 10.1.1.0/24 prefix, and fix any Layer 2 errors on the host or switch side of the subnet.
D. Place an OSPF distribute-list outbound on R3 to block the 10.1.1.0/24 prefix from being advertised back to R3.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 205
How is VPN routing information distributed in an MPLS network?

A. It is controlled through the use of RD.
B. The top level of the customer data packet directs it to the correct CE device.
C. It is established using VPN IPsec peers.
D. It is controlled using of VPN target communities.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 206
A network administrator is troubleshooting a high utilization issue on the route processor of a router that was reported by NMS. The administrator logged into the router to check the control plane policing and observed that the BGP process is dropping a high number of routing packets and causing thousands of routes to recalculate frequently. Which solution resolves this issue?

A. Police the pir for BGP, conform action set-prec-transmit, and exceed action set-clp-transmit.
B. Police the cir for BGP, conform action transmit, and exceed action transmit
C. Shape the cir for BGP, conform-action transmit and exceed action transmit

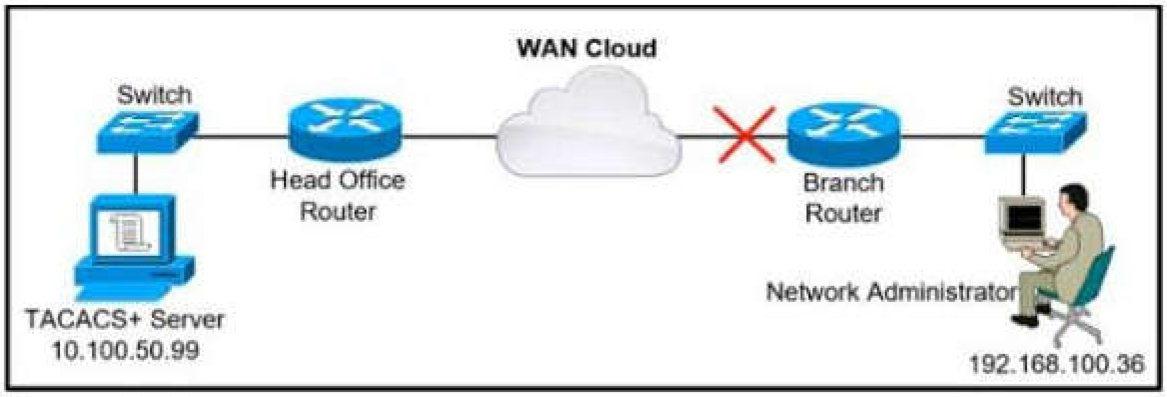
D. Shape the pir for BGP, conform-action set-prec-transmit, and exceed action set-frde-transmit.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 207
Refer to the exhibit. A network administrator is trying to access a branch router using TACACS+ usemame and password credentials, but the administrator cannot log in to the router because the WAN connectivity is down. The branch router has following AAA configuration:

aaa new-model
aaa authorization commands 15 default group tacacs+
aaa accounting commands 1 default stop-only group tacacs+
aaa accounting commands 15 default stop-only group tacacs+ tacacs-server host 10.100.50.99
tacacs-server key Cisco123.



A. aaa authentication login default group tacacs+ local
B. aaa authentication login console group tacacst enable
C. aaa authentication login default group tacacs+ console
D. aaa authentication login default group tacacst+ enable

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

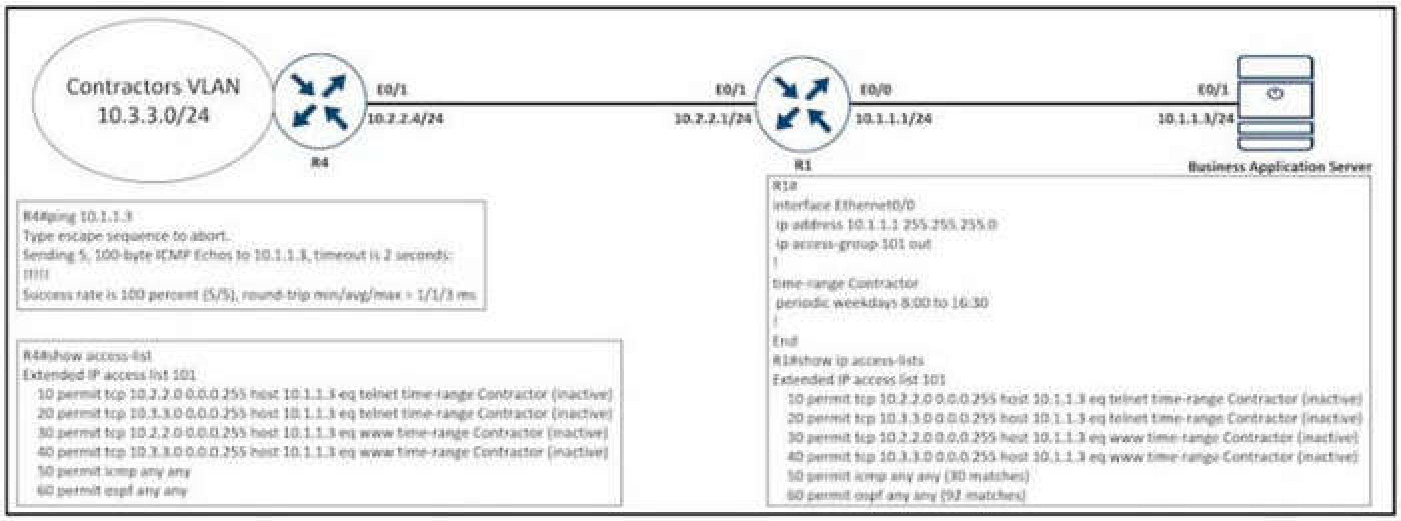
QUESTION 208
What are two characteristics of IPv6 Source Guard? (Choose two.)

A. requires IPv6 snooping on Layer 2 access or trunk ports
B. used in service provider deployments to protect DDoS attacks
C. requires the user to configure a static binding
D. requires that validate prefix be enabled
E. recovers missing binding table entries

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 209
Refer to the exhibit. An engineer is troubleshooting failed access by contractors to the business application server via Telnet or HTTP during the weekend. Which configuration resolves the issue?



```
R4#ping 10.1.1.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.1.1.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/3 ms
```

```
R4#show access-list
Extended IP access list 101
    10 permit tcp 10.2.2.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor (inactive)
    20 permit tcp 10.3.3.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor (inactive)
    30 permit tcp 10.2.2.0 0.0.0.255 host 10.1.1.3 eq www time-range Contractor (inactive)
    40 permit tcp 10.3.3.0 0.0.0.255 host 10.1.1.3 eq www time-range Contractor (inactive)
    50 permit icmp any any
    60 permit ospf any any
```

```
R1#
interface Ethernet0/0
 ip address 10.1.1.1 255.255.255.0
 ip access-group 101 out
!
time-range Contractor
 periodic weekdays 8:00 to 16:30
!
End
R1#show ip access-lists
Extended IP access list 101
    10 permit tcp 10.2.2.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor (inactive)
    20 permit tcp 10.3.3.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor (inactive)
    30 permit tcp 10.2.2.0 0.0.0.255 host 10.1.1.3 eq www time-range Contractor (inactive)
    40 permit tcp 10.3.3.0 0.0.0.255 host 10.1.1.3 eq www time-range Contractor (inactive)
    50 permit icmp any any (30 matches)
    60 permit ospf any any (92 matches)
```

A. R1
no access-list 101 permit tcp 10.3.3.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor

B. R1
time-range Contractor
no periodic weekdays 8:00 to 16:30
periodic daily 8:00 to 16:30

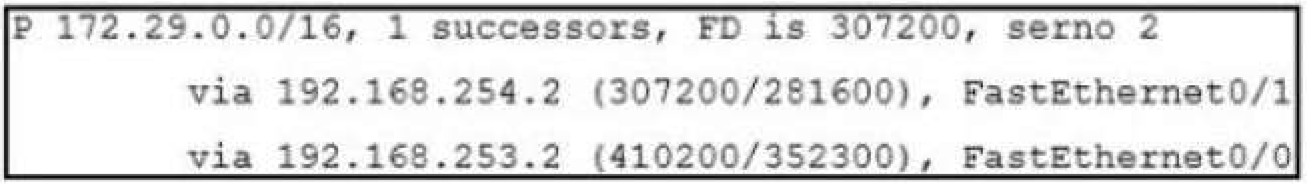
C. R4
time-range Contractor
no periodic weekdays 17:00 to 23:59
periodic daily 8:00 to 16:30

D. R4
no access-list 101 permit top 10.3.3.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 210
Refer to the exhibit. When the FastEthemet0/1 goes down, the route to 172.29.0.0/16 via 192.168.253.2 is not installed in the RIB, Which action resolves the issue?



```
P 172.29.0.0/16, 1 successors, FD is 307200, serno 2
        via 192.168.254.2 (307200/281600), FastEthernet0/1
        via 192.168.253.2 (410200/352300), FastEthernet0/0
```

A. Configure feasible distance greater than the successor’s feasible distance.
B. Configure reported distance greater than the successor’s feasible distance.
C. Configure feasible distance greater than the reported distance.
D. Configure reported distance greater than the feasible distance.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 211
IPV6 is enabled in the infrastructure to support customers with an IPv6 network over WAN and to connect the head office to branch offices in the local network. One of the customers is already running IPv6 and wants to enable IPv6 over the DMVPN network infrastructure between the headend and branch sites. Which configuration command must be applied to establish an mGRE IPV6 tunnel neighborship?

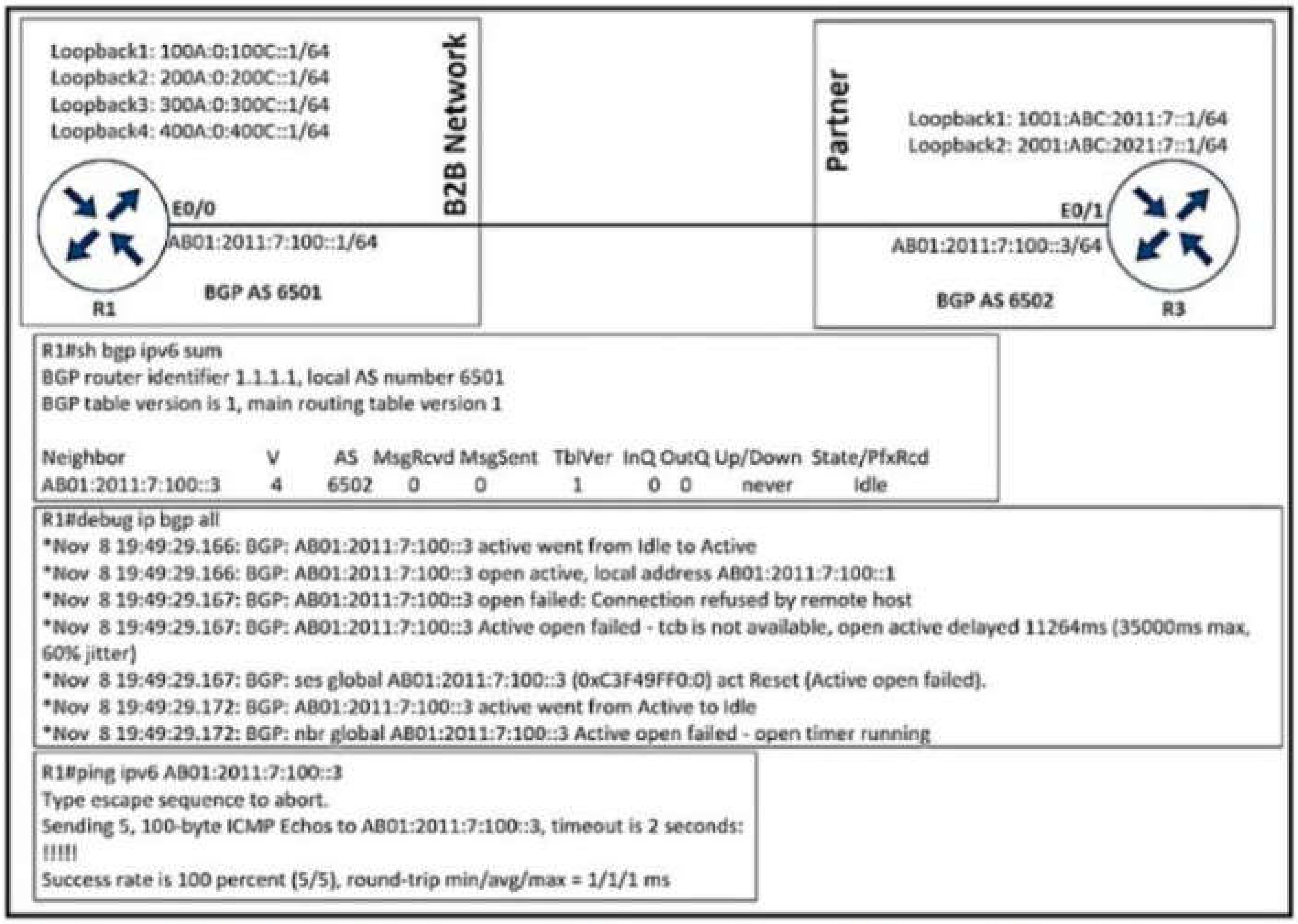
A. ipv6 unicast-routing
B. tunnel mode gre multipoint ipv6
C. ipv6 nhrp holdtime 30
D. tunnel protection mode ipv6

Correct Answer: B

Section: (none)
Explanation

Explanation/Reference:

QUESTION 212
Refer to the exhibit. An engineer configured BGP between routers R1 and R3. The BGP peers cannot establish neighbor adjacency to be able to exchange routes. Which configuration resolves this issue?


Loopback1: 100A:0:100C::1/64
Loopback2: 200A:0:200C::1/64
Loopback3: 300A:0:300C::1/64
Loopback4: 400A:0:400C::1/64
B2B Network
E0/0
AB01:2011:7:100::1/64
R1
BGP AS 6501
Partner
Loopback1: 1001:ABC:2011:7::1/64
Loopback2: 2001:ABC:2021:7::1/64
E0/1
AB01:2011:7:100::3/64
BGP AS 6502
R3

```
R1#sh bgp ipv6 sum
BGP router identifier 1.1.1.1, local AS number 6501
BGP table version is 1, main routing table version 1

Neighbor            V      AS  MsgRcvd MsgSent   TblVer  InQ OutQ Up/Down  State/PfxRcd
AB01:2011:7:100::3  4    6502     0        0        1      0   0    never      Idle
```

```
R1#debug ip bgp all
*Nov  8 19:49:29.166: BGP: AB01:2011:7:100::3 active went from Idle to Active
*Nov  8 19:49:29.166: BGP: AB01:2011:7:100::3 open active, local address AB01:2011:7:100::1
*Nov  8 19:49:29.167: BGP: AB01:2011:7:100::3 open failed: Connection refused by remote host
*Nov  8 19:49:29.167: BGP: AB01:2011:7:100::3 Active open failed - tcb is not available, open active delayed 11264ms (35000ms max,
60% jitter)
*Nov  8 19:49:29.167: BGP: ses global AB01:2011:7:100::3 (0xC3F49FF0:0) act Reset (Active open failed).
*Nov  8 19:49:29.172: BGP: AB01:2011:7:100::3 active went from Active to Idle
*Nov  8 19:49:29.172: BGP: nbr global AB01:2011:7:100::3 Active open failed - open timer running
```

```
R1#ping ipv6 AB01:2011:7:100::3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to AB01:2011:7:100::3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
```

A. R3
router bgp 6502
neighbor AB01:2011:7:100::1 ebgp-multihop 255

B. R1
router bgp 6501
address-family ipv6
neighbor AB01:2011:7:100::3 activate

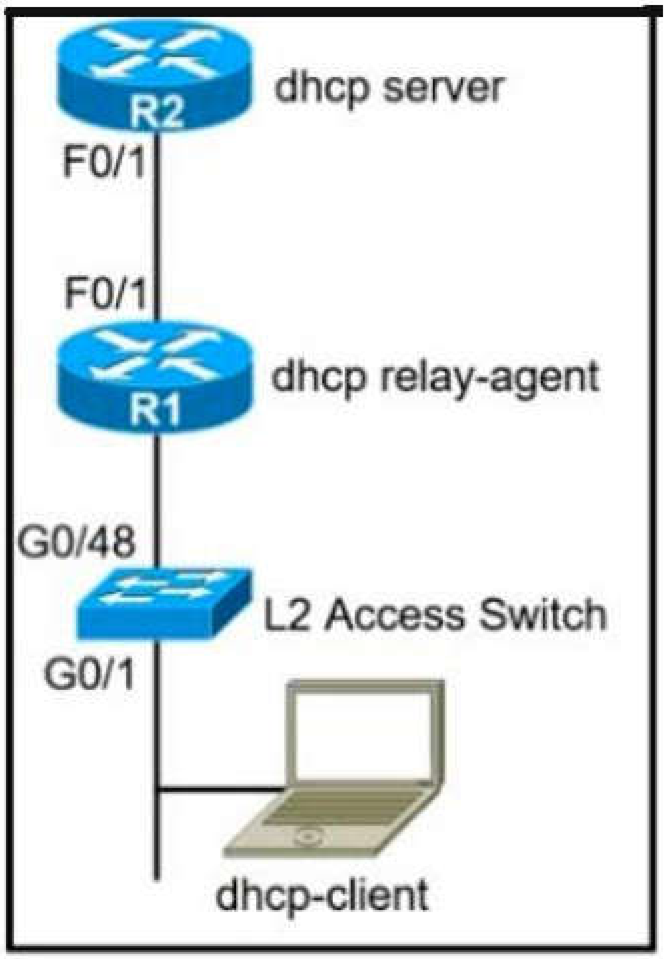
C. R1
router bgp 6501
neighbor AB01:2011:7:100::3 ebgp-multihop 255

D. R3
router bgp 6502
address-family ipv6
neighbor AB01:2011:7:100::1 activate

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 213
Refer to the exhibit. The network administrator can see the DHCP discovery packet in R1, but R2 is not replying to the DHCP request. The R1 related interface is configured with the DHCP helper address. If the PC is directly connected to the Fa0/1 interface on R2, the DHCP server assigns as IP address from the DHCP pool to the PC. Which two commands resolve this issue? (Choose two)



A. service dhcp command on R1
B. ip dhcp relay information trust-all command on R2
C. service dhcp-relay command on R1
D. ip dhcp option 82 command on R2
E. ip dhcp relay information enable command on R1

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

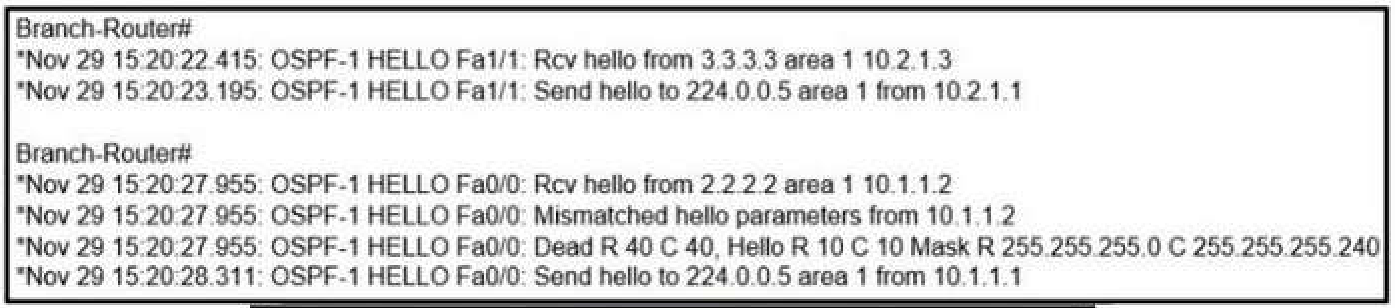
QUESTION 214
Which mechanism must be chosen to optimize the reconvergence time for OSPF at company location 408811049 that is less CPU-intensive than reducing the hello and dead timers?

A. SSO
B. BFD
C. Dead Peer Detection keepalives
D. OSPF demand circuit

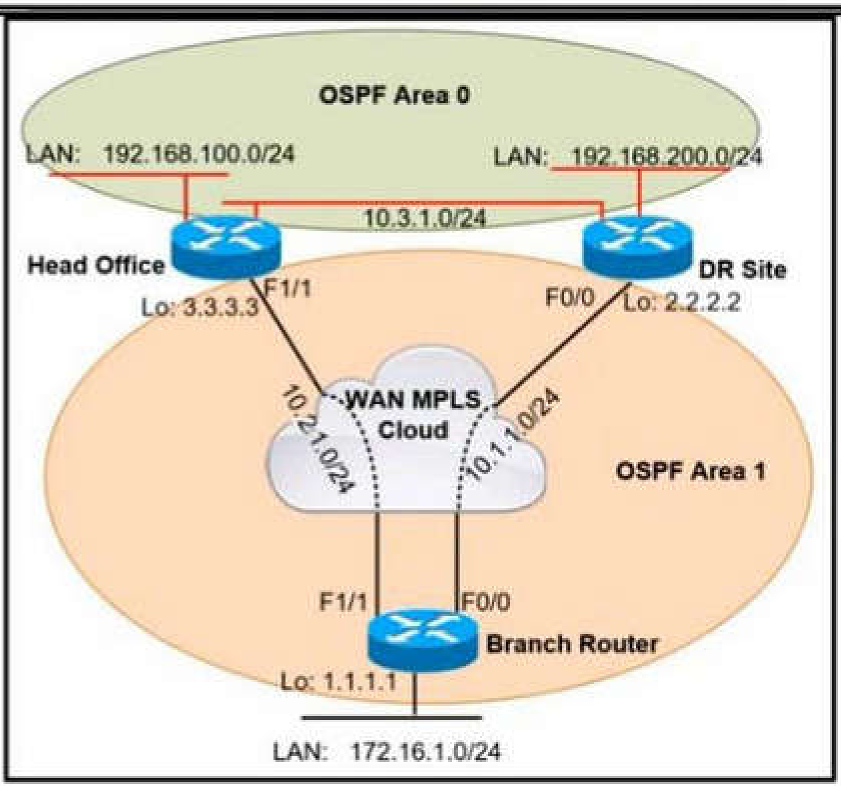
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 215
Refer to the exhibit. A network administrator reviews the branch router console log to troubleshoot the OSPF adjacency issue with the DR router. Which action resolves this issue?



```
Branch-Router#
*Nov 29 15:20:22.415: OSPF-1 HELLO Fa1/1: Rcv hello from 3.3.3.3 area 1 10.2.1.3
*Nov 29 15:20:23.195: OSPF-1 HELLO Fa1/1: Send hello to 224.0.0.5 area 1 from 10.2.1.1

Branch-Router#
*Nov 29 15:20:27.955: OSPF-1 HELLO Fa0/0: Rcv hello from 2.2.2.2 area 1 10.1.1.2
*Nov 29 15:20:27.955: OSPF-1 HELLO Fa0/0: Mismatched hello parameters from 10.1.1.2
*Nov 29 15:20:27.955: OSPF-1 HELLO Fa0/0: Dead R 40 C 40, Hello R 10 C 10 Mask R 255.255.255.0 C 255.255.255.240
*Nov 29 15:20:28.311: OSPF-1 HELLO Fa0/0: Send hello to 224.0.0.5 area 1 from 10.1.1.1
```



A. Configure matching hello and dead intervals between sites
B. Configure the WAN interface for DR site in the related OSPF area
C. Advertise the branch WAN interface matching subnet for the DR site
D. Stabilize the DR site flapping link to establish OSPF adjacency

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

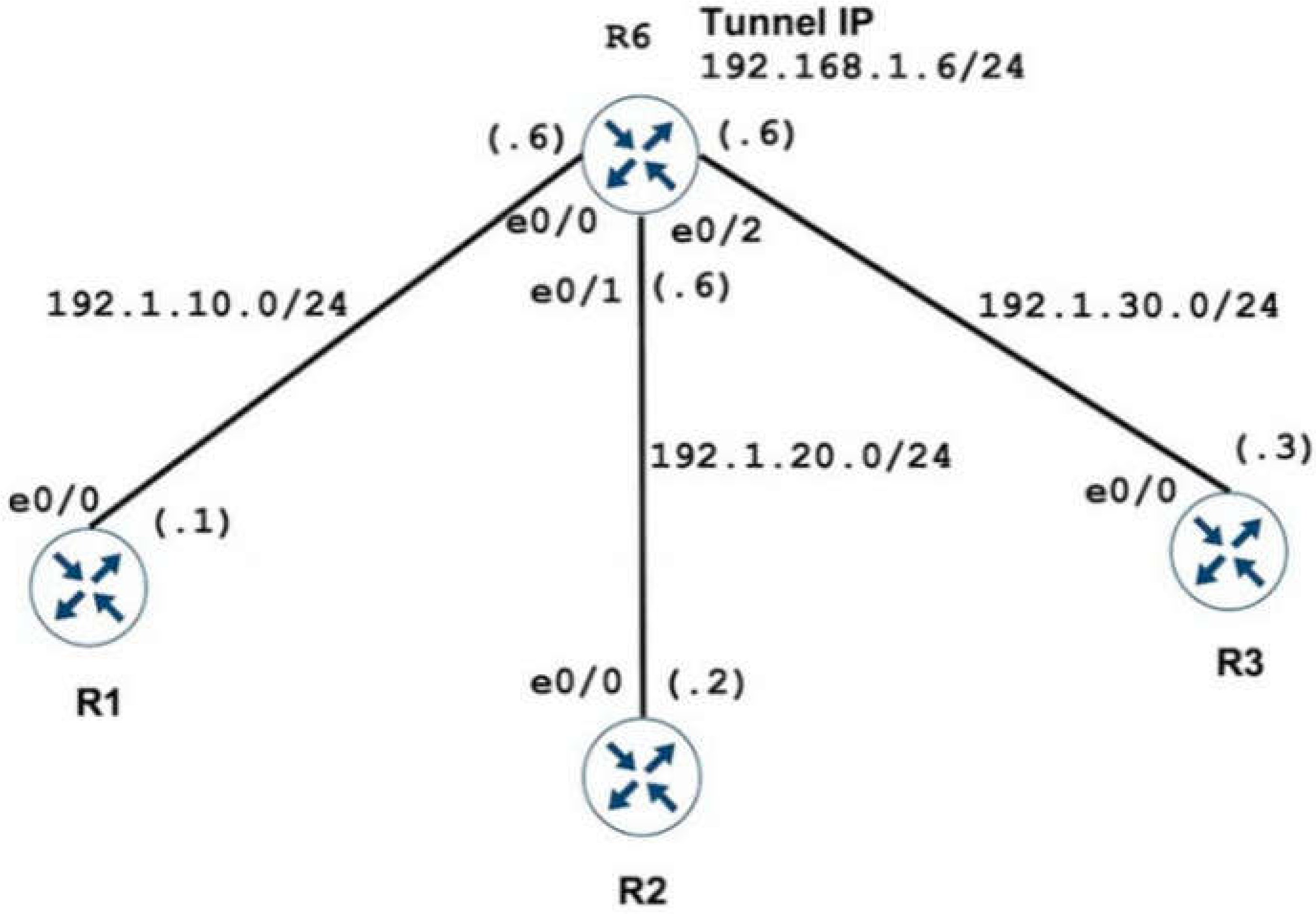
QUESTION 216
Users report issues with reachability between areas as soon as an engineer configured summary routes between areas in a multiple area OSPF autonomous system. Which action resolves the issue?

A. Configure the summary-address command on the ABR.
B. Configure the area range command on the ASBR.
C. Configure the summary-address command on the ASBR.
D. Configure the area range command on the ABR.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 217
Refer to the exhibit. An engineer must establish multipoint GRE tunnels between hub router R6 and branch routers R1, R2, and R3. Which configuration accomplishes this task on R1?



A. interface Tunnel 1
ip address 192.168.1.1 255.255.255.0
tunnel source e0/1
tunnel mode gre multipoint
ip nhrp network-id 1
ip nhrp nhs 192.168.1.6
ip nhrp map 192.168.1.6 192.1.10.1
ip nhrp map 192.168.1.2 192.1.20.2
ip nhrp map 192.168.1.3 192.1.30.3

B. interface Tunnel 1
ip address 192.168.1.1 255.255.255.0
tunnel source e0/0
tunnel mode gre multipoint
ip nhrp nhs 192.168.1.6
ip nhrp map 192.168.1.6 192.1.10.1
ip nhrp map 192.168.1.2 192.1.20.2
ip nhrp map 192.168.1.3 192.1.30.3

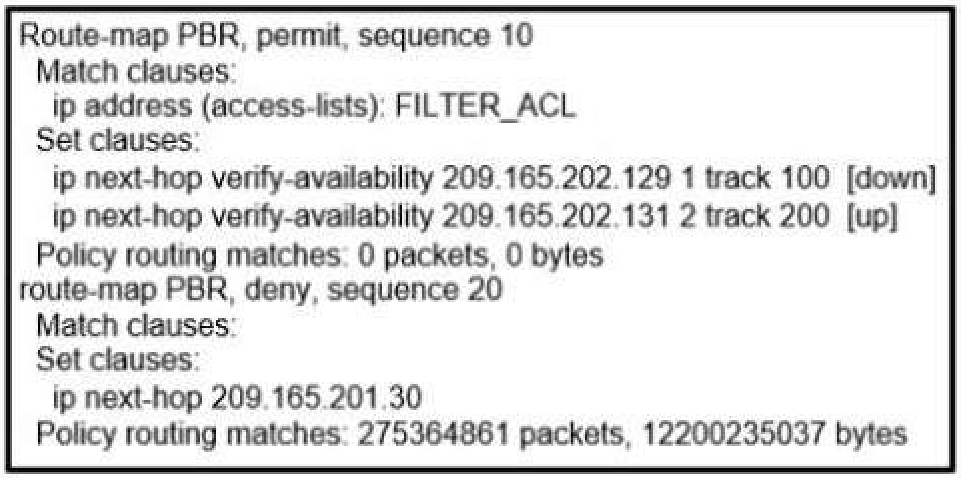
C. interface Tunnel 1
ip address 192.168.1.1 255.255.255.0
tunnel source e0/1
tunnel mode gre multipoint
ip nhrp nhs 192.168.1.6
ip nhrp map 192.168.1.6 192.1.10.6

D. interface Tunnel 1
ip address 192.168.1.1 255.255.255.0
tunnel source e0/0
tunnel mode gre multipoint
ip nhrp network-id 1
ip nhrp nhs 192.168.1.6
ip nhrp map 192.168.1.6 192.1.10.6

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 218
Refer to the exhibit. An engineer has configured policy-based routing and applied the configuration to the correct interface. How is the configuration applied to the traffic that matches the access list?



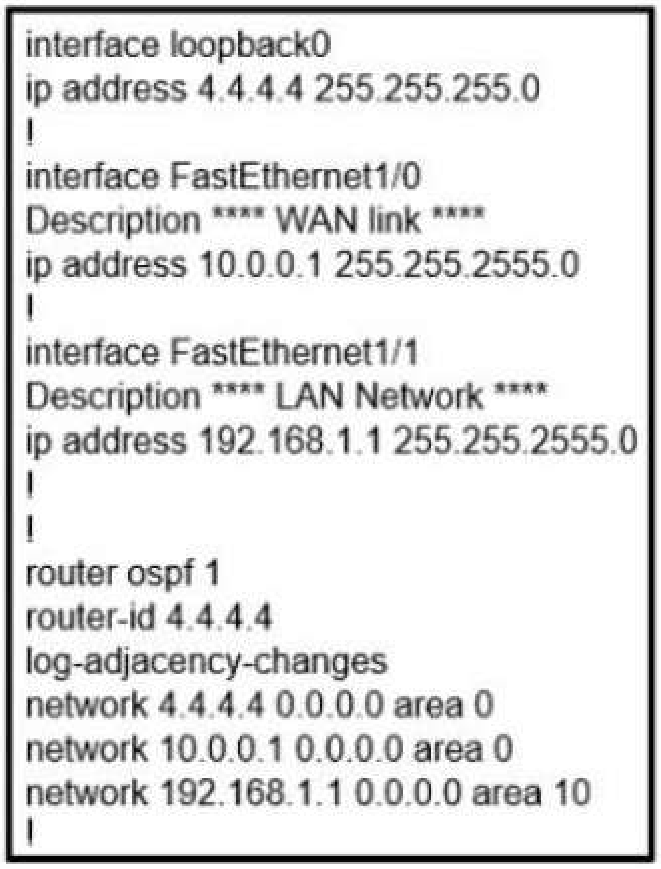
```
Route-map PBR, permit, sequence 10
  Match clauses:
    ip address (access-lists): FILTER_ACL
  Set clauses:
    ip next-hop verify-availability 209.165.202.129 1 track 100  [down]
    ip next-hop verify-availability 209.165.202.131 2 track 200  [up]
  Policy routing matches: 0 packets, 0 bytes
route-map PBR, deny, sequence 20
  Match clauses:
  Set clauses:
    ip next-hop 209.165.201.30
  Policy routing matches: 275364861 packets, 12200235037 bytes
```

A. It is dropped
B. It is forwarded using the routing table lookup
C. It is sent to 209.165.202.131.
D. It is sent to 209.165.202.129.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 219
Refer to the exhibit. Which set of commands restore reachability to loopback0?



```
interface loopback0
ip address 4.4.4.4 255.255.255.0
!
interface FastEthernet1/0
Description **** WAN link ****
ip address 10.0.0.1 255.255.2555.0
!
interface FastEthernet1/1
Description **** LAN Network ****
ip address 192.168.1.1 255.255.2555.0
!
!
router ospf 1
router-id 4.4.4.4
log-adjacency-changes
network 4.4.4.4 0.0.0.0 area 0
network 10.0.0.1 0.0.0.0 area 0
network 192.168.1.1 0.0.0.0 area 10
!
```

A. interface loopback0
ip address 4.4.4.4 255.255.255.0
ip ospf interface type network
B. interface loopback0
ip address 4.4.4.4 255.255.255.0
ip ospf network broadcast
C. interface loopback0
ip address 4.4.4.4 255.255.255.0
ip ospf network point-to-point
D. interface loopback0
ip address 4.4.4.4 255.255.255.0
ip ospf interface area 10

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

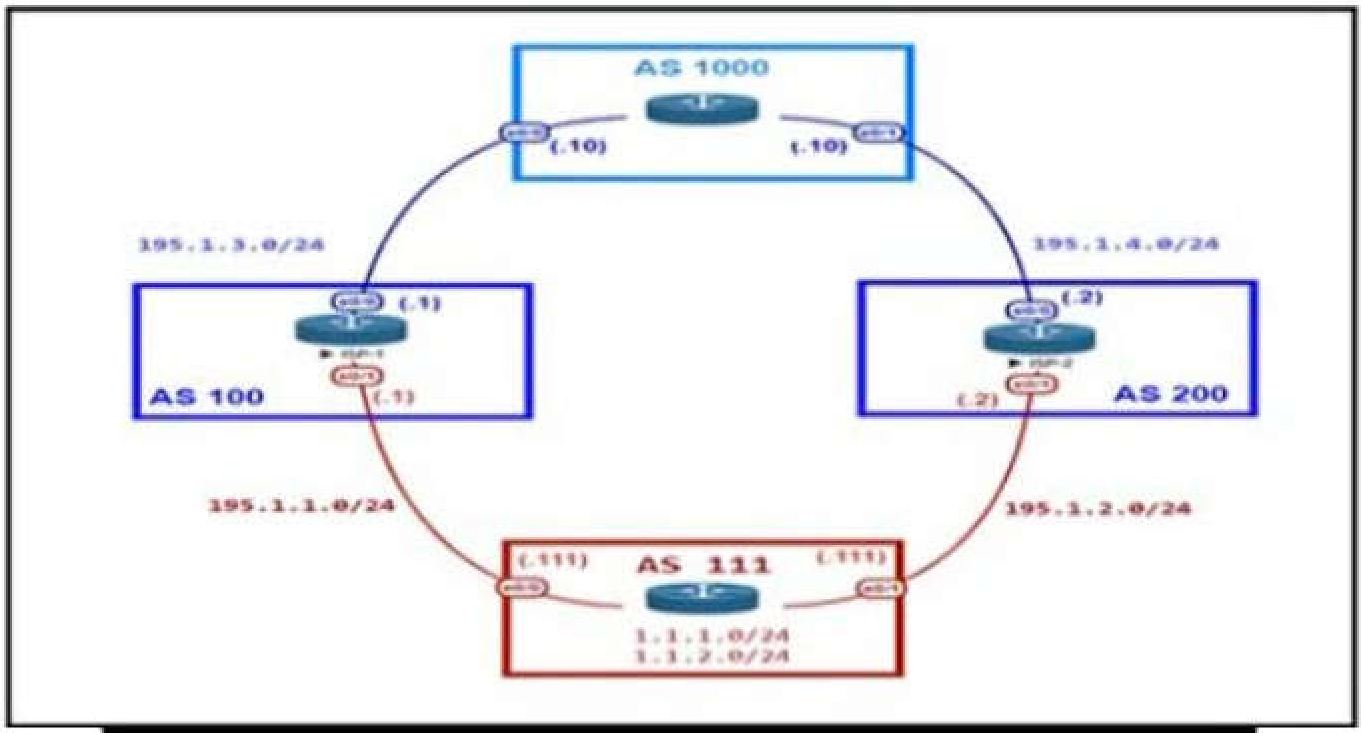
QUESTION 220
A network administrator performed a Compact Flash Memory upgrade on a Cisco Catalyst 6509 Switch. Everything is functioning normally except SNMP, which was configured to monitor the bandwidth of key interfaces but the interface indexes are changed. Which global configuration resolves the issue?

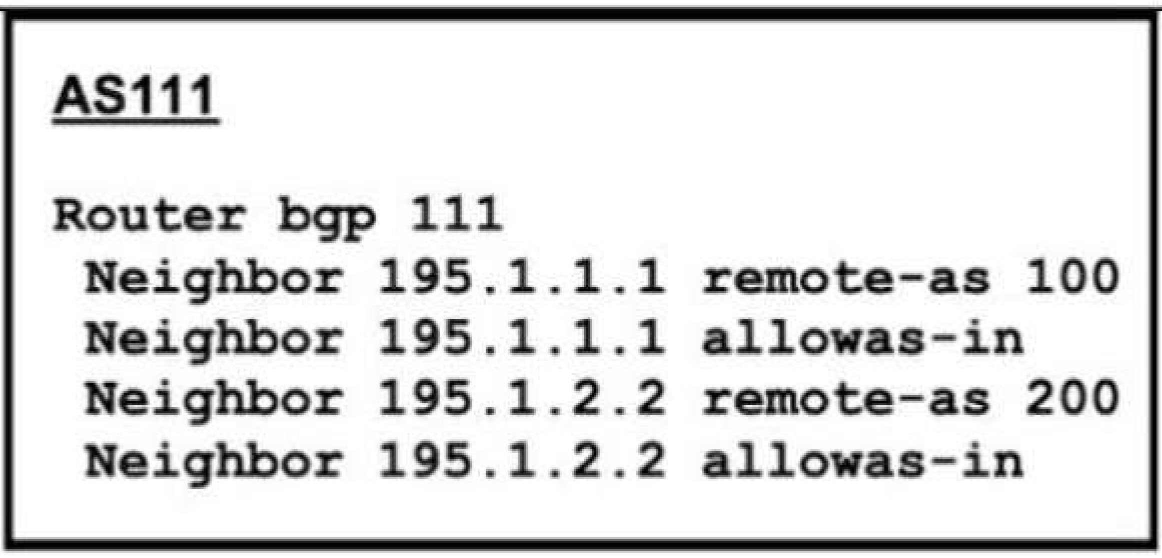
A. snmp-server ifindex permanent
B. snmp ifindex permanent
C. snmp-server ifindex persist
D. snmp ifindex persist

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 221
Refer to the exhibit. AS111 is receiving its own routes from AS200 causing a loop in the network. Which configuration provides loop prevention?





AS111

```
Router bgp 111
 Neighbor 195.1.1.1 remote-as 100
 Neighbor 195.1.1.1 allowas-in
 Neighbor 195.1.2.2 remote-as 200
 Neighbor 195.1.2.2 allowas-in
```

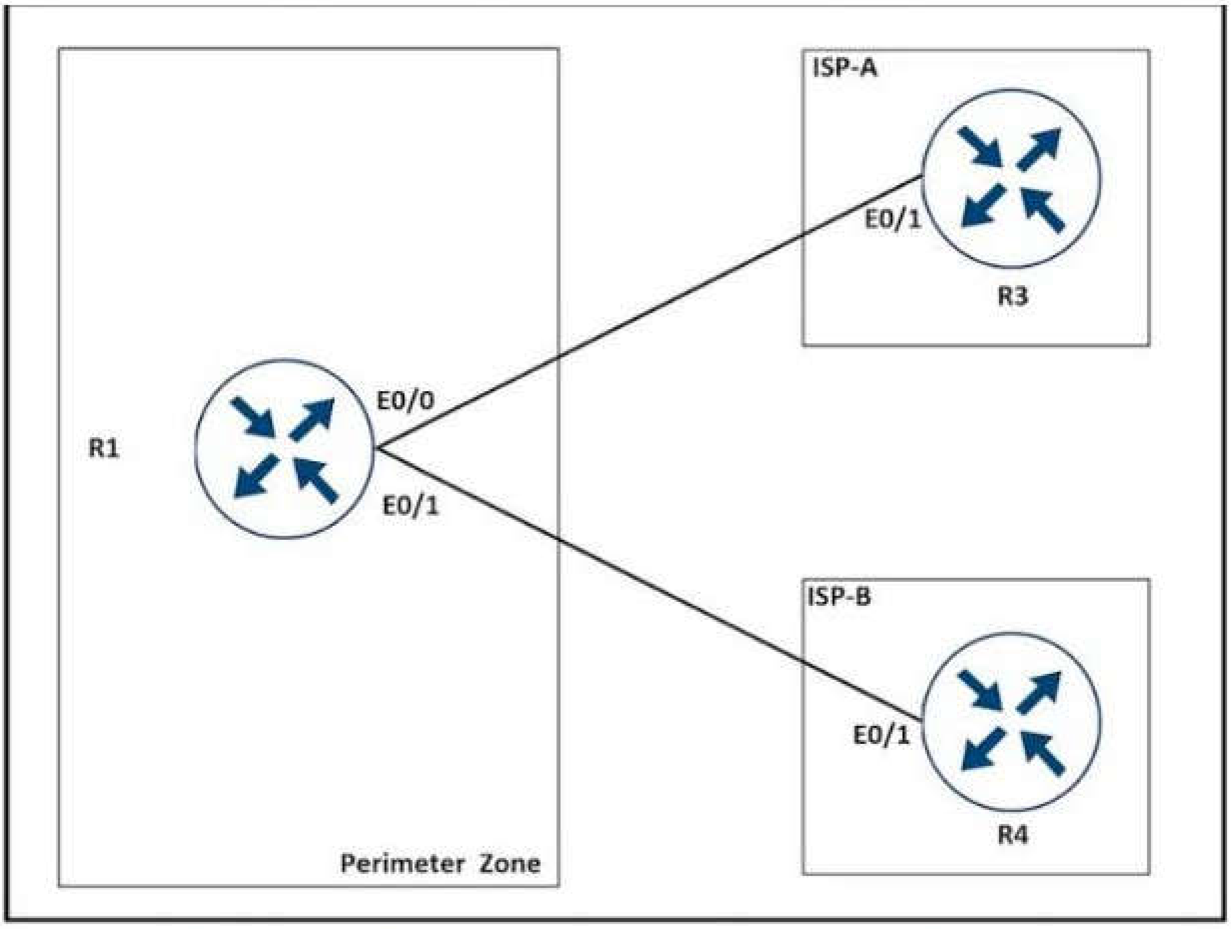
A. router bgp 111
neighbor 195.1.1.1 as-override
no neighbor 195.1.2.2 allowas-in

B. router bgp 111
   neighbor 195.1.2.2 as-override
   no neighbor 195.1.1.1 allowas-in
C. router bgp 111
   neighbor 195.1.1.1 as-override
   neighbor 195.1.2.2 as-override
D. router bgp 111
   no neighbor 195.1.1.1 allowas-in
   no neighbor 195.1.2.2 allowas-in

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 222
Refer to the exhibit. A network is under a cyberattack. A network engineer connected to R1 by SSH and enabled the terminal monitor via SSH session to find the source and destination of the attack. The session was flooded with messages, which made it impossible for the engineer to troubleshoot the issue. Which command resolves this issue on R1?

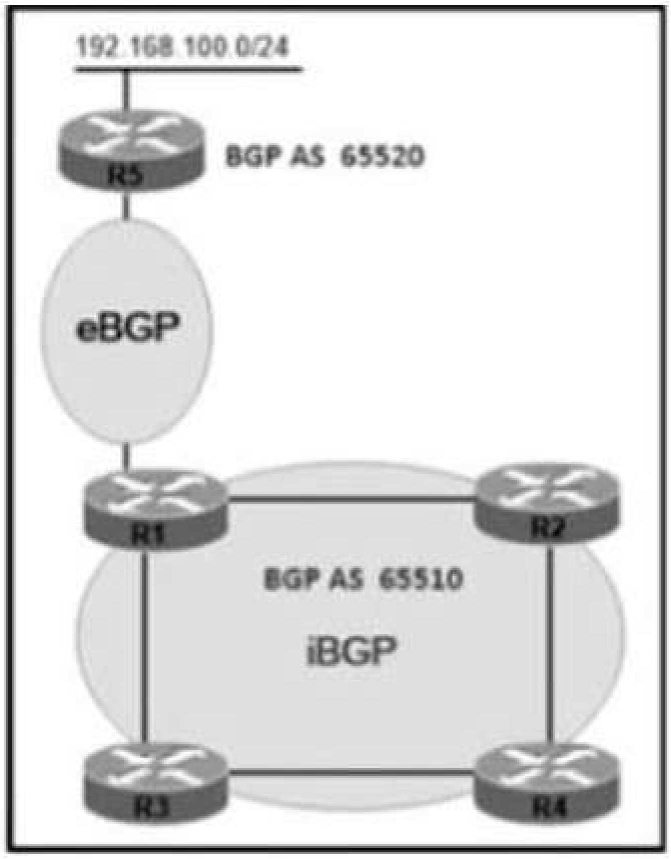


A. #terminal no monitor
B. (config)#terminal no monitor
C. #no terminal monitor
D. (config)#no terminal monitor

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 223
Refer to the exhibit. AS65510 BGP is configured for directly connected neighbors. R4 cannot ping or traceroute network 192.168.100.0/24. Which action resolves this issue?

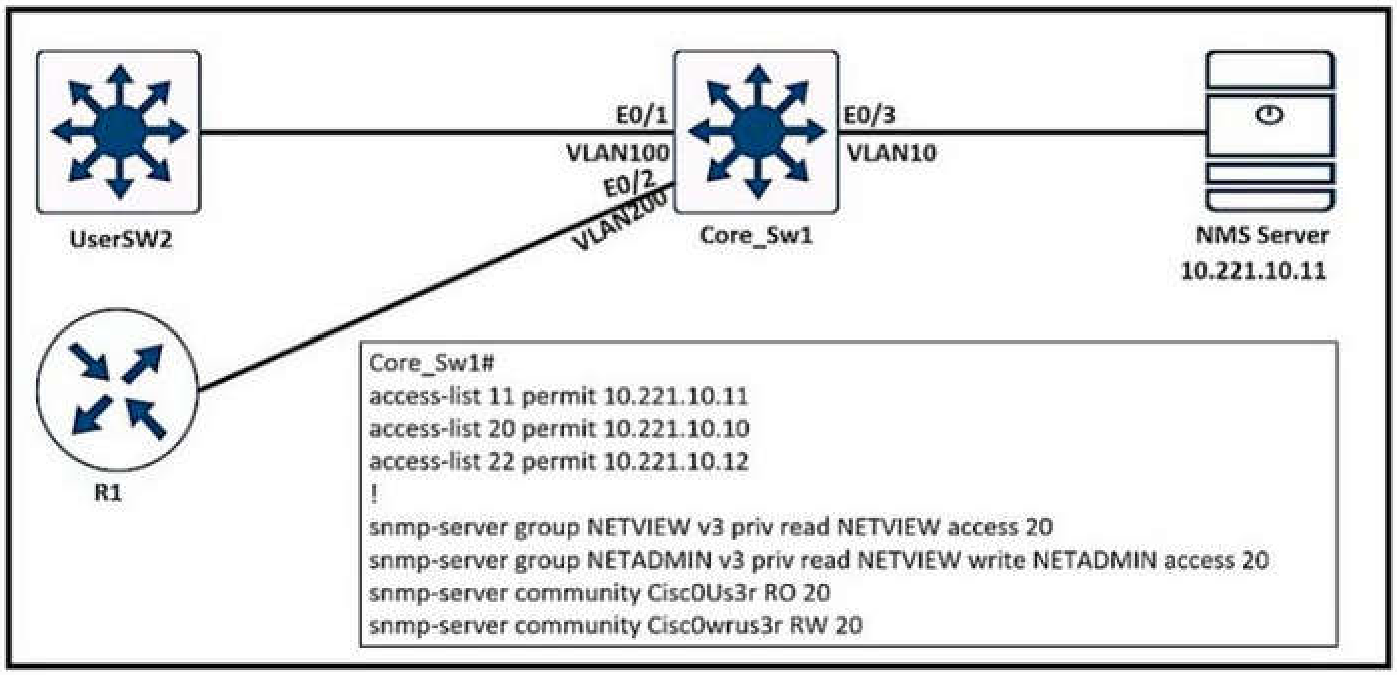


A. Configure R1 as a route reflector server and configure R4 as a route reflector client
B. Configure R4 as a route reflector server and configure R2 and R3 as route reflector clients.
C. Configure R1 as a route reflector server and configure R2 and R3 as route reflector clients.
D. Configure R4 as a route reflector server and configure R1 as a route reflector client.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 224
Refer to the exhibit. An engineer configured SNMP communities on the Core Sw1, but the SNMP server cannot obtain information from Core_Sw1. Which configuration resolves this issue?



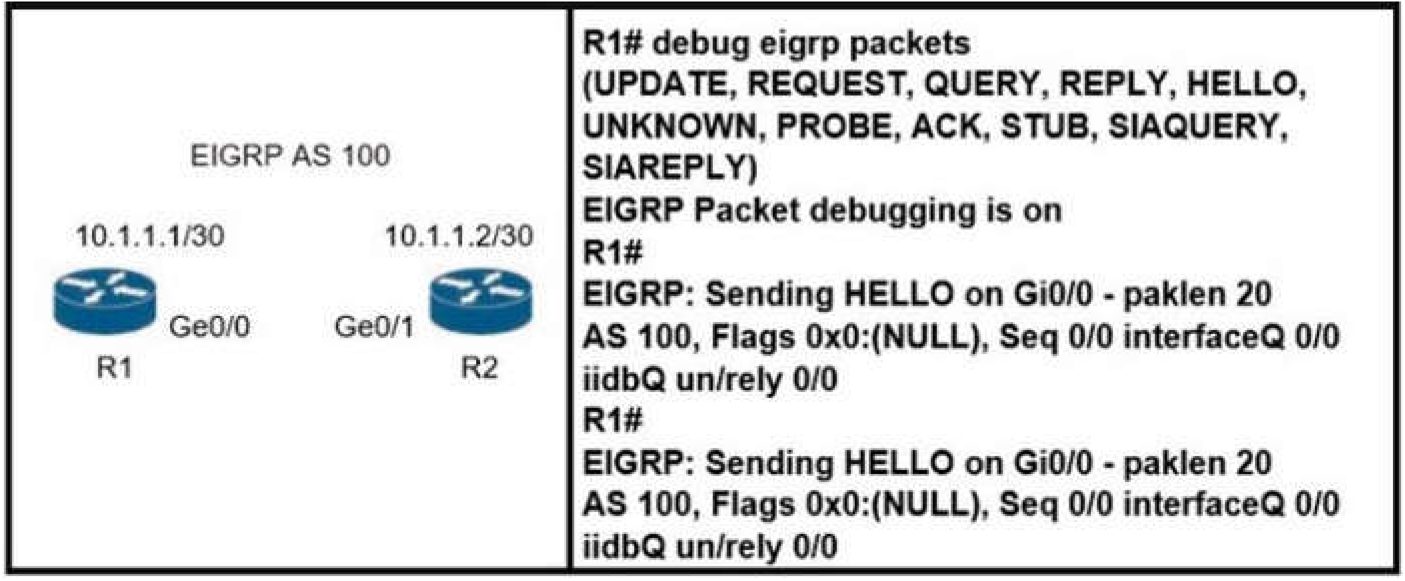
```
Core_Sw1#
access-list 11 permit 10.221.10.11
access-list 20 permit 10.221.10.10
access-list 22 permit 10.221.10.12
!
snmp-server group NETVIEW v3 priv read NETVIEW access 20
snmp-server group NETADMIN v3 priv read NETVIEW write NETADMIN access 20
snmp-server community Cisc0Us3r RO 20
snmp-server community Cisc0wrus3r RW 20
```

A. snmp-server group NETVIEW v2c priv read NETVIEW access 20
B. access-list 20 permit 10.221.10.11
C. access-list 20 permit 10.221.10.12
D. snmp-server group NETADMIN v3 priv read NETVIEW write NETADMIN access 22

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 225
Refer to the exhibit. Which action resolves the adjacency issue?



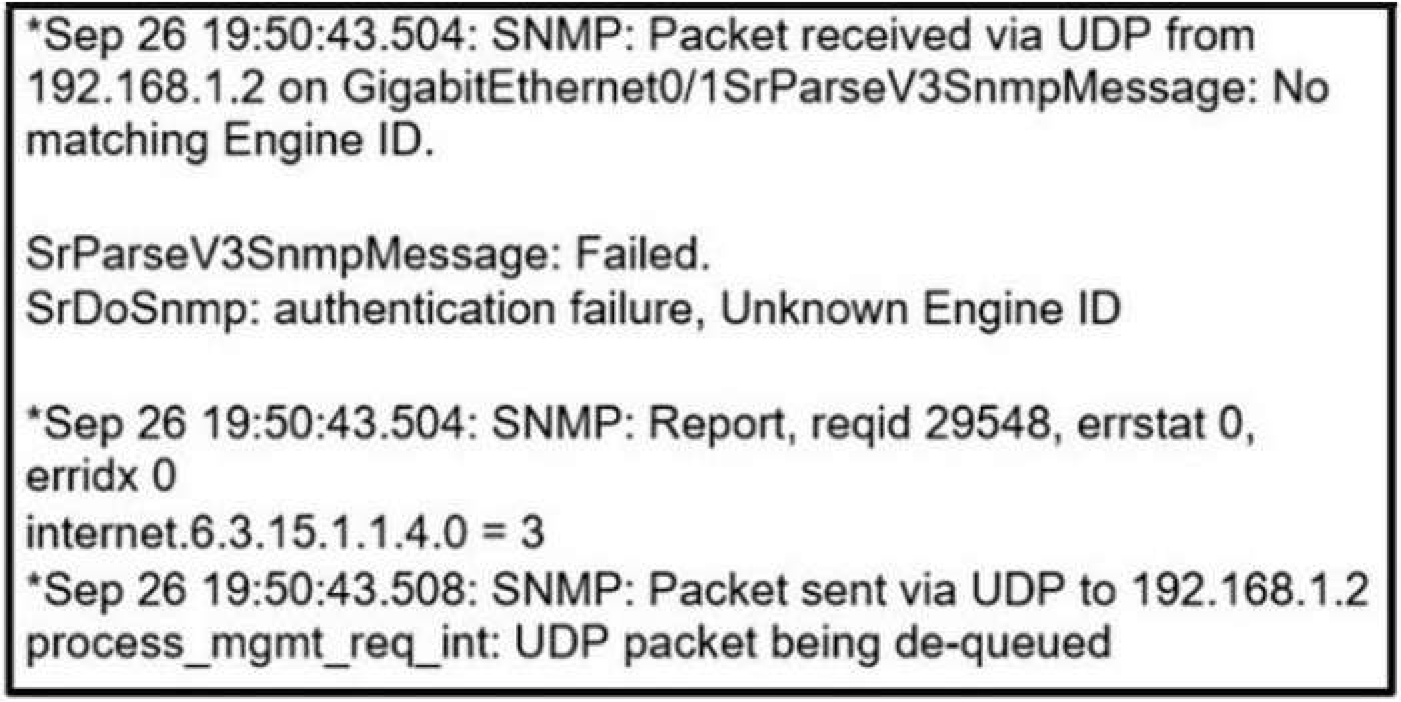
```
R1# debug eigrp packets
(UPDATE, REQUEST, QUERY, REPLY, HELLO,
UNKNOWN, PROBE, ACK, STUB, SIAQUERY,
SIAREPLY)
EIGRP Packet debugging is on
R1#
EIGRP: Sending HELLO on Gi0/0 - paklen 20
AS 100, Flags 0x0:(NULL), Seq 0/0 interfaceQ 0/0
iidbQ un/rely 0/0
R1#
EIGRP: Sending HELLO on Gi0/0 - paklen 20
AS 100, Flags 0x0:(NULL), Seq 0/0 interfaceQ 0/0
iidbQ un/rely 0/0
```

A. Configure the same EIGRP process IDs.
B. Match the authentication keys.
C. Match the hello interval timers.
D. Configure the same autonomous system numbers

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 226
Refer to the exhibit. Which two commands provide the administrator with the information needed to resolve the issue? (Choose two.)



```
*Sep 26 19:50:43.504: SNMP: Packet received via UDP from
192.168.1.2 on GigabitEthernet0/1SrParseV3SnmpMessage: No
matching Engine ID.

SrParseV3SnmpMessage: Failed.
SrDoSnmp: authentication failure, Unknown Engine ID

*Sep 26 19:50:43.504: SNMP: Report, reqid 29548, errstat 0,
erridx 0
internet.6.3.15.1.1.4.0 = 3
*Sep 26 19:50:43.508: SNMP: Packet sent via UDP to 192.168.1.2
process_mgmt_req_int: UDP packet being de-queued
```

A. debug snmp packet
B. debug snmp engine-id
C. show snmp user
D. debug snmpv3 engine-id

E. show snmpv3 user

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 227
What is a characteristic of Layer 3 MPLS VPNs?

A. LSP signaling requires the use of unnumbered IP links for traffic engineering.
B. Traffic engineering supports multiple IGP instances
C. Traffic engineering capabilities provide QoS and SLAs.
D. Authentication is performed by using digital certificates or preshared keys.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 228
What does the MP-BGP OPEN message contain?

A. MPLS labels and the IP address of the router that receives the message
B. the version number and the AS number to which the router belongs
C. IP routing information and the AS number to which the router belongs
D. NLRI, path attributes, and IP addresses of the sending and receiving routers

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 229
What statement about route distinguishes in an MPLS network is true?

A. Route distinguishes make a unique VPNv4 address across the MPLS network.
B. Route distinguishers allow multiple instances of a routing table to coexist within the edge router.
C. Route distinguishes are used for label bindings
D. Route distinguishes define which prefixes are imported and exported on the edge router

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 230
The network administrator configured R1 for Control Plane Policing so that the inbound Telnet traffic is policed to 100 kbps. This policy must not apply to traffic coming in from 10.1.1.1/32 and 172.16.1.1/32. The administrator has configured this:

```
!
class-map COPP-TELNET
 match access-group 101
!
policy-map PM-COPP
 class COPP-TELNET
  police 100000 conform transmit exceed drop
!
control-plane
 service-policy input PM-COPP
```

The network administrator is not getting the desired results. Which set of configurations resolves this issue?

A. no access-list 101

```
    access-list 101 deny tcp host 10.1.1.1 any eq 23
    access-list 101 deny tcp host 172.16.1.1 any eq 23
    access-list 101 permit ip any any
B.  no access-list 101
    access-list 101 deny tcp host 10.1.1.1 any eq 23
    access-list 101 deny tcp host 172.16.1.1 any eq 23
    access-list 101 permit ip any any
    !
    interface E0/0
    service-policy input PM-CoPP
C.  control-plane
    no service-policy input PM-CoPP
    !
    interface Ethernet 0/0
    service-policy input PM-CoPP
D.  control-plane
    no service-policy input PM-CoPP
    service-policy input PM-CoPP
```

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 231
Which mechanism provides traffic segmentation within a DMVPN network?

A. RSVP
B. BGP
C. MPLS
D. iPsec

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
To use the DMPVN - Traffic Segmentation Within DMVPN feature you must configure Multiprotocol Label Switching (MPLS) by using the mpls ip command.

QUESTION 232
R1 and R2 are configured as eBGP neighbor , R1 is in AS100 and R2 is in AS200. R2 is advertising these networks to R1:

- 172.16.16.0/20
- 172.16.3.0/24
- 172.16.4.0/24
- 192.168.1.0/24
- 192.168.2.0/24
- 172.16.0.0/16

The network administrator on R1 must improve convergence by blocking all subnets of 172.16.0.0/16 major network with a mask lower than 23 from coming in, Which set of configurations accomplishes the task on R1?

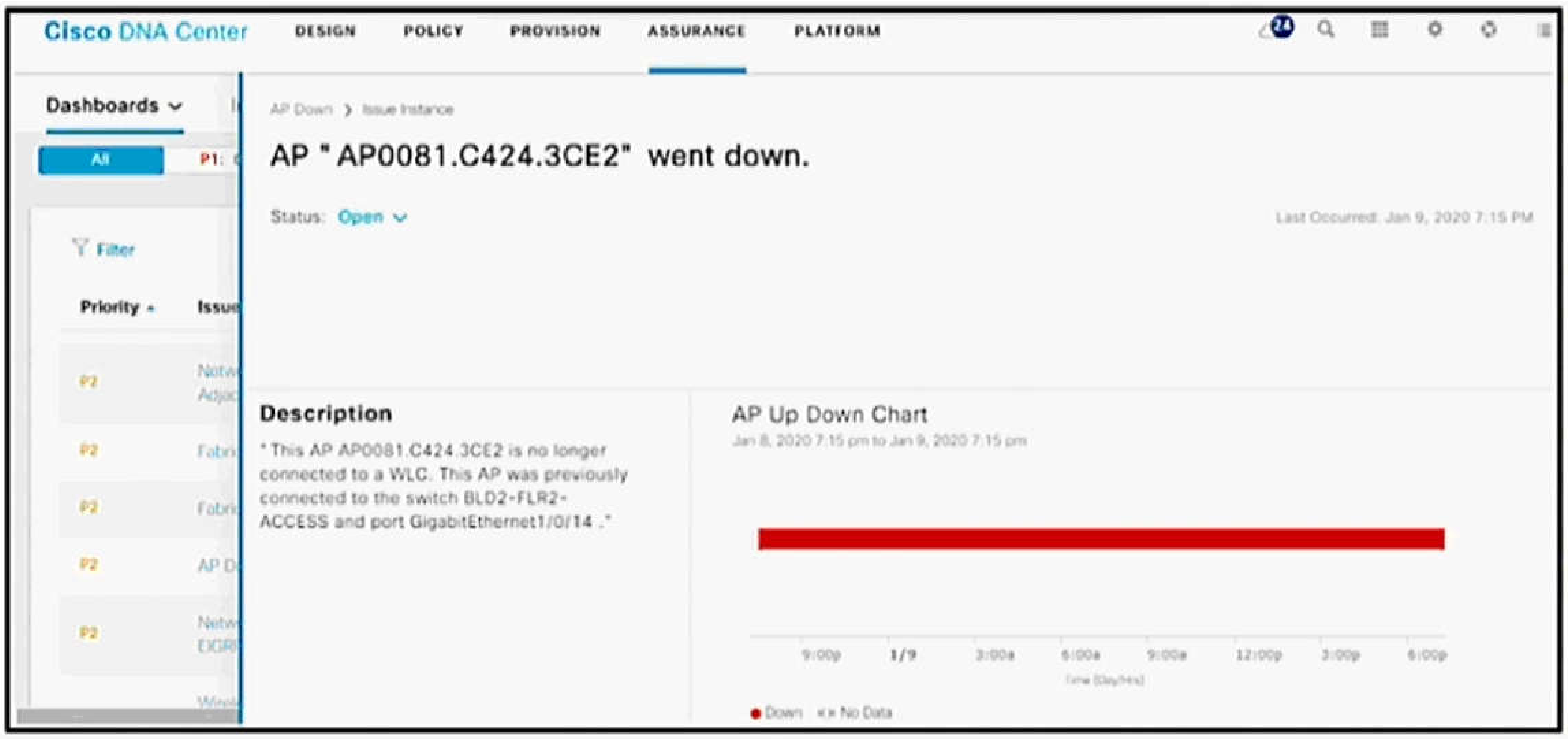
```
A.  ip prefix-list PL-1 deny 172.16.0.0/16
    ip prefix-list PL-1 permit 0.0.0.0/0
    !
    router bgp 100
    neighbor 192.168.100.2 remote-as 200
    neighbor 192.168.100.2 prefix-list PL-1 in
B.  access-list deny 172.16.0.0 0.0.254.255
    access-list permit any
    !
    router bgp 100
    neighbor 192.168.100.2 remote-as 200
    neighbor 192.168.100.2 distribute-list in
C.  ip prefix-list PL-1 deny 172.16.0.0 ge 23
    ip prefix-list PL-1 permit 0.0.0.0/0 le 32
    !
    router bgp 100
    neighbor 192.168.100.2 remote-as 200
    neighbor 192.168.100.2 prefix-list PL-1 in
D.  ip prefix-list PL-1 deny 172.16.0.0 le 23
    ip prefix-list PL-1 permit 0.0.0.0/0 le 32
```

```
!
router bgp 100
neighbor 192.168.100.2 remote-as 200
neighbor 192.168.100.2 prefix-list PL-1 in
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 233
Refer to the exhibit. The AP status from Cisco DNA Center Assurance Dashboard shows some physical connectivity issues from access switch interface G1/0/14. Which command generates the diagnostic data to resolve the physical connectivity issues?



AP " AP0081.C424.3CE2" went down.

Status: Open

Last Occurred: Jan 9, 2020 7:15 PM

Description

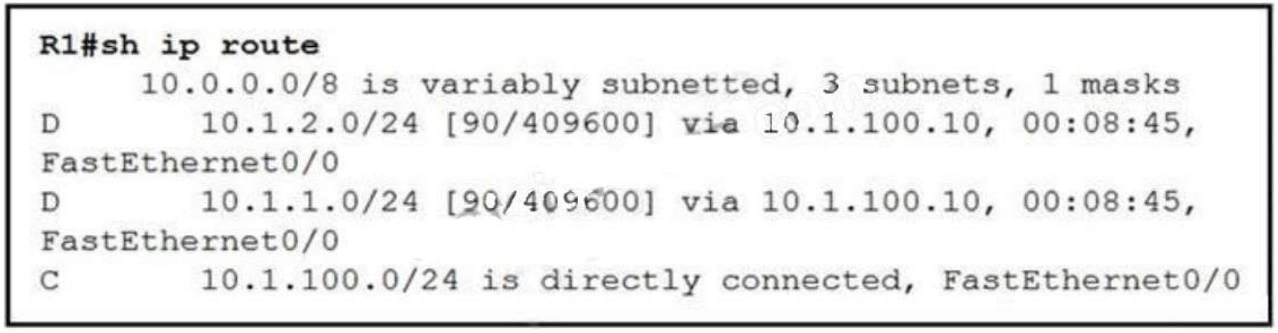
" This AP AP0081.C424.3CE2 is no longer connected to a WLC. This AP was previously connected to the switch BLD2-FLR2-ACCESS and port GigabitEthernet1/0/14 ."

A. test cable-diagnostics tdr interface GigabitEthernet1/0/14
B. Check cable-diagnostics tdr interface GigabitEthernet1/0/14
C. show cable-diagnostics tdr interface GigabitEthernet1/0/14
D. Verify cable-diagnostics tdr interface GigabitEthernet1/0/14

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 234
Refer to the exhibit. An engineer configures the router 10.1.100.10 for EIGRP autosummarization so that R1 should receive the summary route of 10.0.0.0/8. However, R1 receives more specific /24 routes. Which action resolves this issue?



```
R1#sh ip route
     10.0.0.0/8 is variably subnetted, 3 subnets, 1 masks
D       10.1.2.0/24 [90/409600] via 10.1.100.10, 00:08:45,
FastEthernet0/0
D       10.1.1.0/24 [90/409600] via 10.1.100.10, 00:08:45,
FastEthernet0/0
C       10.1.100.0/24 is directly connected, FastEthernet0/0
```

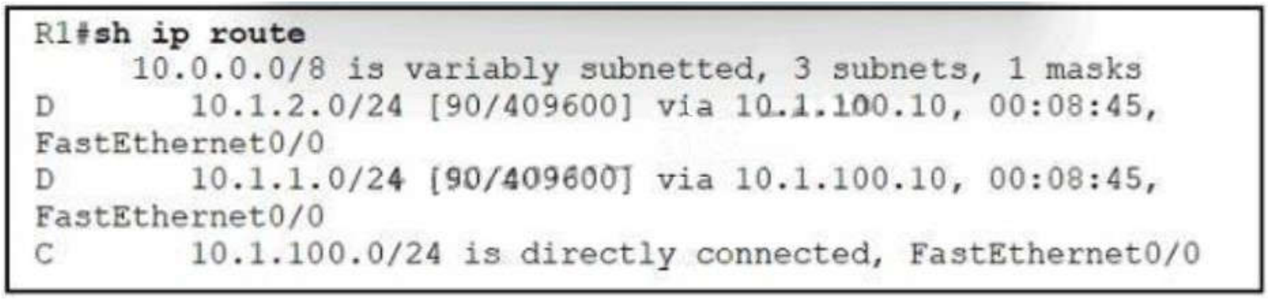
A. Router R1 should configure ip summary address eigrp (AS number) 10.0.0.0 255.0.0.0 for the R1 Fast Ethernet 0/0 connected interface.
B. Router R1 should configure ip route 10.0.0.0 255.0.0.0 null 0 for the routes that are received on R1.
C. Router 10.1.100.10 should configure ip route 10.0.0.0 255.0.0.0 null 0 for the routes that are summarized toward R1.
D. Router 10.1.100.10 should configure ip summary address eigrp (AS number) 10.0.0.0 255.0.0.0 for the R1 Fast Ethernet 0/0 connected

interface.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 235
Refer to the exhibit. Although summarization is configured for R1 to receive 10.0.0.0/8. more specific routes are received by R1. How should the 10.0.0.0/8 summary route be received from the neighbor, attached to R1 via Fast Ethernet0/0 interface?



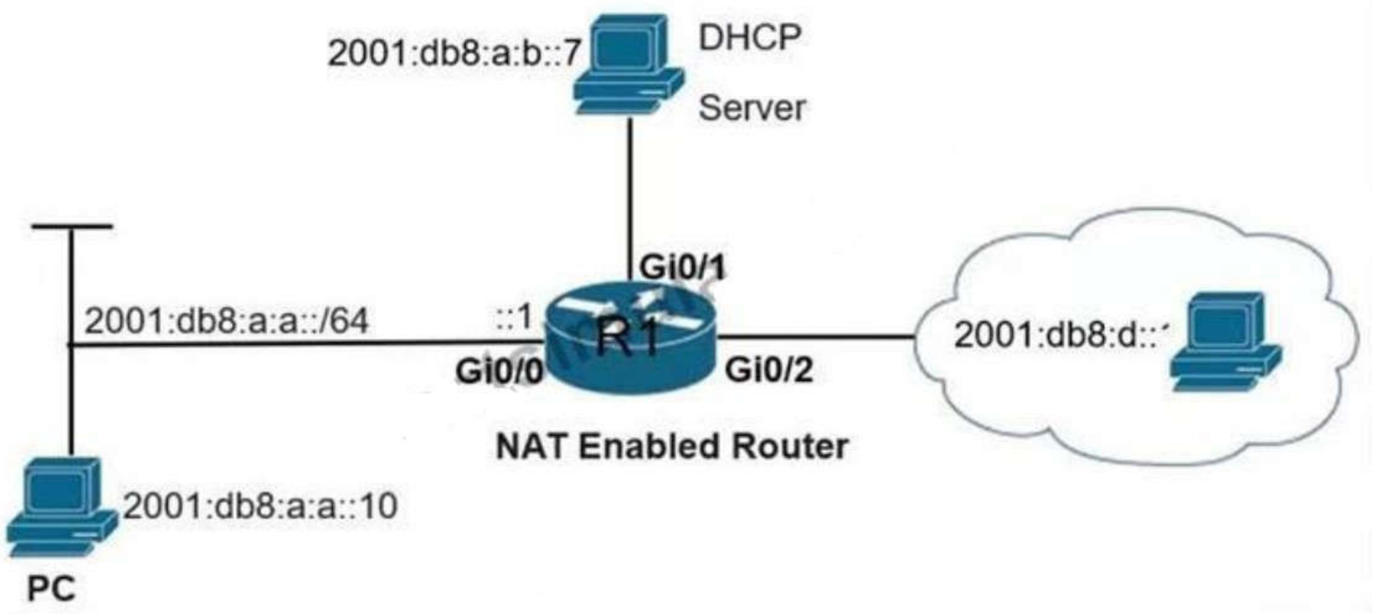
```
R1#sh ip route
     10.0.0.0/8 is variably subnetted, 3 subnets, 1 masks
D       10.1.2.0/24 [90/409600] via 10.1.100.10, 00:08:45,
FastEthernet0/0
D       10.1.1.0/24 [90/409600] via 10.1.100.10, 00:08:45,
FastEthernet0/0
C       10.1.100.0/24 is directly connected, FastEthernet0/0
```

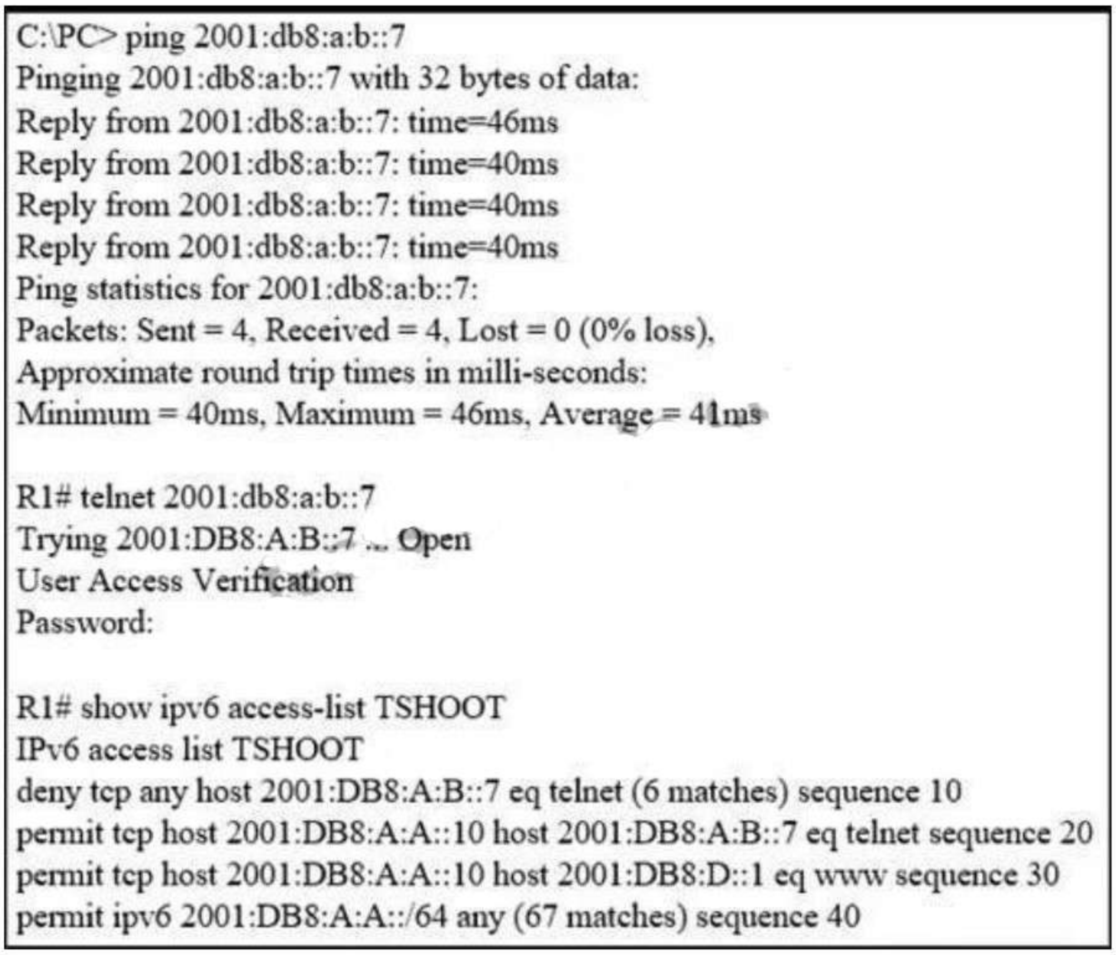
A. R1 should configure the ip summary-address eigrp <AS number> 10.0.0.0.255.0.0.0 command under the Fast Ethernet 0/0 interface.
B. The summarization condition is not met Router 10 1 100.10 requires a route for 10 0.0.0/8 that points to null 0
C. The summarization condition is not met. The network 10.1.100.0/24 should be changed to 172.16.0.0/24.
D. R1 should configure the ip summary-address eigrp <AS number> 10.0.0.0 0.0.0.255 command under the Fast Ethernet 0/0 interface.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 236
Refer to the exhibit. An engineer is troubleshooting a failed Telnet session from PC to the DHCP server. Which action resolves the issue?





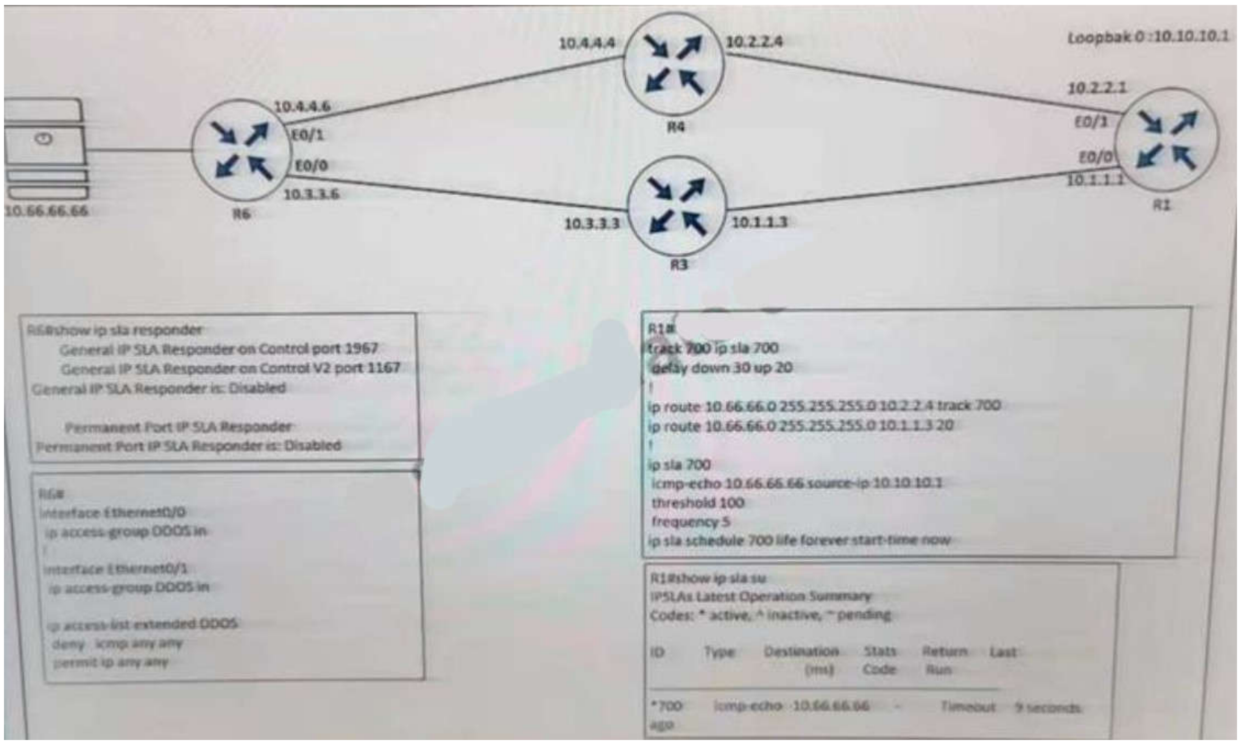
```
C:\PC> ping 2001:db8:a:b::7
Pinging 2001:db8:a:b::7 with 32 bytes of data:
Reply from 2001:db8:a:b::7: time=46ms
Reply from 2001:db8:a:b::7: time=40ms
Reply from 2001:db8:a:b::7: time=40ms
Reply from 2001:db8:a:b::7: time=40ms
Ping statistics for 2001:db8:a:b::7:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 40ms, Maximum = 46ms, Average = 41ms

R1# telnet 2001:db8:a:b::7
Trying 2001:DB8:A:B::7 ... Open
User Access Verification
Password:

R1# show ipv6 access-list TSHOOT
IPv6 access list TSHOOT
deny tcp any host 2001:DB8:A:B::7 eq telnet (6 matches) sequence 10
permit tcp host 2001:DB8:A:A::10 host 2001:DB8:A:B::7 eq telnet sequence 20
permit tcp host 2001:DB8:A:A::10 host 2001:DB8:D::1 eq www sequence 30
permit ipv6 2001:DB8:A:A::/64 any (67 matches) sequence 40
```

A. Remove sequence 30 and add it back to the IPv6 traffic filter as sequence 5.
B. Remove sequence 20 and add it back to the IPv6 traffic filter as sequence 5.
C. Remove sequence 10 to add the PC source IP address and add it back as sequence 10.
D. Remove sequence 20 for sequence 40 in the access list to allow Telnet.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 237
Refer to the exhibit. R1 is configured with IP SLA to check the availability of the server behind R6 but it kept failing. Which configuration resolves the issue?



```
R6#show ip sla responder
      General IP SLA Responder on Control port 1967
      General IP SLA Responder on Control V2 port 1167
General IP SLA Responder is: Disabled

      Permanent Port IP SLA Responder
Permanent Port IP SLA Responder is: Disabled
```

```
R6#
interface Ethernet0/0
 ip access-group DDOS in
!
interface Ethernet0/1
 ip access-group DDOS in

ip access-list extended DDOS
 deny   icmp any any
 permit ip any any
```

```
R1#
track 700 ip sla 700
 delay down 30 up 20
!
ip route 10.66.66.0 255.255.255.0 10.2.2.4 track 700
ip route 10.66.66.0 255.255.255.0 10.1.1.3 20
!
ip sla 700
 icmp-echo 10.66.66.66 source-ip 10.10.10.1
 threshold 100
 frequency 5
ip sla schedule 700 life forever start-time now
```

```
R1#show ip sla su
IPSLAs Latest Operation Summary
Codes: * active, ^ inactive, ~ pending

ID      Type       Destination   Stats    Return   Last
                   (ms)          Code     Run
-----------------------------------------------------------
*700    icmp-echo  10.66.66.66   -        Timeout  9 seconds
ago
```

A. R6(config)# ip sla responder
B. R6(config)# ip sla responder udp-echo ip address 10.10.10.1 port 5000
C. R6(config)# ip access-list extended DDOS
   R6(config ext-nac)# 5 permit icmp host 10.66 66.66 host 10.10.10.1
D. R6(config)# ip access-list extended DDOS
   R6(confg ext-nac)# 5 permit icmp host 10.10.10.1 host 10.66.66.66

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 238
Which 0S1 model is used to insert an MPLS label?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 239
The network administrator configured R1 to authenticate Telnet connections based on Cisco ISE using TACACS+. ISE has been configured with an IP address of 192.168.1.5 and with a network device pointing toward R1(192.168.1.1) with a shared secret password of Cisco123.

```
aaa new-model
!
tacacs server ISE1
 address ipv4 192.168.1.5
 key Cisco123
!
aaa group server tacacs+ TAC-SERV
 server name ISEI
!
aaa authentication login telnet group TAC-SERV
```

The administrator cannot authenticate to R1 based on ISE. Which configuration fixes the issue?

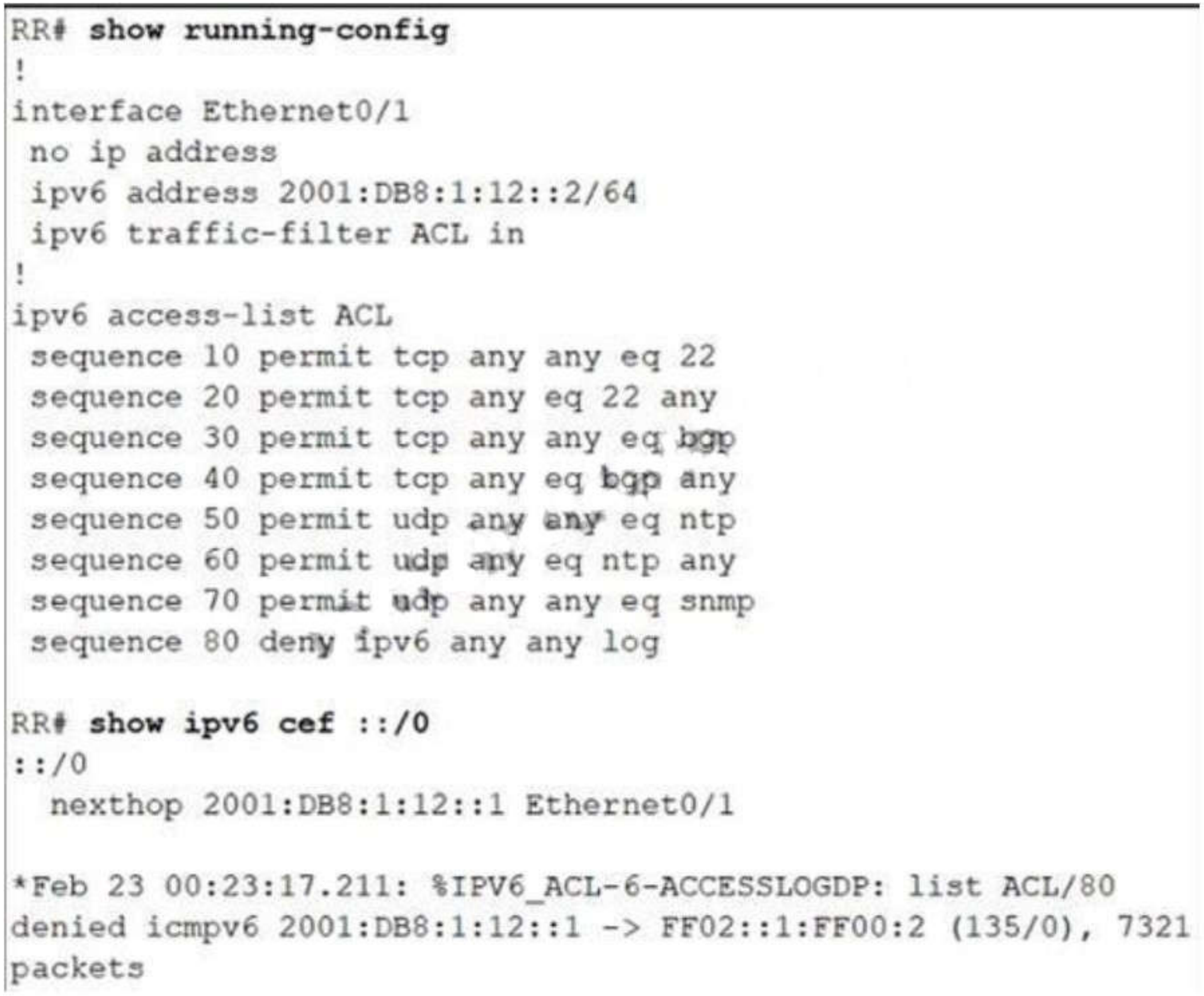
A. ip tacacs-server host 192.168.1.5 key Cisco123

B. line vty 0 4
   login authentication TAC-SERV
C. line vty 0 4
   login authentication telnet
D. tacacs-server host 192.168.1.5 key Cisco123

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 240
Refer to the exhibit. After a security audit, the administrator implemented an ACL in the route reflector. The RR became unreachable from any router in the network. Which two actions resolve the issue? (Choose two.)



```
RR# show running-config
!
interface Ethernet0/1
 no ip address
 ipv6 address 2001:DB8:1:12::2/64
 ipv6 traffic-filter ACL in
!
ipv6 access-list ACL
 sequence 10 permit tcp any any eq 22
 sequence 20 permit tcp any eq 22 any
 sequence 30 permit tcp any any eq bgp
 sequence 40 permit tcp any eq bgp any
 sequence 50 permit udp any any eq ntp
 sequence 60 permit udp any eq ntp any
 sequence 70 permit udp any any eq snmp
 sequence 80 deny ipv6 any any log

RR# show ipv6 cef ::/0
::/0
  nexthop 2001:DB8:1:12::1 Ethernet0/1

*Feb 23 00:23:17.211: %IPV6_ACL-6-ACCESSLOGDP: list ACL/80
denied icmpv6 2001:DB8:1:12::1 -> FF02::1:FF00:2 (135/0), 7321
packets
```

A. Enable the ND proxy feature on the default gateway.
B. Configure a link-local address on the Ethernet0/1 interface.
C. Permit ICMPv6 neighbor discovery traffic in the ACL.
D. Remove the ACL entry 80.
E. Change the next hop of the default route to the link-local address of the default gateway.

Correct Answer: BC
Section: (none)
Explanation

Explanation/Reference:

QUESTION 241
A company is expanding business by opening 35 branches over the Internet. A network engineer must configure DMVPN at the branch routers to connect with the hub router and allow NHRP to add spoke routers securely to the multicast NHRP mappings automatically Which configuration meets this requirement at the hub router?

A. interface Tunnel0
   ip address 10.0.0.1 255.255.255.0
   ip nbrp authentication KEY1

```
    ip nhrp nhs dynamic ip nhop network-id 10
    tunnel mode mgre auto
```

B. interface Tunnel0
   ip address 10.0.0.1 255.255.255.0
   ip nhrp authentication KEY1
   ip nhrp registration no-unique
   ip nhrp network-id 10
   tunnel mode gre nmba

C. interface Tunnel0
   ip address 10.0.0.1 255.255.255.0
   ip nhrp authentication KEY1
   ip nhrp map multicast dynamic
   ip nbrp network-id 10
   tunnel mode gre multipoint

D. interface Tunnel0
   ip address 10.0.0.1 255.255.255.0
   ip nhrp authentication KEY1
   ip nhrp map multicast 224.0.0.0
   ip nhrp network-id 10
   tunnel mode gre ipv4

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

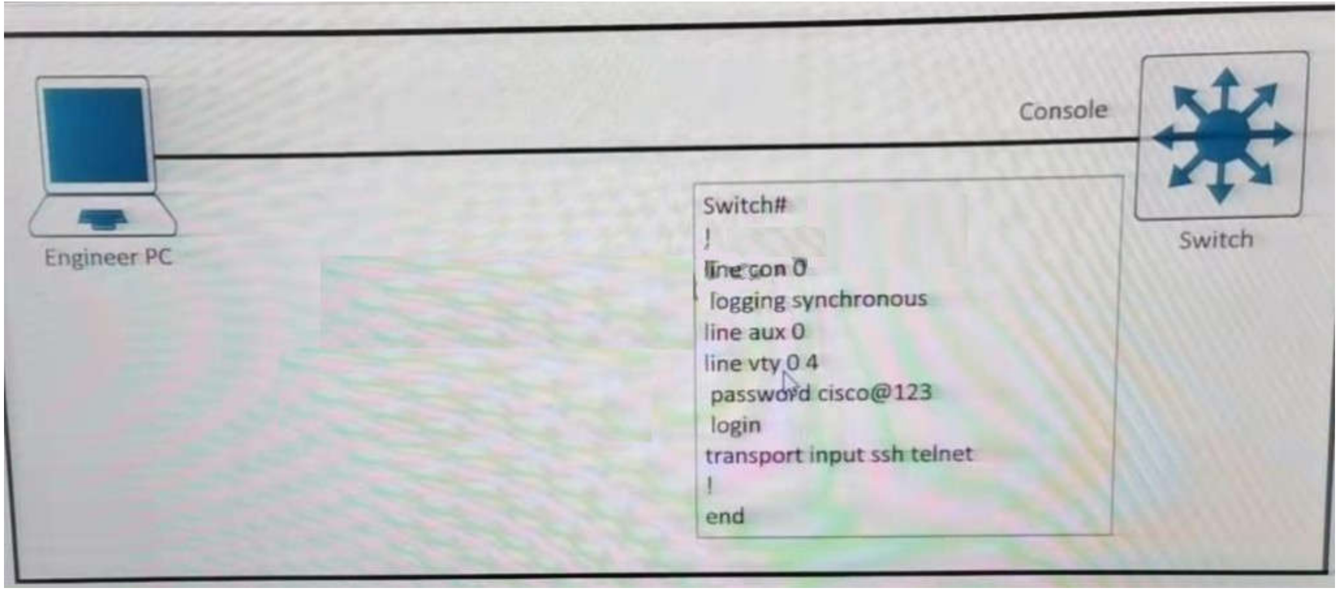
QUESTION 242
What is a function of IPv6 Source Guard?

A. It works with address glean or ND to find existing addresses.
B. It inspects ND and DHCP packets to build an address binding table.
C. It denies traffic from known sources and allocated addresses.
D. It notifies the ND protocol to inform hosts if the traffic is denied by it.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 243
Refer to the exhibit. An engineer must block access to the console ports for all corporate remote Cisco devices based on the recent corporate security policy but the security team stilt can connect through the console port. Which configuration on the console port resolves the issue?



```
Switch#
!
line con 0
 logging synchronous
line aux 0
line vty 0 4
 password cisco@123
 login
transport input ssh telnet
!
end
```

A. transport input telnet
B. login and password
C. no exec
D. exec 0.0

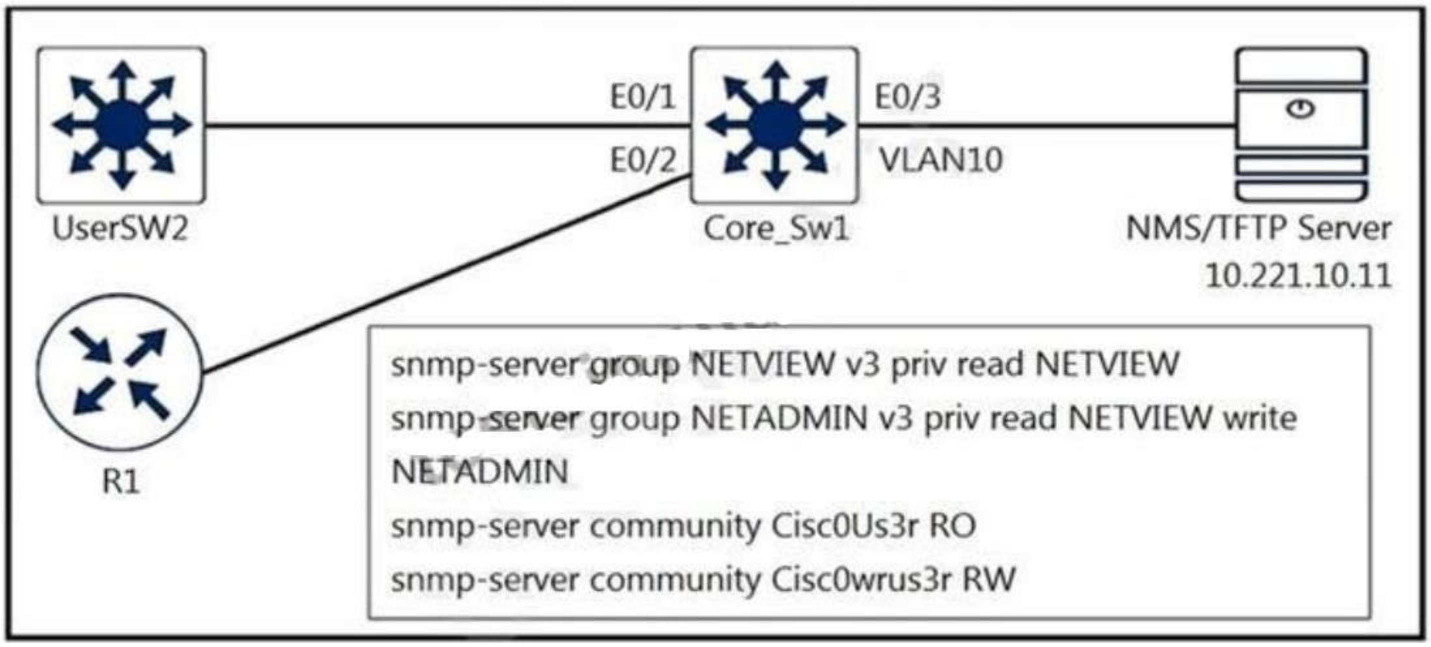
Correct Answer: C

Section: (none)
Explanation

Explanation/Reference:

QUESTION 244

Refer to the exhibit. A junior engineer configured SNMP to network devices. Malicious users have uploaded different configurations to the network devices using SNMP and TFTP servers. Which configuration prevents changes from unauthorized NMS and TFTP servers?



```
snmp-server group NETVIEW v3 priv read NETVIEW
snmp-server group NETADMIN v3 priv read NETVIEW write
NETADMIN
snmp-server community Cisc0Us3r RO
snmp-server community Cisc0wrus3r RW
```

A. access-list 20 permit 10.221.10.11
access-list 20 deny any log
!
snmp-server group NETVIEW v3 priv read NETVIEW access 20
snmp-server group NETADMIN v3 priv read NETVIEW write NETADMIN access 20 snmp-server community Cisc0Us3r RO 20 snmp-server community Cisc0wrus3r RW 20 snmp-server tftp-server-list 20

B. access-list 20 permit 10.221.10.11
access-list 20 deny any log
!
snmp-server group NETVIEW v3 priv read NETVIEW access 20
snmp-server group NETADMIN v3 priv read NETVIEW write NETADMIN access 20 snmp-server community Cisc0wrus3r RO 20 snmp-server community Cisc0Us3r RW 20 snmp-server tftp-server-list 20

C. access-list 20 permit 10.221.10.11
access-list 20 deny any log

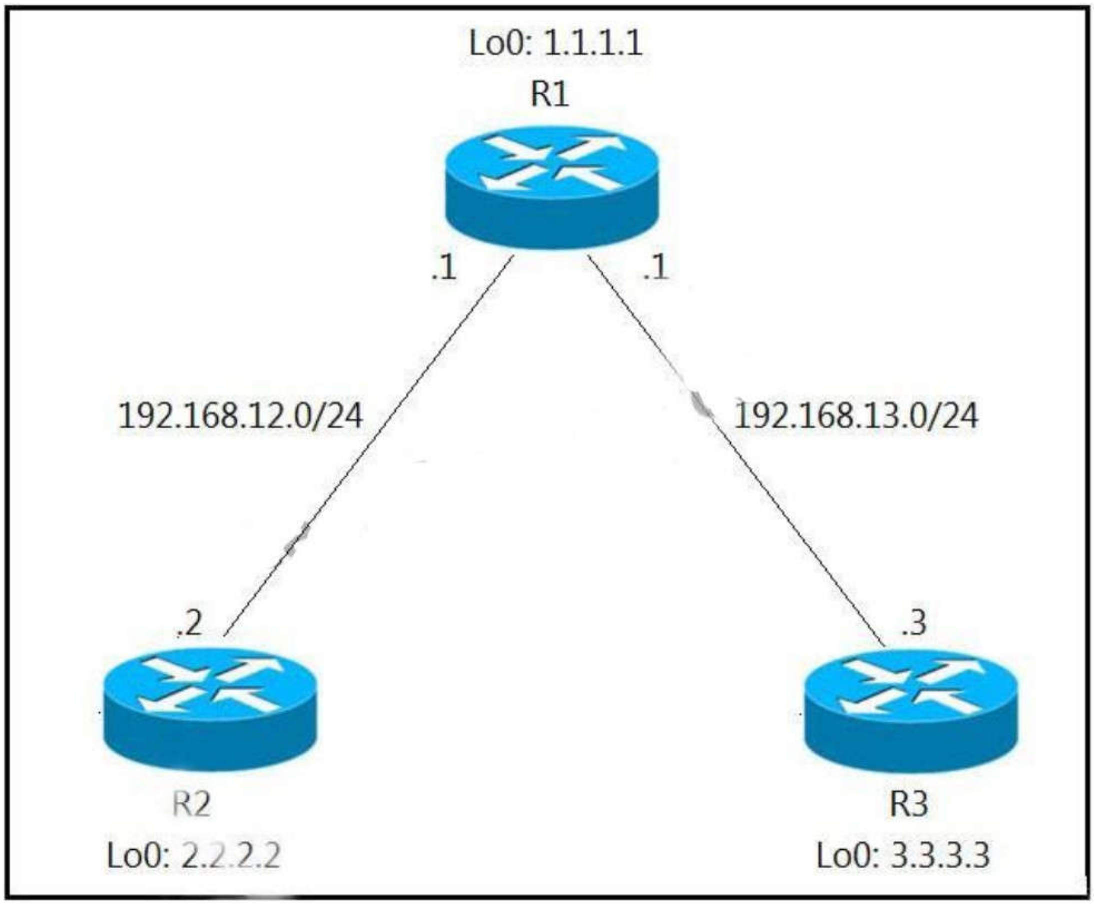
D. access-list 20 permit 10.221.10.11

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 245

Refer to the exhibit. An engineer has configured R1 as EIGRP stub router. After the configuration, router R3 failed to reach to R2 loopback address. Which action advertises R2 loopback back into the R3 routing table?



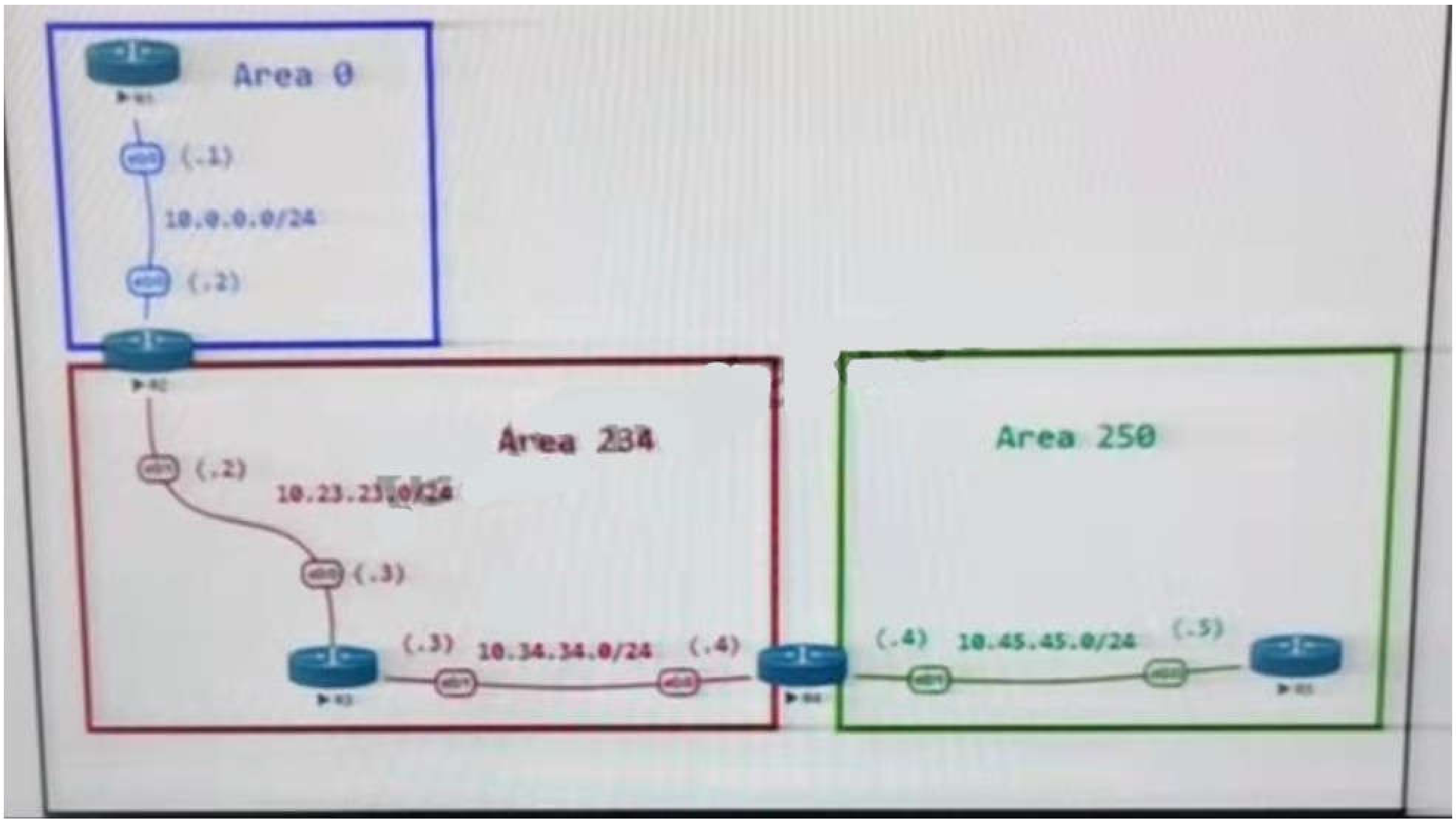
A. Add a static route for R2 loopback address in R1 and redistribute it to advertise to R3.
B. Use a leak map on R1 that matches the required prefix and apply it with the distribute list command toward R3.
C. Use a leak map on R3 that matches the required prefix and apply it with the EIGRP stub feature.
D. Add a static null route for R2 loopback address in R1 and redistribute it to advertise to R3.

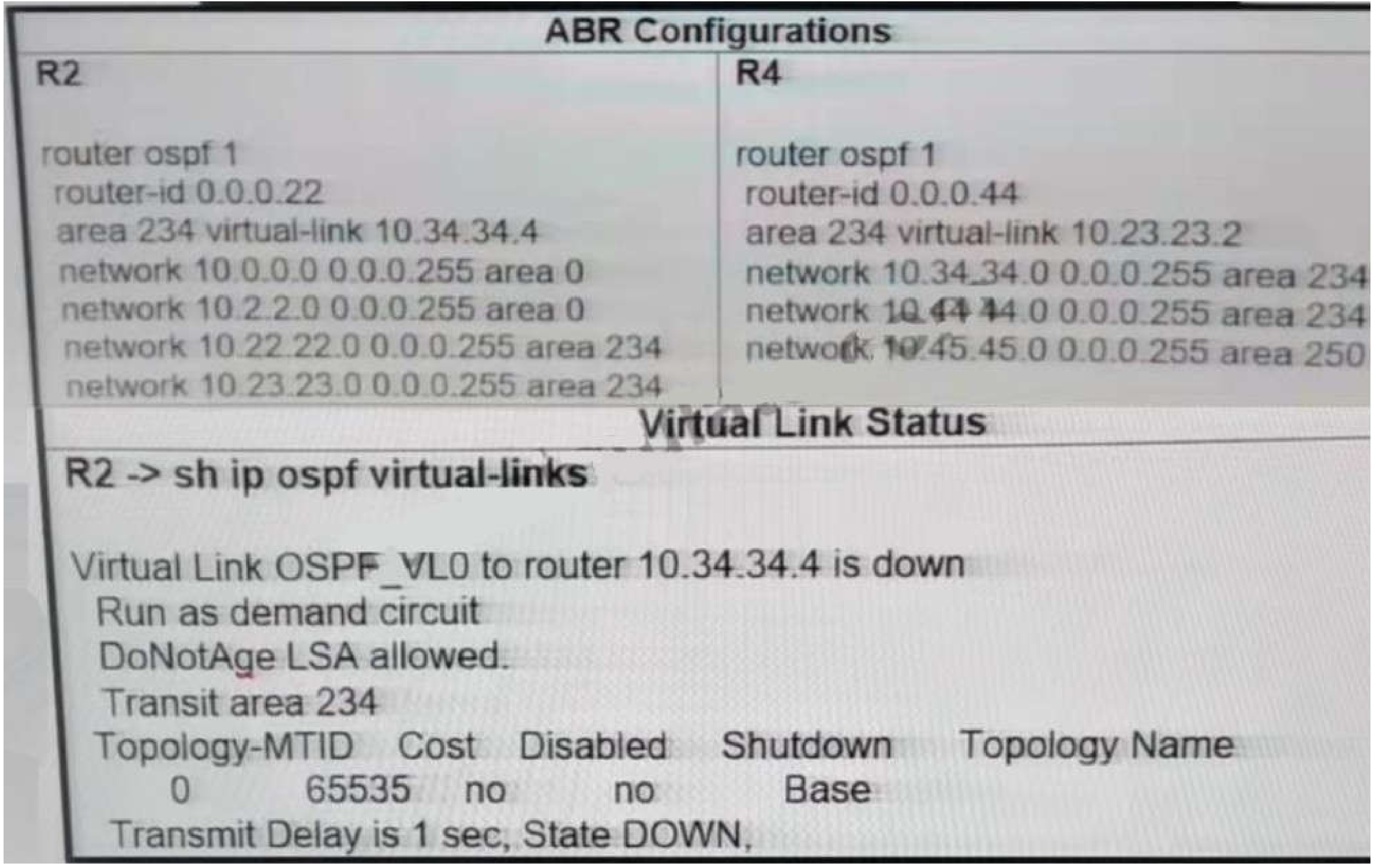
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The EIGRP stub feature is useful to prevent unnecessary EIGRP queries and to filter some routes that you advertise. What if you want to configure your router as a stub router but still make an exception to some routes that it advertises? That is possible with the leak-map feature. This is how to configure leak-map in this question:

```
R1(config)#ip access-list standard R2_L0
R1(config-std-nacl)#permit host 2.2.2.2
R1(config)#route-map R2_L0_LEAK
R2(config-route-map)#match ip address R2_L0
R1(config)#router eigrp 1
R1(config-router)#eigrp stub leak-map R2_L0_LEAK
```

QUESTION 246
Refer to the exhibit. The network administrator configured the network to connect two disjointed networks and ail the connectivity is up except the virtual link which causes area 250 to be unreachable. Which two configurations resolve this issue? (Choose two.)





ABR Configurations

R2	R4
router ospf 1 router-id 0.0.0.22 area 234 virtual-link 10.34.34.4 network 10.0.0.0 0.0.0.255 area 0 network 10.2.2.0 0.0.0.255 area 0 network 10.22.22.0 0.0.0.255 area 234 network 10.23.23.0 0.0.0.255 area 234	router ospf 1 router-id 0.0.0.44 area 234 virtual-link 10.23.23.2 network 10.34.34.0 0.0.0.255 area 234 network 10.44.44.0 0.0.0.255 area 234 network 10.45.45.0 0.0.0.255 area 250

Virtual Link Status

```
R2 -> sh ip ospf virtual-links

Virtual Link OSPF_VL0 to router 10.34.34.4 is down
 Run as demand circuit
 DoNotAge LSA allowed.
 Transit area 234
 Topology-MTID   Cost   Disabled   Shutdown   Topology Name
     0          65535    no         no          Base
  Transmit Delay is 1 sec, State DOWN,
```

A. R4
 router ospf 1
 no area 234 virtual-link 10.23.23.2
 area 234 virtual-link 0.0.0.22

B. R4
 router ospf 1
 no area area 234 virtual-link 10.23.23.2
 area 0 virtual-link 0.0.0.22

C. R2
 router ospf 1
 no area area 234 virtual-link 10.34.34.4
 area 0 virtual-link 0.0.0.44

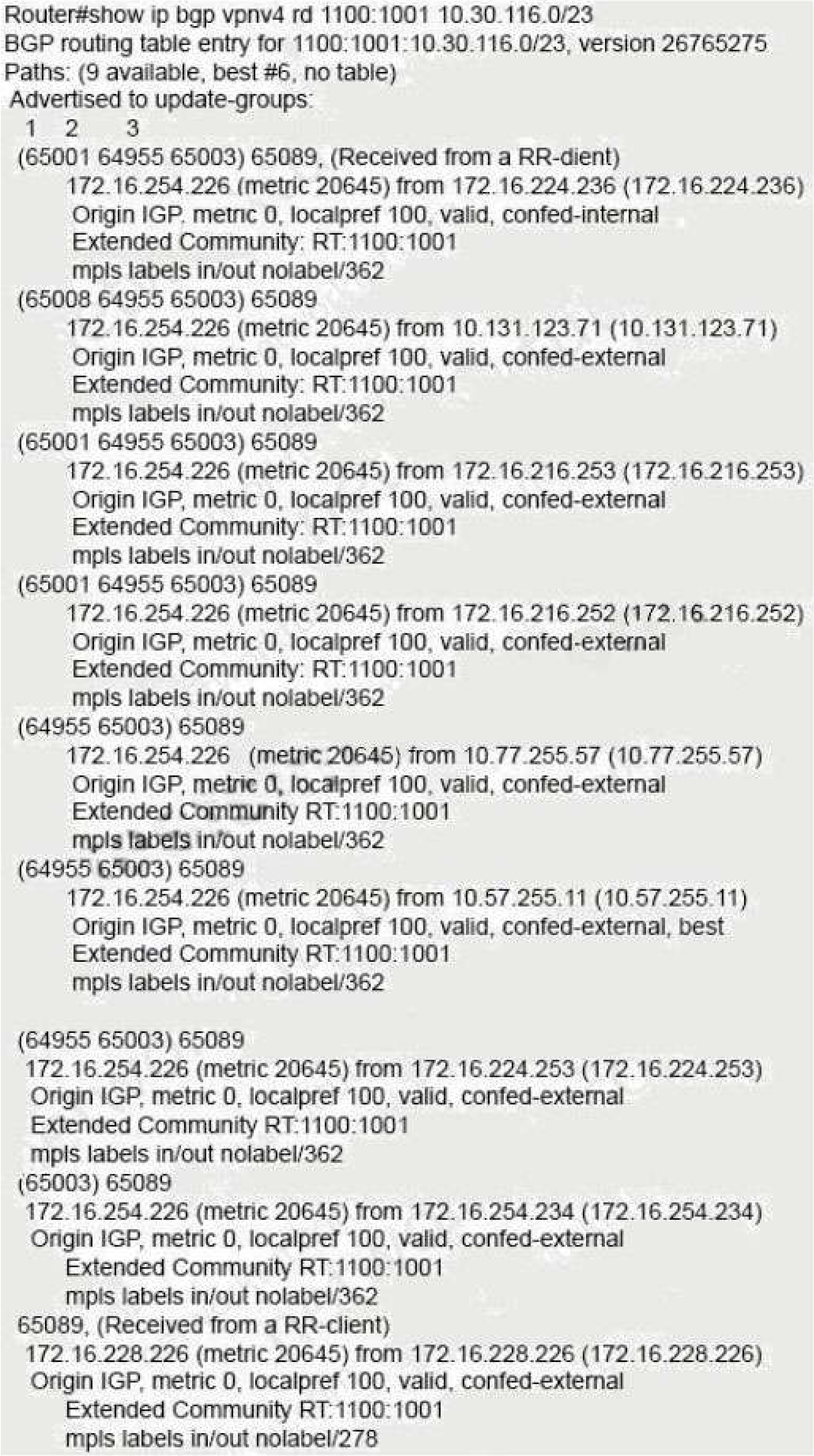
D. R2
   router ospf 1
   router-id 10.23.23.2

E. R2
   router ospf 1
   no area 234 virtual-ink 10.34.34.4
   area 234 virtual-link 0.0.0.44

Correct Answer: E
Section: (none)
Explanation

Explanation/Reference:

QUESTION 247
Refer to the exhibit. An engineer configured BGP and wants to select the path from 10.77.255.57 as the best path instead of current best path. Which action resolves the issue?



```
Router#show ip bgp vpnv4 rd 1100:1001 10.30.116.0/23
BGP routing table entry for 1100:1001:10.30.116.0/23, version 26765275
Paths: (9 available, best #6, no table)
 Advertised to update-groups:
   1    2      3
  (65001 64955 65003) 65089, (Received from a RR-dient)
        172.16.254.226 (metric 20645) from 172.16.224.236 (172.16.224.236)
         Origin IGP. metric 0, localpref 100, valid, confed-internal
         Extended Community: RT:1100:1001
         mpls labels in/out nolabel/362
  (65008 64955 65003) 65089
        172.16.254.226 (metric 20645) from 10.131.123.71 (10.131.123.71)
         Origin IGP, metric 0, localpref 100, valid, confed-external
         Extended Community: RT:1100:1001
         mpls labels in/out nolabel/362
  (65001 64955 65003) 65089
        172.16.254.226 (metric 20645) from 172.16.216.253 (172.16.216.253)
         Origin IGP, metric 0, localpref 100, valid, confed-external
         Extended Community: RT:1100:1001
         mpls labels in/out nolabel/362
  (65001 64955 65003) 65089
        172.16.254.226 (metric 20645) from 172.16.216.252 (172.16.216.252)
         Origin IGP, metric 0, localpref 100, valid, confed-external
         Extended Community: RT:1100:1001
         mpls labels in/out nolabel/362
  (64955 65003) 65089
        172.16.254.226   (metric 20645) from 10.77.255.57 (10.77.255.57)
         Origin IGP, metric 0, localpref 100, valid, confed-external
         Extended Community RT:1100:1001
         mpls labels in/out nolabel/362
  (64955 65003) 65089
        172.16.254.226 (metric 20645) from 10.57.255.11 (10.57.255.11)
         Origin IGP, metric 0, localpref 100, valid, confed-external, best
         Extended Community RT:1100:1001
         mpls labels in/out nolabel/362

  (64955 65003) 65089
   172.16.254.226 (metric 20645) from 172.16.224.253 (172.16.224.253)
    Origin IGP, metric 0, localpref 100, valid, confed-external
    Extended Community RT:1100:1001
    mpls labels in/out nolabel/362
  (65003) 65089
   172.16.254.226 (metric 20645) from 172.16.254.234 (172.16.254.234)
    Origin IGP, metric 0, localpref 100, valid, confed-external
         Extended Community RT:1100:1001
         mpls labels in/out nolabel/362
  65089, (Received from a RR-client)
   172.16.228.226 (metric 20645) from 172.16.228.226 (172.16.228.226)
    Origin IGP, metric 0, localpref 100, valid, confed-external
         Extended Community RT:1100:1001
         mpls labels in/out nolabel/278
```

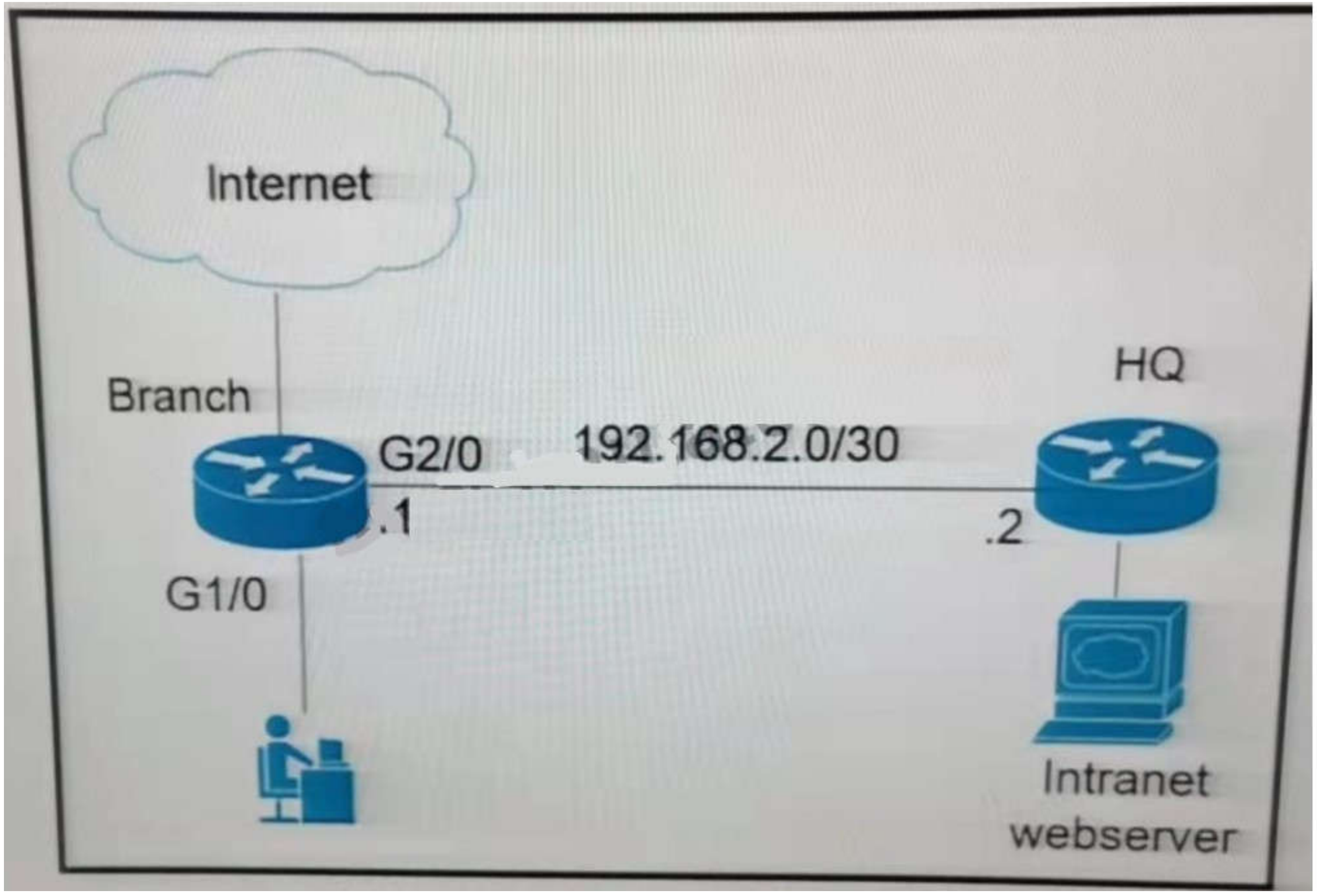
A. Configure AS_PATH prepend for the current best path
B. Configure higher MED to select as the best path
C. Configure AS_PATH prepend for the desired best path
D. Configure lower LOCAL_PREF to select as the best path

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
From the output, we learn that the current best path is from 10.57.255.11 (which includes "…valid, confed-external, best") and this path is 2

ASes away (64955 65003). Although there are some paths with only 1 AS away (path from 172.16.254.234 for example) but they were not chosen the best path so AS_PATH was not used to determine the best path -> Answers A and answer C are not correct.
All the paths in the output have metric of 0 and this is the lowest (best) value for this attribute. If we configure higher MED then it is less preferred over other paths -> Answer B is not correct.
Only answer D is left but LOCAL_PREF attribute should be configured with higher value to be preferred so we hope “lower LOCAL_PREF” here means higher value. But this is the best answer.

QUESTION 248
Refer to the exhibit. The branch router is configured with a default route toward the internet and has no routes configured for the HQ site that is connected through interface G2/0. The HQ router is fully configured and does not require changes. Which configuration on the branch router makes the intranet website (TCP port 80) available to the branch office users?



A. access-list 100 permit tcp any host intranet-webserver-ip eq 80
!
route-map pbr permit 10
match ip address 100
set ip next-hop 192.168.2.2
!
interface G2/0
ip policy route-map pbr

B. access-list 101 permit tcp any any eq 80
access-list 102 permit tcp any host intranet-webserver-ip
!
route-map pbr permit 10
match ip address 101 102
set ip next-hop 192.168.2.2
!
interface G1/0
ip policy route-map pbr

C. access-list 101 permit tcp any any eq 80
access-list 102 permit tcp any host intranet-webserver-ip
!
route-map pbr permit 10
match ip address 101
set ip next-hop 192.168.2.2
route-map pbr permit 20
match ip address 102
set ip next-hop 192.168.2.2
!
interface G2/0
ip policy route-map pbr

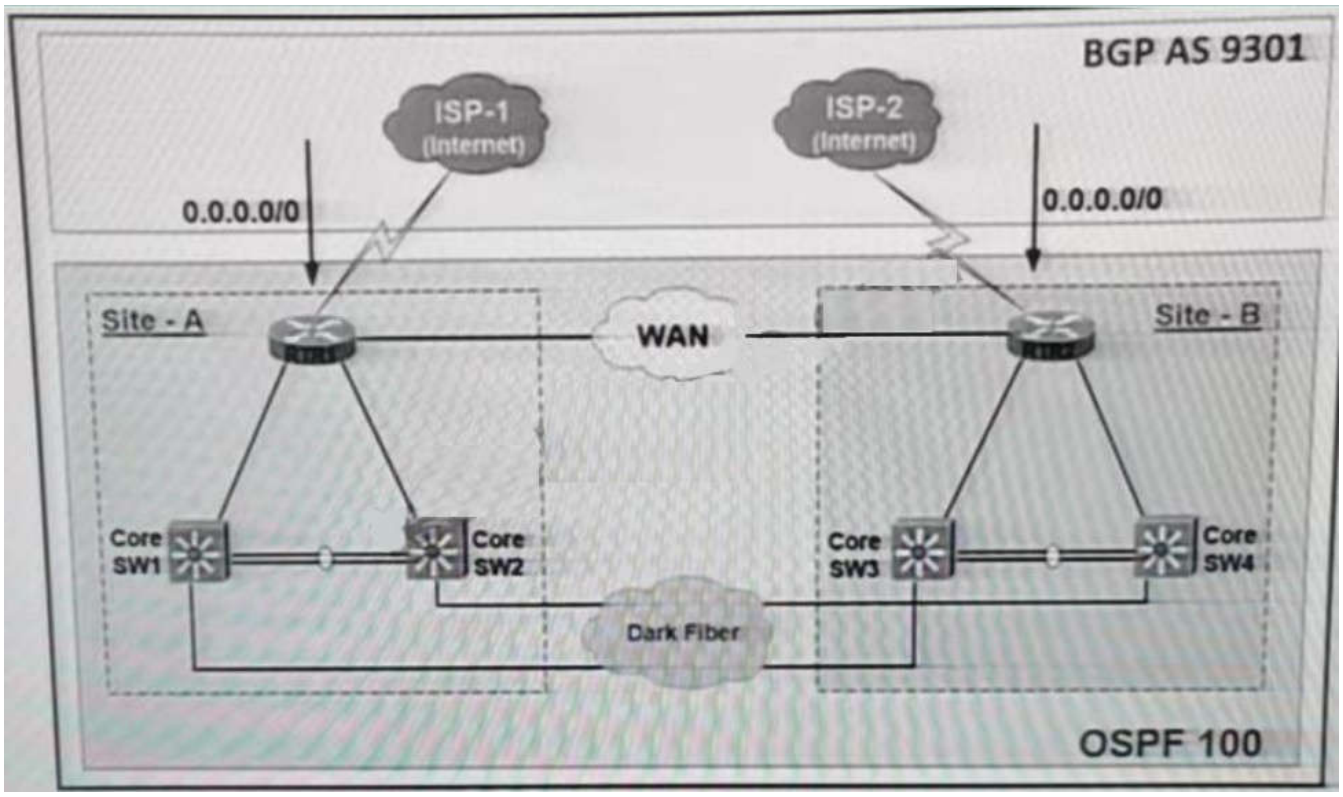
D. access-list 100 permit tcp host intranet-webserver-ip eg 80 any
!
route-map pbr permit 10
match ip address 100

```
set ip next-hop 192.168.2.2
!
interface G1/0
ip policy route-map pbr
```

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 249
Refer to the exhibit. The Internet traffic should always prefer Site-A ISP-1 if the link and BGP connection are up; otherwise, all Internet traffic should go to ISP-2 Redistribution is configured between BGP and OSPF routing protocols and it is not working as expected. What action resolves the issue?

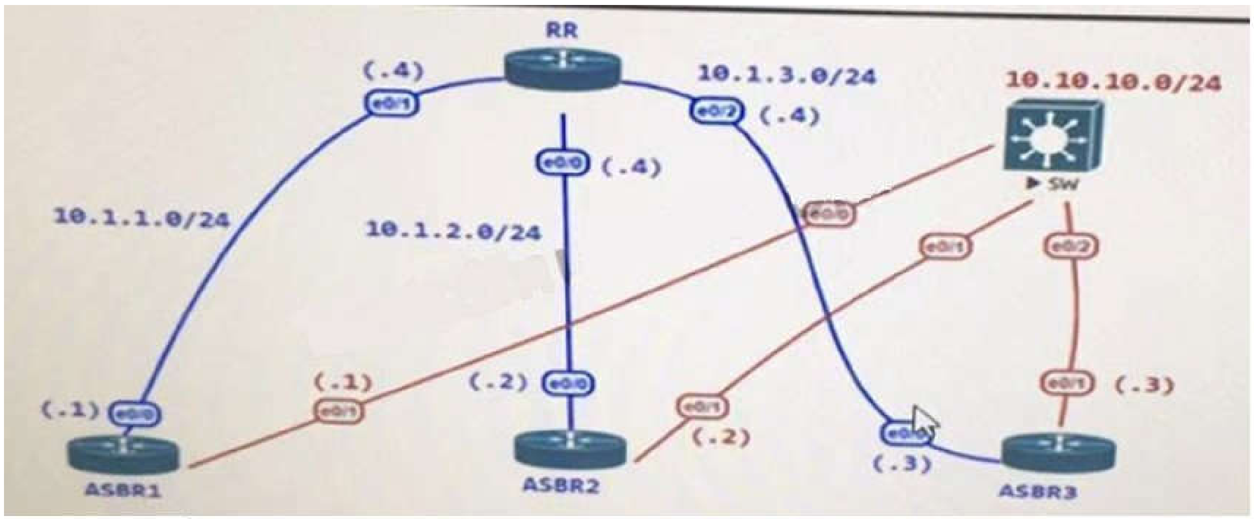


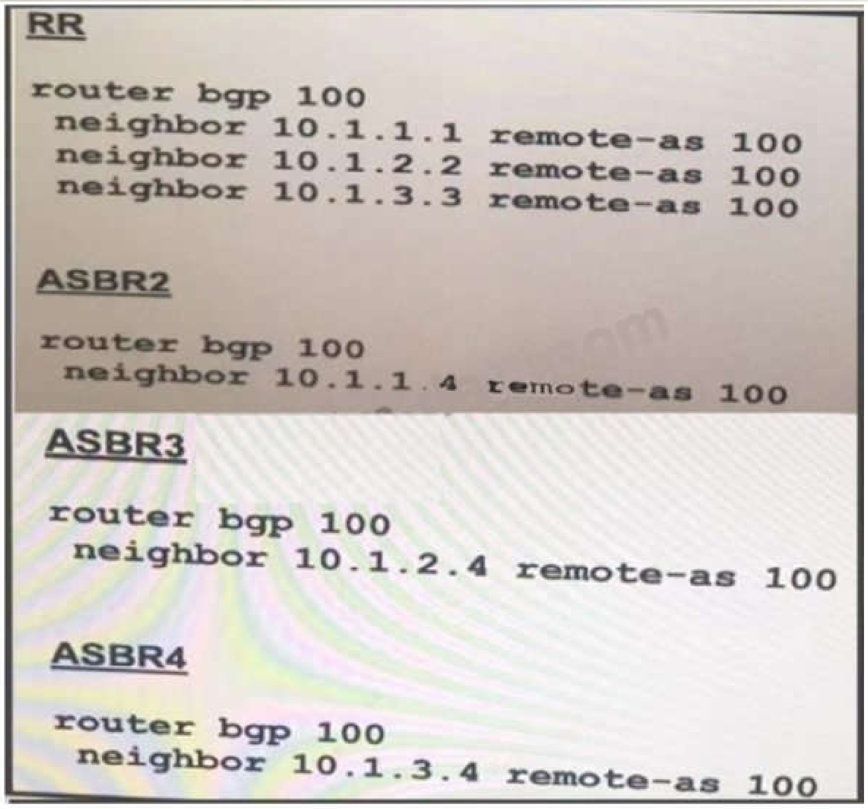
A. Set metric-type 2 at Site-A RTR1, and set metric-type 1 at Site-B RTR2
B. Set OSPF cost 100 at Site-A RTR1, and set OSPF Cost 200 at Site-B RTR2
C. Set OSPF cost 200 at Site: A RTR1 and set OSPF Cost 100 at Site-B RTR2
D. Set metric-type 1 at Site-A RTR1, and set metric-type 2 at Site-B RTR2

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 250
Refer to the exhibit. The administrator configured the network devise for end-to-end reachability, but the ASBRs are not propagation routes to each other. Which set of configuration resolves this issue?





```
RR

router bgp 100
 neighbor 10.1.1.1 remote-as 100
 neighbor 10.1.2.2 remote-as 100
 neighbor 10.1.3.3 remote-as 100

ASBR2

router bgp 100
 neighbor 10.1.1.4 remote-as 100

ASBR3

router bgp 100
 neighbor 10.1.2.4 remote-as 100

ASBR4

router bgp 100
 neighbor 10.1.3.4 remote-as 100
```

A. router bgp 100
neighbor 10.1.1.1 route-reflector-client
neighbor 10.1.2.2 route-reflector-client
neighbor 10.1.3.3 route-reflector-client

B. router bgp 100
neighbor 10.1.1.1 next-hop-self
neighbor 10.1.2.2 next-hop-self
neighbor 10.1.3.3 next-hop-self

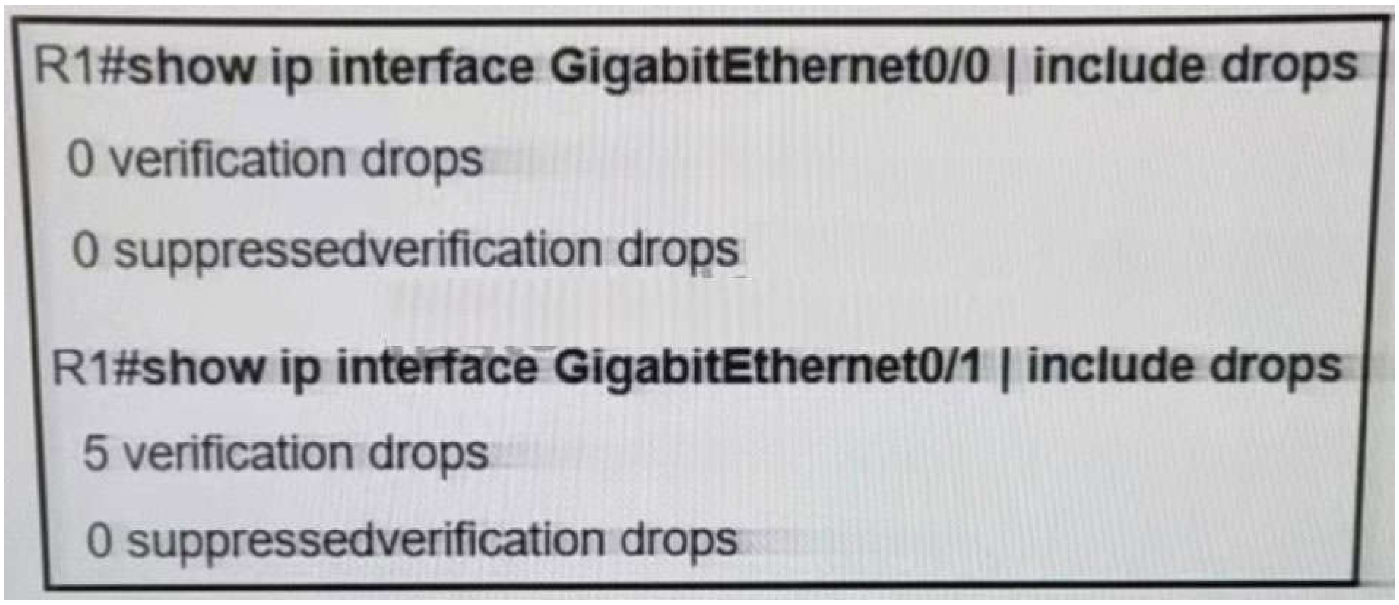
C. router bgp 100
neighbor 10.1.1.1 update-source Loopback0
neighbor 10.1.2.2 update-source Loopback0
neighbor 10.1 3.3 update-source Loopback0

D. router bgp 100
neighbor 10.1.1.1 ebgp-multihop
neighbor 1021.2.2 ebgp-multihop
neighbor 10.1.3.3 ebgp-multihop

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 251
Refer to the exhibit. R1 is configured with uRPF, and ping to R1 is failing from a source present in the R1 routing table via the GigatxtEthernet 0/0 interface. Which action resolves the issue?



```
R1#show ip interface GigabitEthernet0/0 | include drops
 0 verification drops
 0 suppressedverification drops
R1#show ip interface GigabitEthernet0/1 | include drops
 5 verification drops
 0 suppressedverification drops
```

A. Remove the access list from the interface GigabrtEthernet 0/0
B. Modify the uRPF mode from strict to loose
C. Enable Cisco Express Forwarding to ensure that uRPF is functioning correctly
D. Add a floating static route to the source on R1 to the GigabitEthernet 0/1 interface

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 252
The network administrator configured CoPP so that all HTTP and HTTPS traffic from the administrator device located at 172.16 1.99 toward the router CPU is limited to 500 kbps. Any traffic that exceeds this limit must be dropped.

```
access-list 100 permit ip host 172.16.1.99 any
!
class-map CM-ADMIN
match access-group 100
!
policy-map PM-COPP
class CM-ADMIN
police 500000 conform-action transmit
!
interface E0/0
service-policy input PM-COPP
```

CoPP failed to capture the desired traffic and the CPU load is getting higher. Which two configurations resolve the issue? (Choose two.)

A.
```
interface E0/0
no service-policy input PM-COPP
!
control-plane
service-policy input PM-COPP
```
B.
```
policy-map PM-COPP
class CM-ADMIN
no police 500000 conform-action transmit
police 500 conform-action transmit
!
control-plane
service-policy input PM-COPP
```
C.
```
no access-list 100
access-list 100 permit tcp host 172.16.1.99 any eq 80
```
D.
```
no access-list 100
access-list 100 permit tcp host 172.16.1.99 any eq 80
access-list 100 permit tcp host 172.16.1.99 any eq 443
```
E.
```
policy-map PM-COPP
class CM-ADMIN
no police 500000 conform-action transmit
police 500 conform-action transmit
```

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:

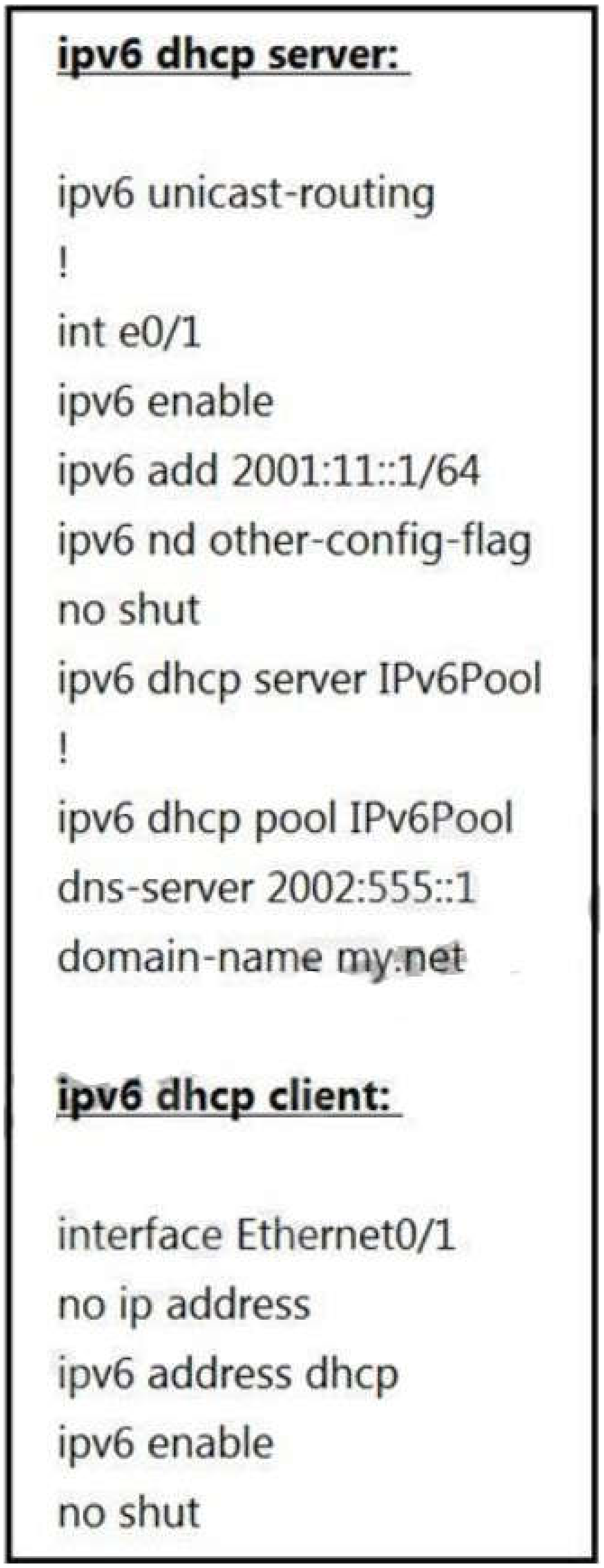
QUESTION 253
An engineer creates a Cisco DNA Center cluster with three nodes, but all the services are running on one host node. Which action resolves this issue?

A. Restore the link on the switch interface that is connected to a cluster link on the Cisco DNA Center
B. Click the master host node with all the services and select services to be moved to other hosts
C. Enable service distribution from the Systems 360 page.
D. Click system updates, and upgrade to the latest version of Cisco DNA Center.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 254
Refer to the exhibit. A network administrator is troubleshooting IPv6 address assignment for a DHCP client that is not getting an IPv6 address from the server. Which configuration retrieves the client IPv6 address from the DHCP server?

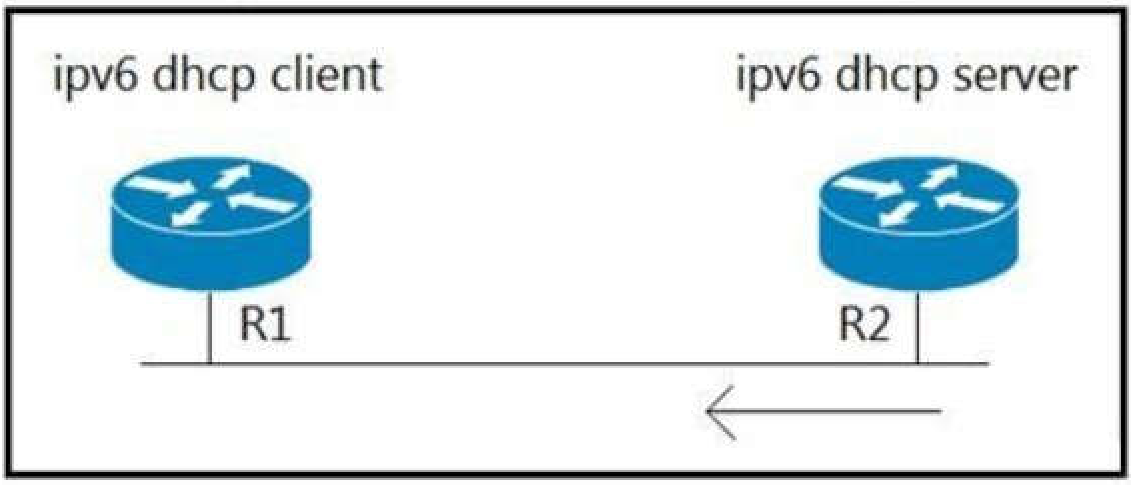


ipv6 dhcp server:

```
ipv6 unicast-routing
!
int e0/1
ipv6 enable
ipv6 add 2001:11::1/64
ipv6 nd other-config-flag
no shut
ipv6 dhcp server IPv6Pool
!
ipv6 dhcp pool IPv6Pool
dns-server 2002:555::1
domain-name my.net
```

ipv6 dhcp client:

```
interface Ethernet0/1
no ip address
ipv6 address dhcp
ipv6 enable
no shut
```

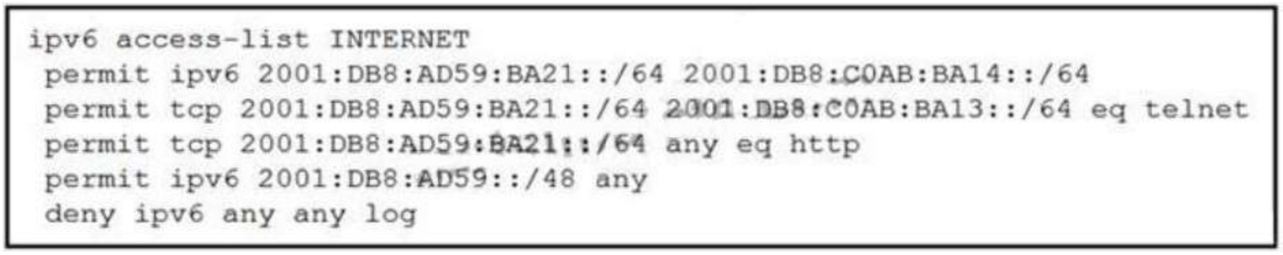


A. ipv6 address autoconfig command on the interface
B. ipv6 dhcp server automatic command on DHCP server
C. ipv6 dhcp relay-agent command on the interface
D. service dhcp command on DHCP server

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 255
Refer to the exhibit. While monitoring VTY access to a router, an engineer notices that the router does not have any filter and anyone can access the router with username and password even though an ACL is configured. Which command resolves this issue?



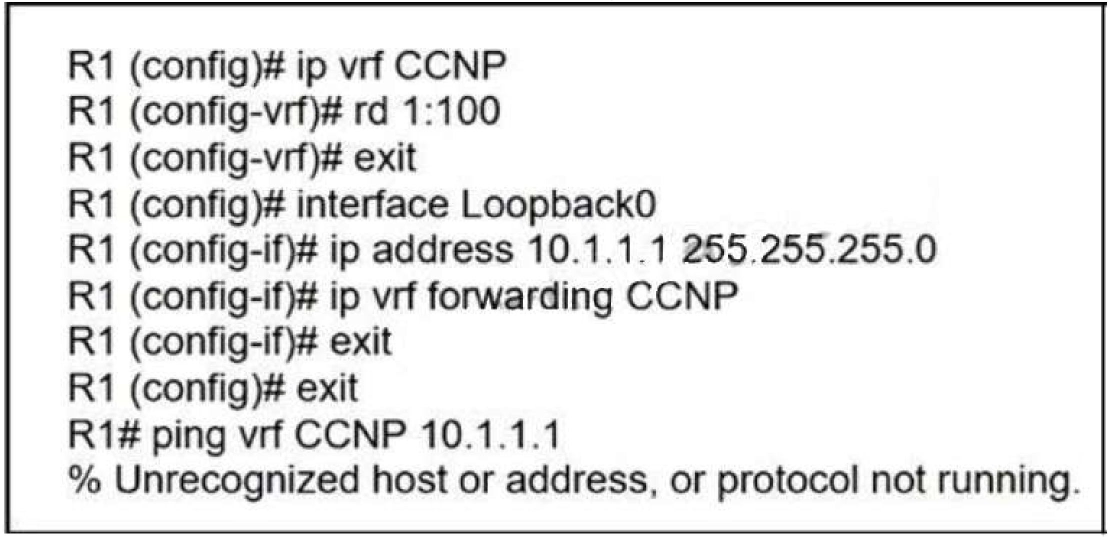
```
ipv6 access-list INTERNET
 permit ipv6 2001:DB8:AD59:BA21::/64 2001:DB8:C0AB:BA14::/64
 permit tcp 2001:DB8:AD59:BA21::/64 2001:DB8:C0AB:BA13::/64 eq telnet
 permit tcp 2001:DB8:AD59:BA21::/64 any eq http
 permit ipv6 2001:DB8:AD59::/48 any
 deny ipv6 any any log
```

A. access-class INTERNET in
B. ip access-group INTERNET in
C. ipv6 traffic-filter INTERNET in
D. ipv6 access-class INTERNET in

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 256
Refer to the exhibit. Which command must be configured to make VRF CCNP work?



```
R1 (config)# ip vrf CCNP
R1 (config-vrf)# rd 1:100
R1 (config-vrf)# exit
R1 (config)# interface Loopback0
R1 (config-if)# ip address 10.1.1.1 255.255.255.0
R1 (config-if)# ip vrf forwarding CCNP
R1 (config-if)# exit
R1 (config)# exit
R1# ping vrf CCNP 10.1.1.1
% Unrecognized host or address, or protocol not running.
```

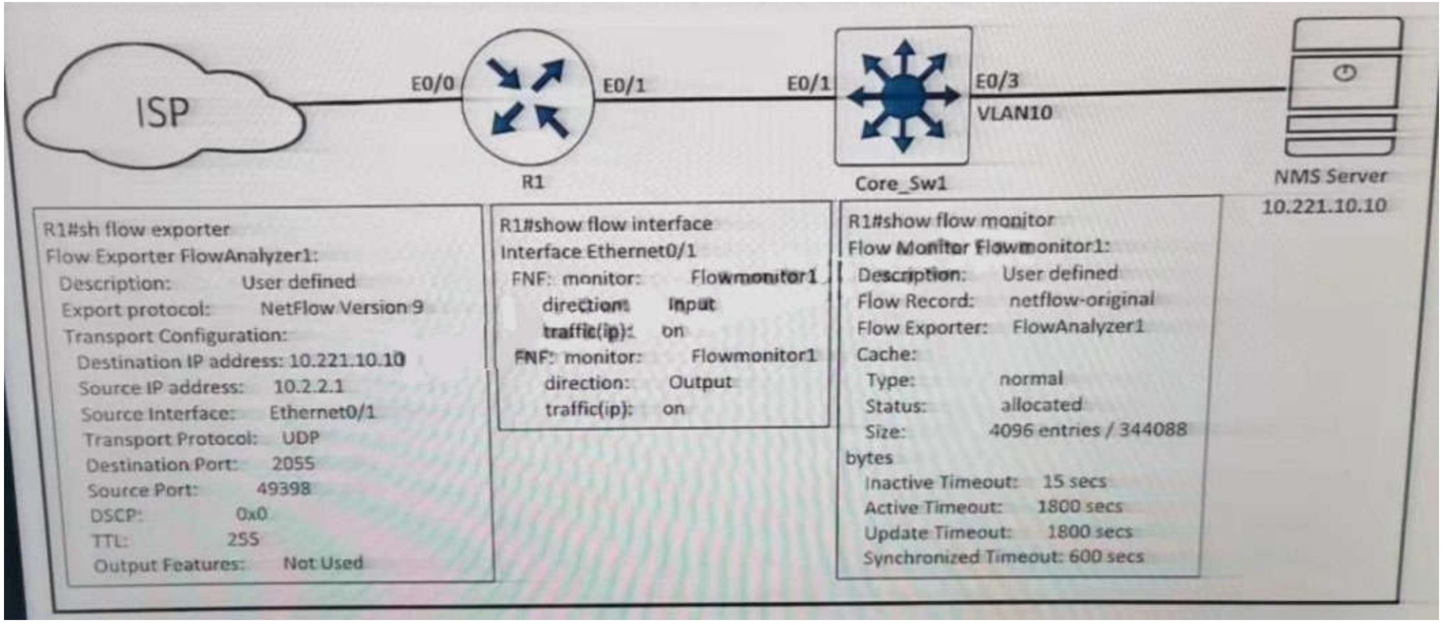
A. interface Loopback0
   vrf forwarding CCNP
B. interface Loopback0
   ip address 10.1.1.1 255.255.255.0
C. interface Loopback0
   ip address 10.1.1.1 255.255.255.0
   vrf forwarding CCNP
D. interface Loopback0
   ip address 10.1.1.1 255.255.255.0
   ip vrf forwarding CCNP

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 257

Refer to the exhibit. An engineer configured NetFlow on R1, but the NMS server cannot see the flow from ethernet 0/0 of R1. Which configuration resolves the issue?



```
R1#sh flow exporter
Flow Exporter FlowAnalyzer1:
  Description:          User defined
  Export protocol:      NetFlow Version 9
  Transport Configuration:
    Destination IP address: 10.221.10.10
    Source IP address:    10.2.2.1
    Source Interface:     Ethernet0/1
    Transport Protocol:   UDP
    Destination Port:     2055
    Source Port:          49398
    DSCP:                 0x0
    TTL:                  255
    Output Features:      Not Used
```

```
R1#show flow interface
Interface Ethernet0/1
  FNF:  monitor:        Flowmonitor1
        direction:      Input
        traffic(ip):    on
  FNF:  monitor:        Flowmonitor1
        direction:      Output
        traffic(ip):    on
```

```
R1#show flow monitor
Flow Monitor Flowmonitor1:
  Description:       User defined
  Flow Record:       netflow-original
  Flow Exporter:     FlowAnalyzer1
  Cache:
    Type:              normal
    Status:            allocated
    Size:              4096 entries / 344088
bytes
    Inactive Timeout:  15 secs
    Active Timeout:    1800 secs
    Update Timeout:    1800 secs
    Synchronized Timeout: 600 secs
```

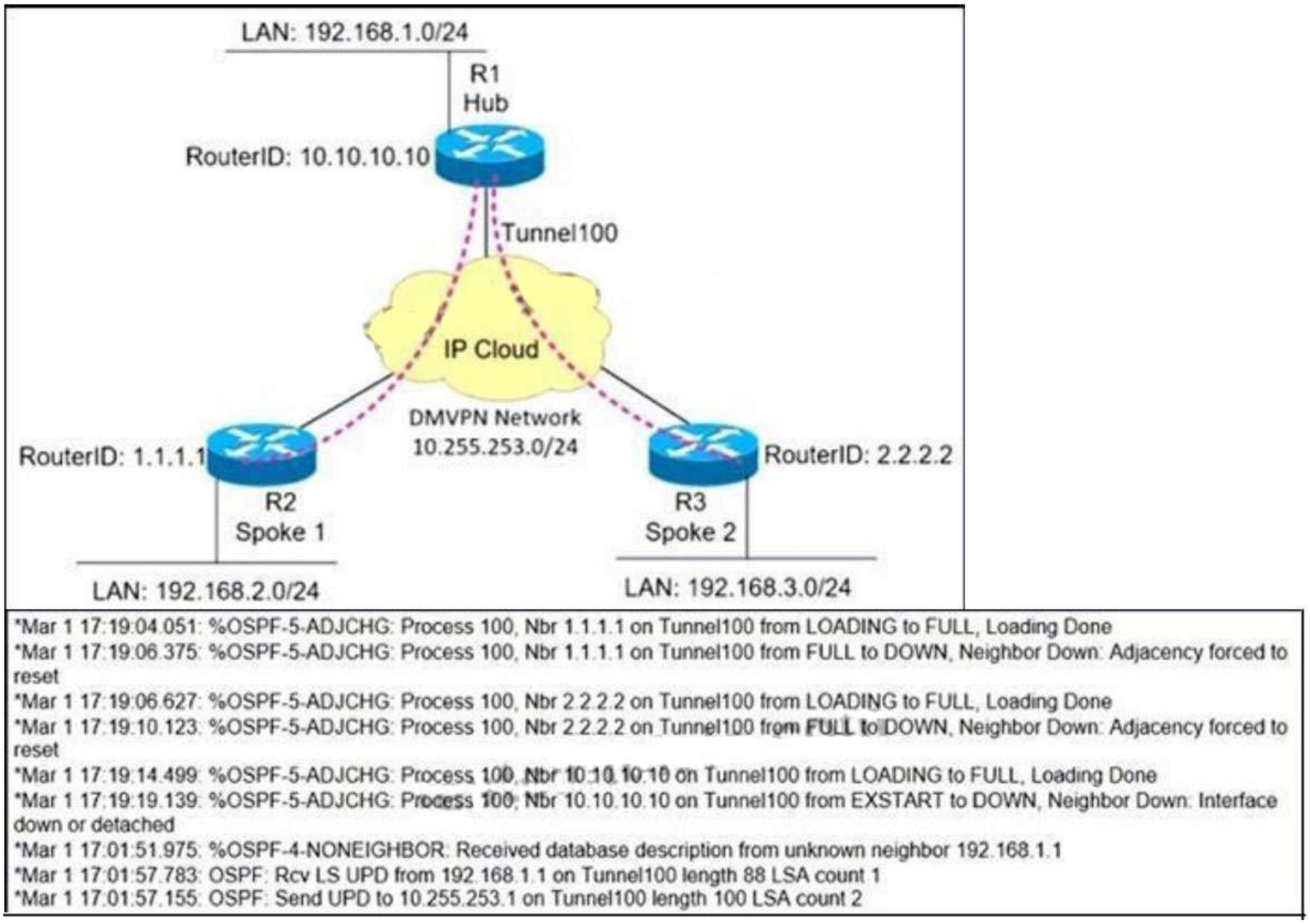
A. flow monitor Flowmonitor1
   source Ethernet0/0
B. interface Ethernet0/1
   ip flow monitor Flowmonitor1 input
   ip flow monitor Flowmonitor1 output
C. interface Ethernet0/0
   ip flow monitor Flowmonitor1 input
   ip flow monitor Flowmonitor1 output
D. flow exporter FlowAnalyzer1
   source Ethernet0/0

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 258

Refer to the exhibit. A network administrator sets up an OSPF routing protocol for a DMVPN network on the hub router. Which configuration required to establish a DMVPN tunnel with multiple spokes?



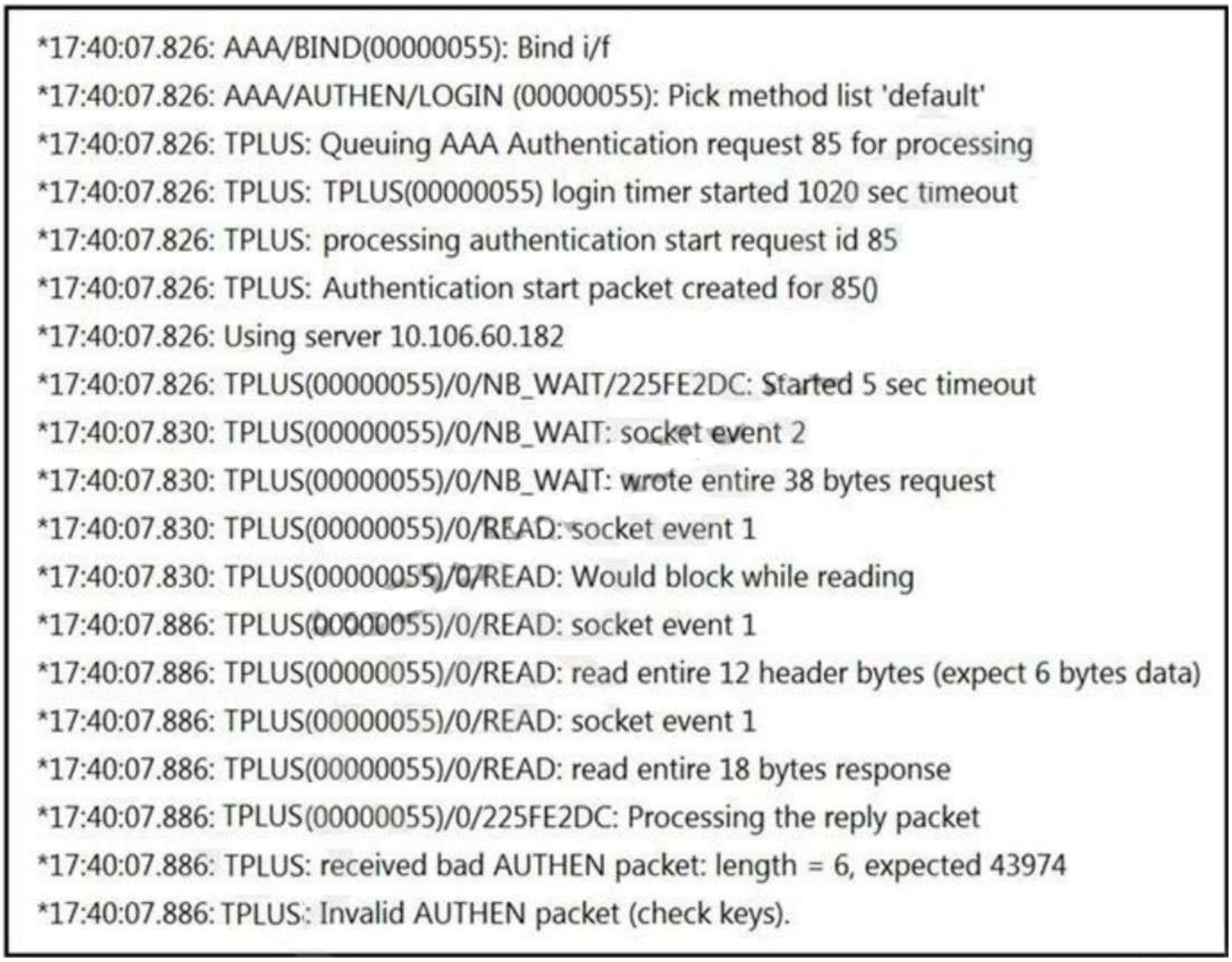
```
*Mar 1 17:19:04.051: %OSPF-5-ADJCHG: Process 100, Nbr 1.1.1.1 on Tunnel100 from LOADING to FULL, Loading Done
*Mar 1 17:19:06.375: %OSPF-5-ADJCHG: Process 100, Nbr 1.1.1.1 on Tunnel100 from FULL to DOWN, Neighbor Down: Adjacency forced to
reset
*Mar 1 17:19:06.627: %OSPF-5-ADJCHG: Process 100, Nbr 2.2.2.2 on Tunnel100 from LOADING to FULL, Loading Done
*Mar 1 17:19:10.123: %OSPF-5-ADJCHG: Process 100, Nbr 2.2.2.2 on Tunnel100 from FULL to DOWN, Neighbor Down: Adjacency forced to
reset
*Mar 1 17:19:14.499: %OSPF-5-ADJCHG: Process 100, Nbr 10.10.10.10 on Tunnel100 from LOADING to FULL, Loading Done
*Mar 1 17:19:19.139: %OSPF-5-ADJCHG: Process 100, Nbr 10.10.10.10 on Tunnel100 from EXSTART to DOWN, Neighbor Down: Interface
down or detached
*Mar 1 17:01:51.975: %OSPF-4-NONEIGHBOR: Received database description from unknown neighbor 192.168.1.1
*Mar 1 17:01:57.783: OSPF: Rcv LS UPD from 192.168.1.1 on Tunnel100 length 88 LSA count 1
*Mar 1 17:01:57.155: OSPF: Send UPD to 10.255.253.1 on Tunnel100 length 100 LSA count 2
```

A. ip ospf network point-to-multipoint on both spoke routers
B. ip ospf network point-to-point on the hub router
C. ip ospf network point-to-multipoint on One spoke router
D. ip ospf network point-to-point on both spoke routers

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 259
Refer to the exhibit. An engineer is troubleshooting a TACACS problem. Which action resolves the issue?



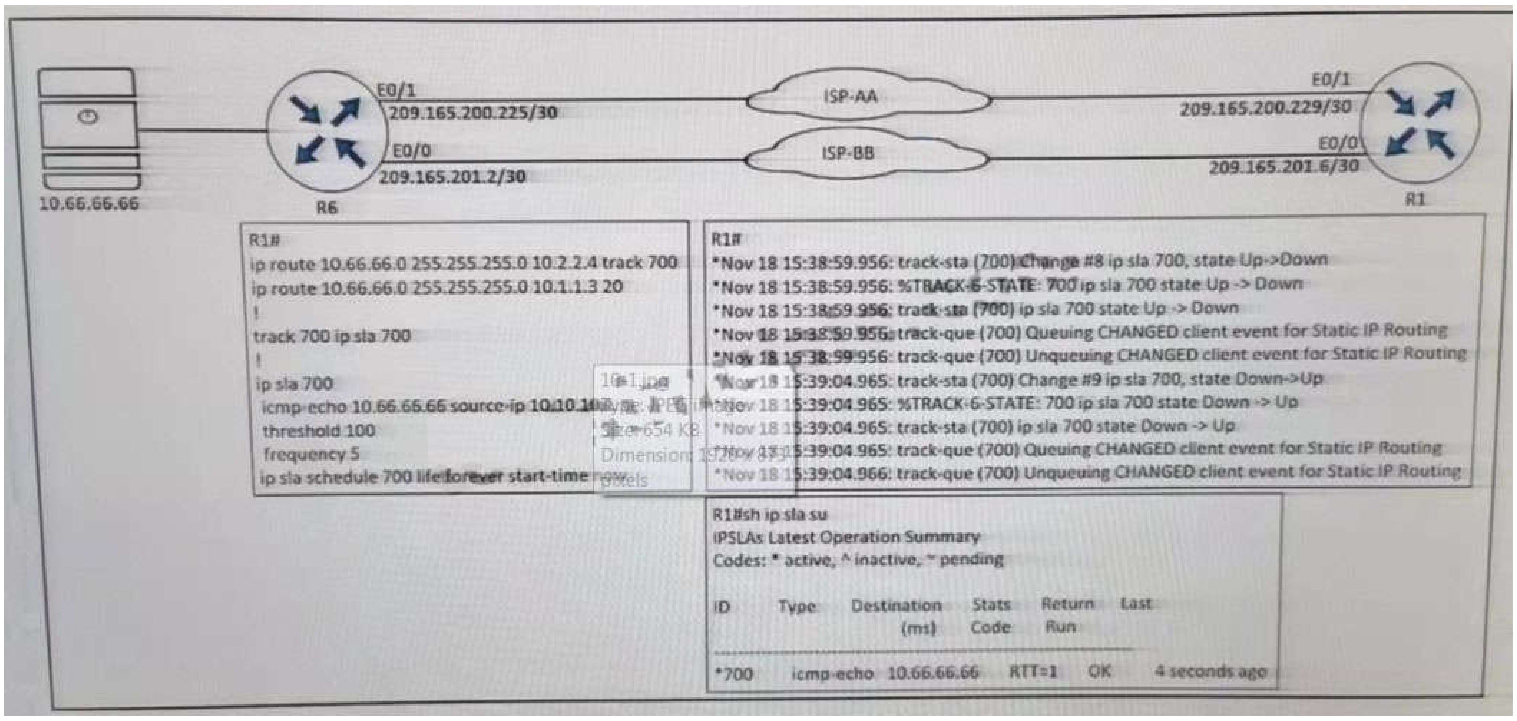
```
*17:40:07.826: AAA/BIND(00000055): Bind i/f
*17:40:07.826: AAA/AUTHEN/LOGIN (00000055): Pick method list 'default'
*17:40:07.826: TPLUS: Queuing AAA Authentication request 85 for processing
*17:40:07.826: TPLUS: TPLUS(00000055) login timer started 1020 sec timeout
*17:40:07.826: TPLUS: processing authentication start request id 85
*17:40:07.826: TPLUS: Authentication start packet created for 85()
*17:40:07.826: Using server 10.106.60.182
*17:40:07.826: TPLUS(00000055)/0/NB_WAIT/225FE2DC: Started 5 sec timeout
*17:40:07.830: TPLUS(00000055)/0/NB_WAIT: socket event 2
*17:40:07.830: TPLUS(00000055)/0/NB_WAIT: wrote entire 38 bytes request
*17:40:07.830: TPLUS(00000055)/0/READ: socket event 1
*17:40:07.830: TPLUS(00000055)/0/READ: Would block while reading
*17:40:07.886: TPLUS(00000055)/0/READ: socket event 1
*17:40:07.886: TPLUS(00000055)/0/READ: read entire 12 header bytes (expect 6 bytes data)
*17:40:07.886: TPLUS(00000055)/0/READ: socket event 1
*17:40:07.886: TPLUS(00000055)/0/READ: read entire 18 bytes response
*17:40:07.886: TPLUS(00000055)/0/225FE2DC: Processing the reply packet
*17:40:07.886: TPLUS: received bad AUTHEN packet: length = 6, expected 43974
*17:40:07.886: TPLUS: Invalid AUTHEN packet (check keys).
```

A. Configure a matching TACACS server IP.
B. Configure a matching preshared key.
C. Generate authentication from a relative source interface.
D. Apply a configured AAA profile to the VTY.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 260
Refer to the exhibit. An engineer configured IP SLA on R1 to avoid the ISP link flapping problem. but it is not working as designed IP SLA should wait 30 seconds before switching traffic to a secondary connection and then revert to the primary link after waning 20 seconds, when the primary link is available and stabilized. Which configuration resolves the issue?



```
R1#
ip route 10.66.66.0 255.255.255.0 10.2.2.4 track 700
ip route 10.66.66.0 255.255.255.0 10.1.1.3 20
!
track 700 ip sla 700
!
ip sla 700
 icmp-echo 10.66.66.66 source-ip 10.10.10[illegible]
 threshold 100
 frequency 5
ip sla schedule 700 life forever start-time now
```

```
R1#
*Nov 18 15:38:59.956: track-sta (700) Change #8 ip sla 700, state Up->Down
*Nov 18 15:38:59.956: %TRACK-6-STATE: 700 ip sla 700 state Up -> Down
*Nov 18 15:38:59.956: track-sta (700) ip sla 700 state Up -> Down
*Nov 18 15:38:59.956: track-que (700) Queuing CHANGED client event for Static IP Routing
*Nov 18 15:38:59.956: track-que (700) Unqueuing CHANGED client event for Static IP Routing
*Nov 18 15:39:04.965: track-sta (700) Change #9 ip sla 700, state Down->Up
*Nov 18 15:39:04.965: %TRACK-6-STATE: 700 ip sla 700 state Down -> Up
*Nov 18 15:39:04.965: track-sta (700) ip sla 700 state Down -> Up
*Nov 18 15:39:04.965: track-que (700) Queuing CHANGED client event for Static IP Routing
*Nov 18 15:39:04.966: track-que (700) Unqueuing CHANGED client event for Static IP Routing
```

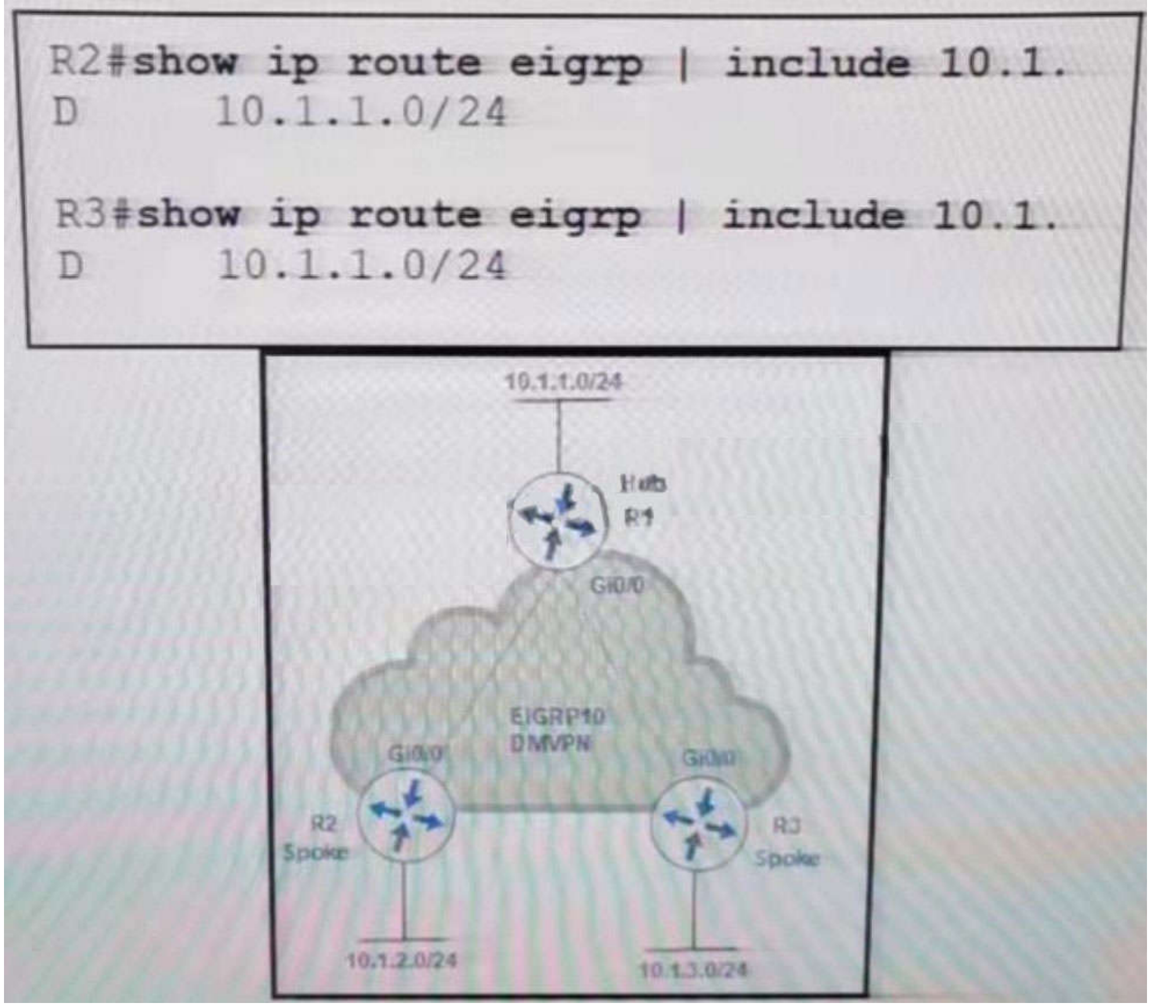
```
R1#sh ip sla su
IPSLAs Latest Operation Summary
Codes: * active, ^ inactive, ~ pending

ID      Type       Destination    Stats    Return    Last
                        (ms)      Code     Run
-----------------------------------------------------------
*700    icmp-echo  10.66.66.66    RTT=1    OK        4 seconds ago
```

A. R1(config)#ip sla 700
   R1(config-ip-sla)#delay down 30 up 20
B. R1(config)#ip sla 700
   R1(config-ip-sla)#delay down 20 up 30
C. R1(config)#track 700 ip sla 700
   R1(config-track)#delay down 30 up 20
D. R1(config)#track 700 ip sla 700
   R1(config-track)#delay down 20 up 30

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 261
Refer to the exhibit. An engineer configures DMVPN and receives the hub location prefix of 10.1.1.0724 on R2 and R3 The R3 prefix of 10 1.3.0/24 is not received on R2. and the R2 prefix 10.1,2.0/24 is not received on R3. Which action reserves the issue?



```
R2#show ip route eigrp | include 10.1.
D       10.1.1.0/24

R3#show ip route eigrp | include 10.1.
D       10.1.1.0/24
```

A. Split horizon prevents the routes from being advertised between spoke routers it should be disabled with the command no ip split-horizon eigrp 10 on the tunnel interface of R1

B. There is no spoke-to-spoke connection DMVPN configuration should be modified to enable a tunnel connection between R2 and R3 and neighbor relationship confirmed by use of the show ip eigrp neighbor command

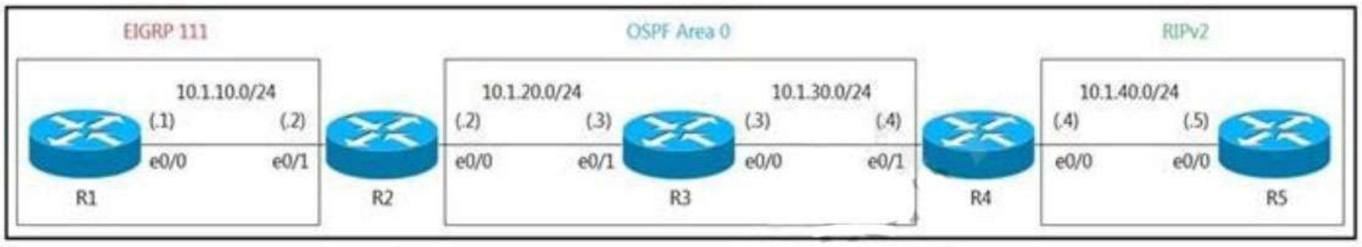
C. Split horizon prevents the routes from being advertised between spoke routers it should be disabled with the no ip split-horizon eigrp 10 command on the Gi0/0 interface of R1.

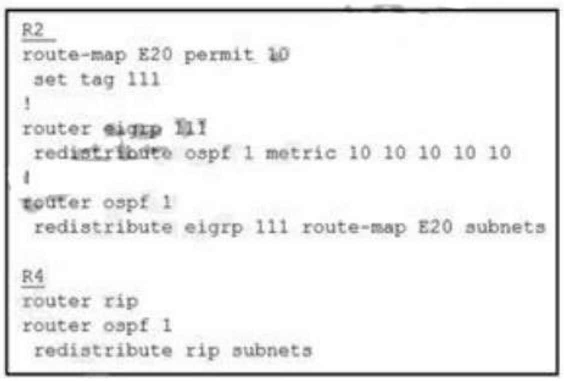
D. There is no spoke-to-spoke connection DMVPN configuration should be modified with a manual neighbor relationship configured between R2 and R3 and confirmed bb use of the show ip eigrp neighbor command.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 262
Refer to the exhibit. R5 should not receive any routes originated in the EIGRP domain. Which set of configuration changes removes the EIGRP routes from the R5 routing table to fix the issue?





```
R2
route-map E20 permit 10
 set tag 111
!
router eigrp 111
 redistribute ospf 1 metric 10 10 10 10 10
!
router ospf 1
 redistribute eigrp 111 route-map E20 subnets

R4
router rip
router ospf 1
 redistribute rip subnets
```

A. R4
route-map O2R deny 10
match tag 111
route-map O2R permit 20
!
router rip
redistribute ospf 1 route-map O2R metric 1

B. R2
route-map E20 deny 20
R4
route-map O2R deny 10
match tag 111
!
router rip
redistribute ospf 1 route-map O2R metric 1

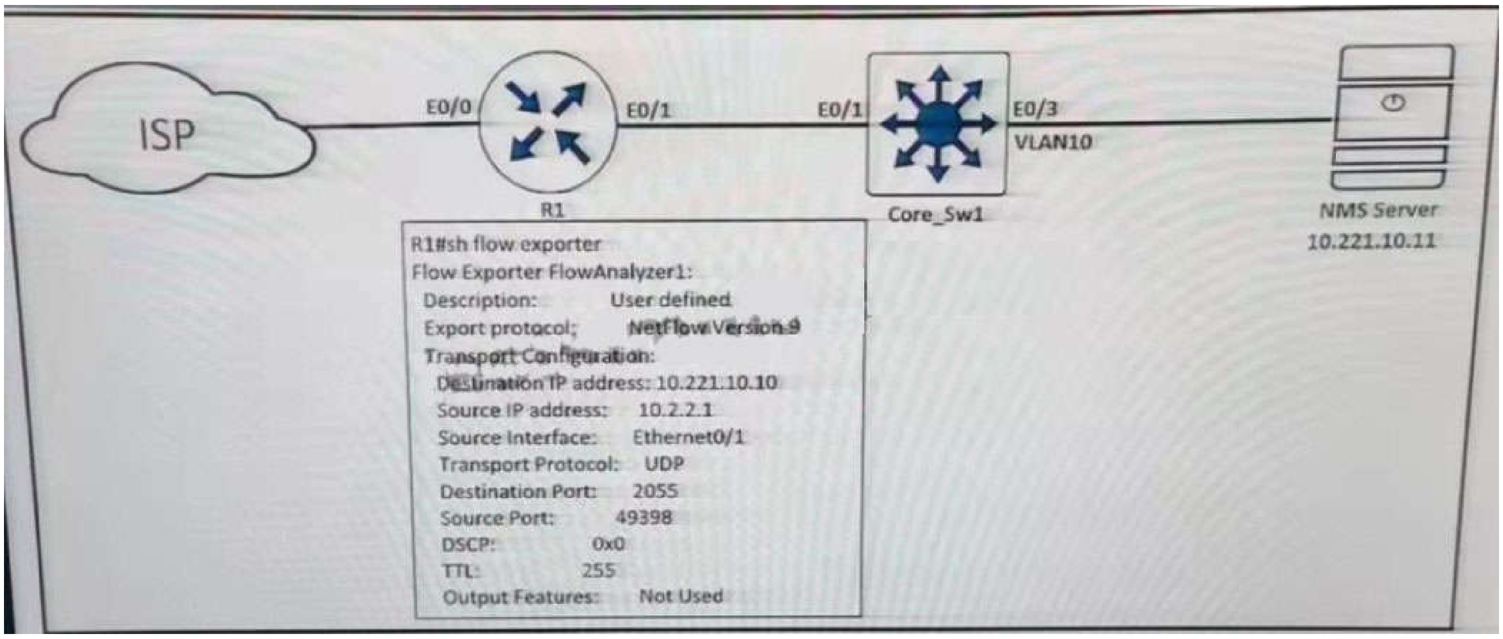
C. R4
route-map O2R permit 10
match tag 111
route-map O2R deny 20
!
router rip
redistribute ospf 1 route-map O2R metric 1

D. R4
route-map O2R deny 10
match tag 111
!
router rip
redistribute ospf 1 route-map O2R metric 1

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 263
Refer to the exhibit. An engineer configured NetFlow on R1, but the NMS server cannot see the flow from R1. Which configuration resolves the issue?



```
R1#sh flow exporter
Flow Exporter FlowAnalyzer1:
 Description:          User defined
 Export protocol;        NetFlow Version 9
 Transport Configuration:
  Destination IP address: 10.221.10.10
  Source IP address:     10.2.2.1
  Source Interface:     Ethernet0/1
  Transport Protocol:    UDP
  Destination Port:     2055
  Source Port:        49398
  DSCP:           0x0
  TTL:           255
  Output Features:      Not Used
```

A. flow monitor Flowmonitor1
destination 10.221.10.11

B. flow exporter FlowAnalyzer1
destination 10.221.10.11

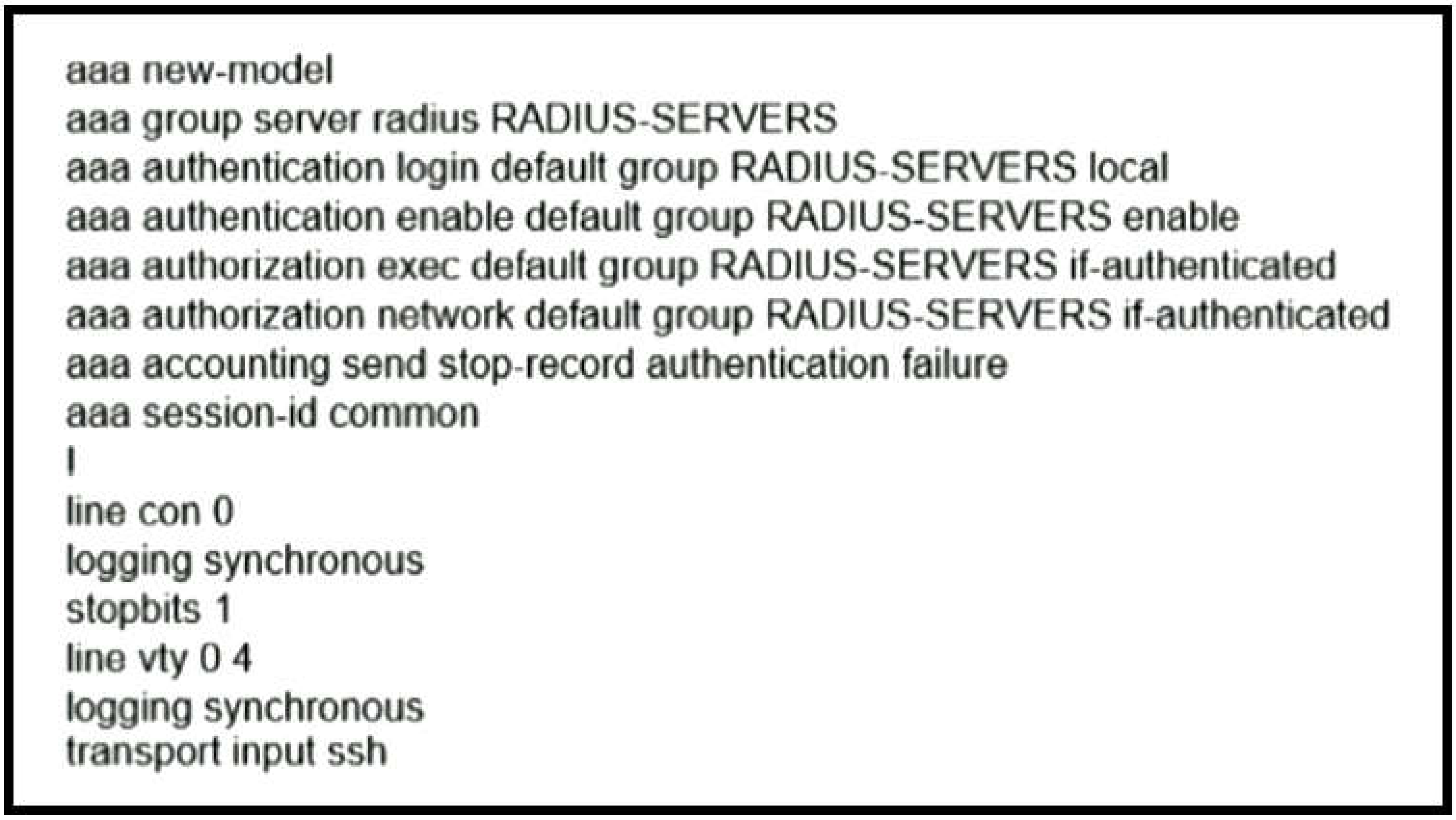
C. interface Ethernet0/1
flow-destination 10.221.10.11

D. interface Ethernet0/0
flow-destination 10.221.10.11

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 264
Refer to the exhibit. A network administrator successfully logs in to a switch using SSH from a (RADIUS server When the network administrator uses a console port to access the switch the RADIUS server returns shell:privlvl=15" and the switch asks to enter the enable command \ the command is entered, it gets rejected. Which command set is used to troubleshoot and reserve this issue?



```
aaa new-model
aaa group server radius RADIUS-SERVERS
aaa authentication login default group RADIUS-SERVERS local
aaa authentication enable default group RADIUS-SERVERS enable
aaa authorization exec default group RADIUS-SERVERS if-authenticated
aaa authorization network default group RADIUS-SERVERS if-authenticated
aaa accounting send stop-record authentication failure
aaa session-id common
!
line con 0
logging synchronous
stopbits 1
line vty 0 4
logging synchronous
transport input ssh
```

A. line con 0
aaa authorization console
authorization exec
!
line vty 0 4
transport input ssh

B. line con 0
aaa authorization console
!
line vty 0 4
authorization exec

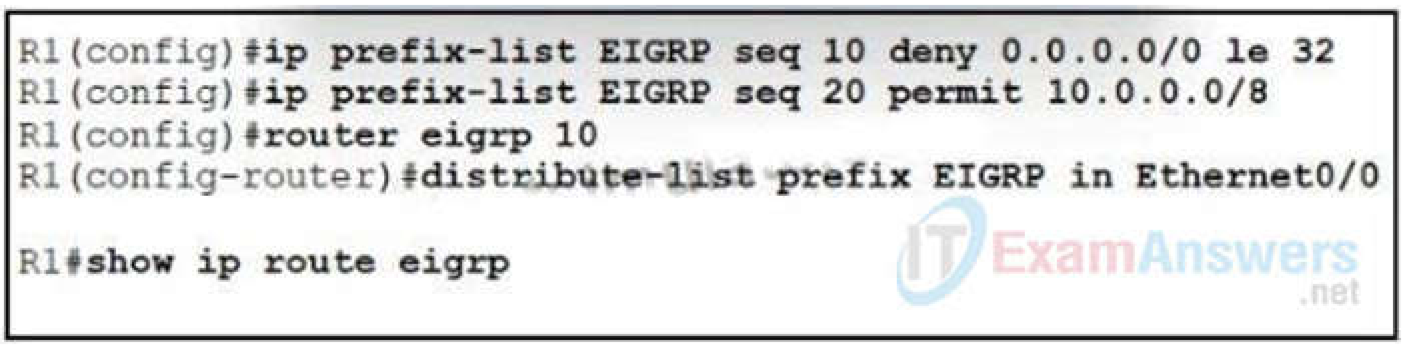
C. line con 0
aaa authorization console priv15
!
line vty 0 4
authorization exec

D. line con 0
aaa authorization console
authorization priv15
!
line vty 0 4
transport input ssh

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 265
Refer to the exhibit.



```
R1(config)#ip prefix-list EIGRP seq 10 deny 0.0.0.0/0 le 32
R1(config)#ip prefix-list EIGRP seq 20 permit 10.0.0.0/8
R1(config)#router eigrp 10
R1(config-router)#distribute-list prefix EIGRP in Ethernet0/0

R1#show ip route eigrp
```

A prefix list is created to filter routes inbound to an EIGRP process except for network 10 prefixes After the prefix list is applied no network 10 prefixes are visible in the routing table from EIGRP. Which configuration resolves the issue?

A. ip prefix-list EIGRP seq 20 permit 10.0.0.0/8 ge 9.
B. ip prefix-list EIGRP seq 10 permit 0.0.0.0/0 le 32
C. ip prefix-list EIGRP seq 5 permit 10.0.0.0/8 ge 9 no ip prefix-list EIGRP seq 20 permit 10.0.0.0/8
D. ip prefix-list EIGRP seq 20 permit 10.0.0.0/8 ge 9 ip prefix-list EIGRP seq 10 permit 0.0.0.0/0 le 32

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

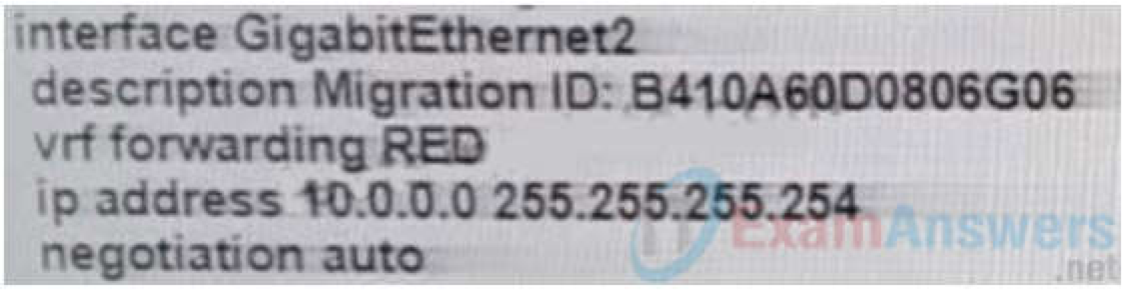
QUESTION 266
How does an MPLS Layer 3 VPN differentiate the IP address space used between each VPN?

A. by RD
B. by address family
C. by MP-BGP
D. byRT

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 267
An engineer is implementing a coordinated change with a server team. As part of the change, the engineer must configure interlace GigabitEthernet2 in an existing VRF “RED” then move the interface to an existing VRF “BLUE” when the server team is ready. The engineer configured interface GigabitEthemet2 in VRF “RED”



```
interface GigabitEthernet2
 description Migration ID: B410A60D0806G06
 vrf forwarding RED
 ip address 10.0.0.0 255.255.255.254
 negotiation auto
```

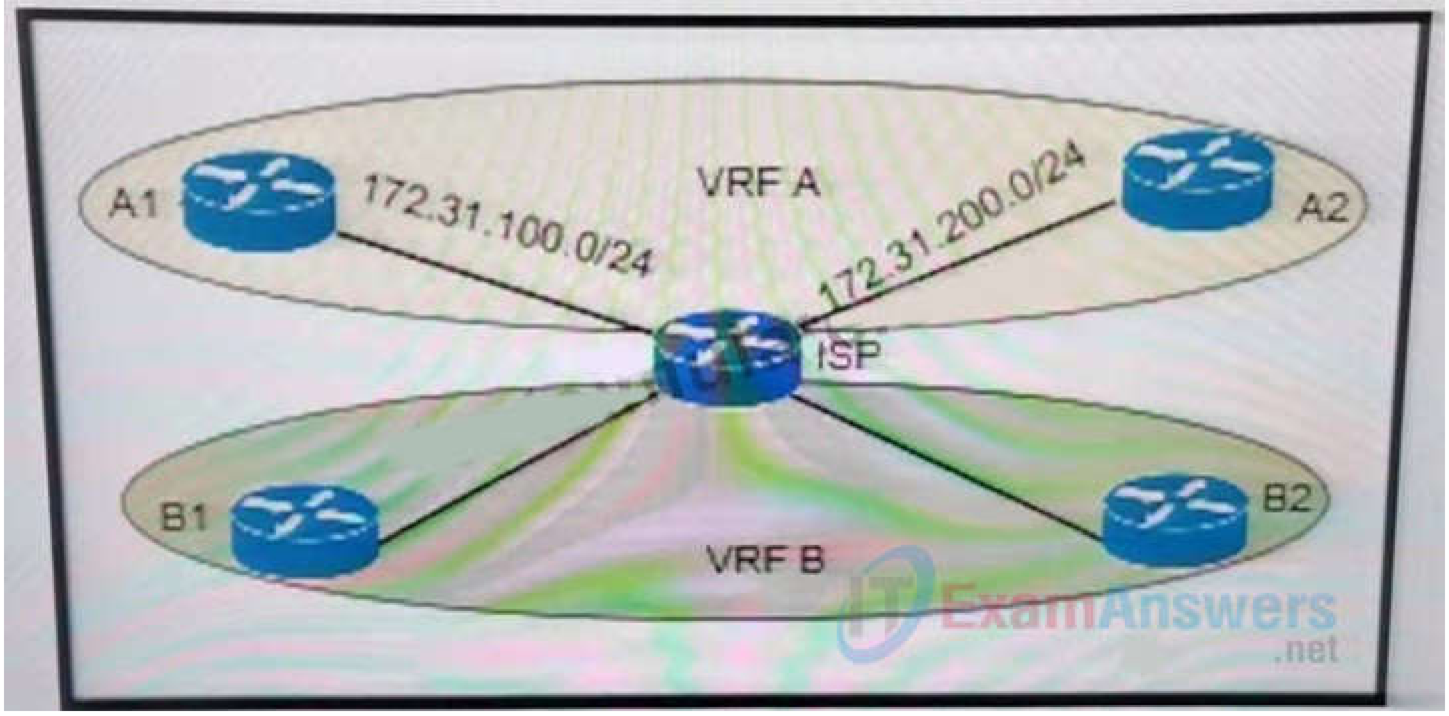
Which configuration completes the change?

A. interface GigabitEthernet2
no ip address
vrf forwarding BLUE
B. interface GigabitEthernet2
no vrf forwarding RED
vrf forwarding BLUE
ip address 10.0.0.0 255.255.255.254
C. interface GigabitEthernet2
no vrf forwarding RED
vrf forwarding BLUE
D. interface GigabitEthernet2
no ip address
ip address 10.0.0.0 255.255.255.254
vrf forwarding BLUE

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 268
Refer to the exhibit. The ISP router is fully configured for customer A and customer B using the VRF-Lite feature. What is the minimum configuration required for customer A to communicate between routers A1 and A2?



A.
```
A1:
interface fa0/0
description To->ISP
ip vrf forwarding A
ip add 172.31.100.1 255.255.255.0
no shut
!
router ospf 100
net 172.31.100.1 0.0.0.255 area 0
A2:
interface fa0/0
description To->ISP
ip vrf forwarding A
ip add 172.31.200.1 255.255.255.0
no shut
!
router ospf 100
net 172.31.200.1 0.0.0.255 area 0
```

B.
```
A1:
interface fa0/0
description To->ISP
ip add 172.31.200.1 255.255.255.0
no shut
!
router ospf 100
net 172.31.200.1 0.0.0.255 area 0
A2:
interface fa0/0
description To->ISP
ip add 172.31.100.1 255.255.255.0
no shut
!
router ospf 100
net 172.31.100.1 0.0.0.255 area 0
```

C.
```
A1:
interface fa0/0
description To->ISP
ip vrf forwarding A
ip add 172.31.100.1 255.255.255.0
no shut
```

```
!
router ospf 100 vrf A
net 172.31.100.1 0.0.0.255 area 0
A2:
interface fa0/0
description To->ISP
ip vrf forwarding A
ip add 172.31.200.1 255.255.255.0
no shut
!
router ospf 100 vrf A
net 172.31.200.1 0.0.0.255 area 0
```

D. A1:

```
interface fa0/0
description To->ISP
ip add 172.31.100.1 255.255.255.0
no shut
!
router ospf 100
net 172.31.100.1 0.0.0.255 area 0
A2:
interface fa0/0
description To->ISP
ip add 172.31.200.1 255.255.255.0
no shut
!
router ospf 100
net 172.31.200.1 0.0.0.255 area 0
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

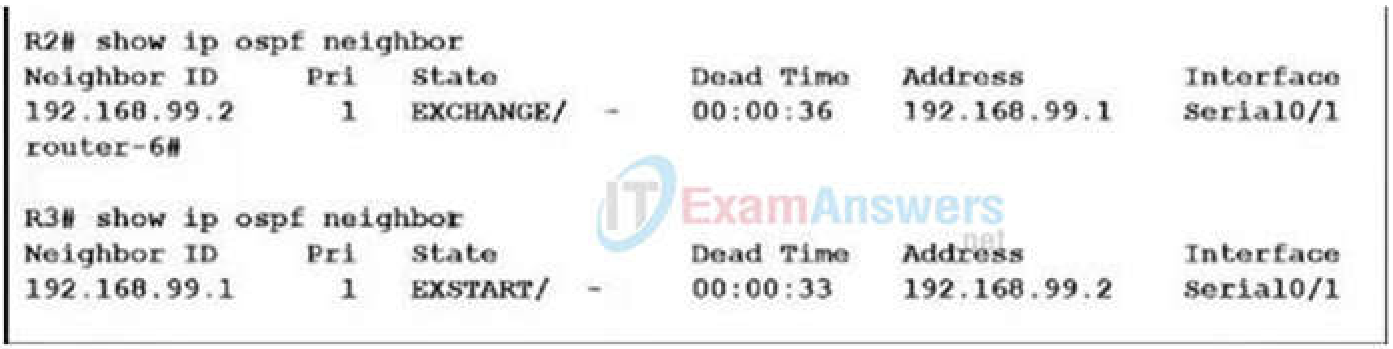
QUESTION 269
What are the two prerequisites to enable BFD on Cisco routers? (Choose two)

A. A supported IP routing protocol must be configured on the participating routers.
B. OSPF Demand Circuit must run BFD on all participating routers.
C. ICMP must be allowed on all participating routers.
D. UDP port 1985 must be allowed on all participating routers.
E. Cisco Express Forwarding and IP Routing must be enabled on all participating routers.

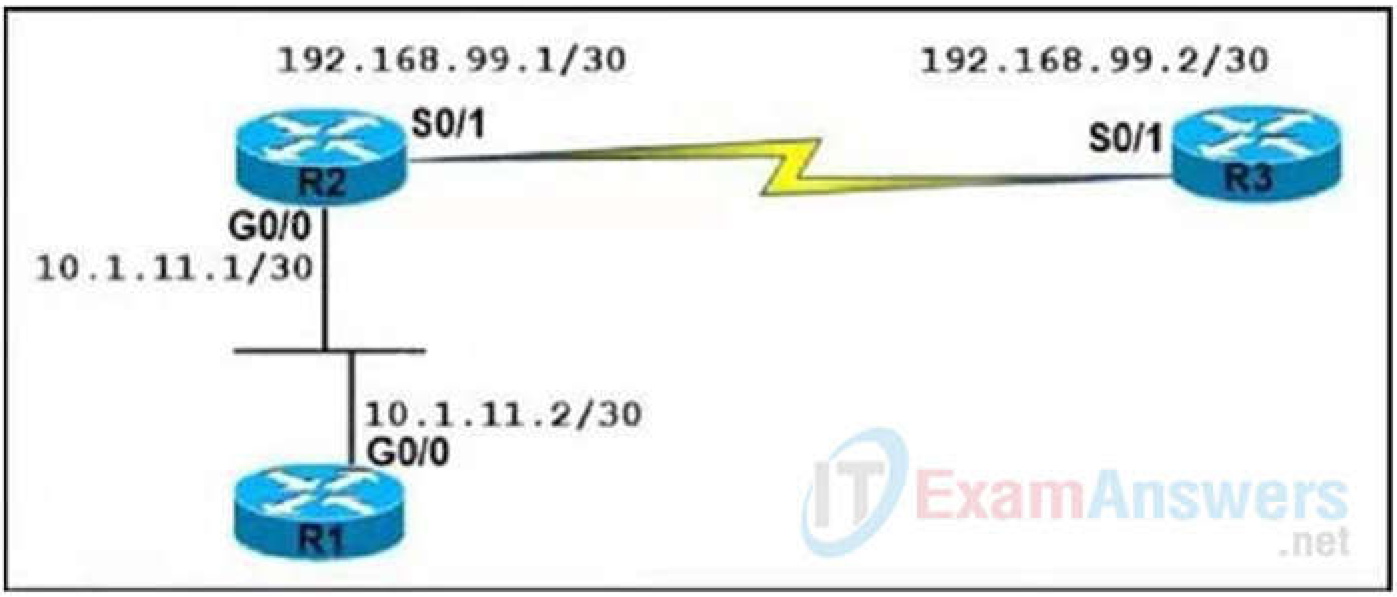
Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 270
Refer to the exhibit.



```
R2# show ip ospf neighbor
Neighbor ID      Pri   State           Dead Time   Address         Interface
192.168.99.2       1   EXCHANGE/  -    00:00:36    192.168.99.1    Serial0/1
router-6#

R3# show ip ospf neighbor
Neighbor ID      Pri   State           Dead Time   Address         Interface
192.168.99.1       1   EXSTART/  -     00:00:33    192.168.99.2    Serial0/1
```



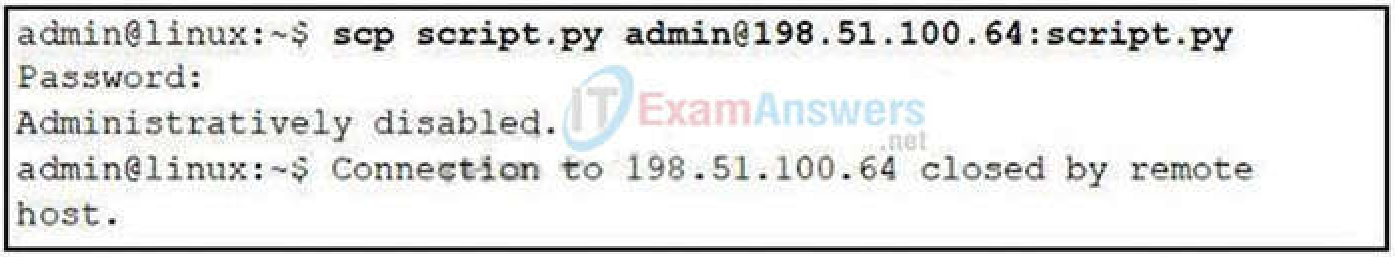
An OSPF neighbor relationship between R2 and R3 is showing stuck in EXCHANGE/EXSTART state. The neighbor is established between R1 and R2. The network engineer can ping from R2 to R3 and vice versa, but the neighbor is still down. Which action resolves the issue?

A. Restore the Layer 2/Layer 3 conectivity issue in the ISP network.
B. Match MTU on both router interfaces or ignore MTU.
C. Administrative “shut then no shut” both router interfaces.
D. Enable OSPF on the interface, which is required.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 271
Refer to the exhibit.



```
admin@linux:~$ scp script.py admin@198.51.100.64:script.py
Password:
Administratively disabled.
admin@linux:~$ Connection to 198.51.100.64 closed by remote
host.
```

A network administrator has developed a Python script on the local Linux machine and is trying to transfer it to the router. However, the transfer fails. Which action resolves this issue?

A. The SSH service must be enabled with the crypto key generate rsa command.
B. The SCP service must be enabled with the ip scp server enable command.
C. The Python interpreter must first be enabled with the guestshell enable command.
D. The SSH access must be allowed on the VTY lines using the transport input ssh command.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 272
Which two solutions are used to overcome a flapping link that causes a frequent label binding exchange between MPLS routers? (Choose two)

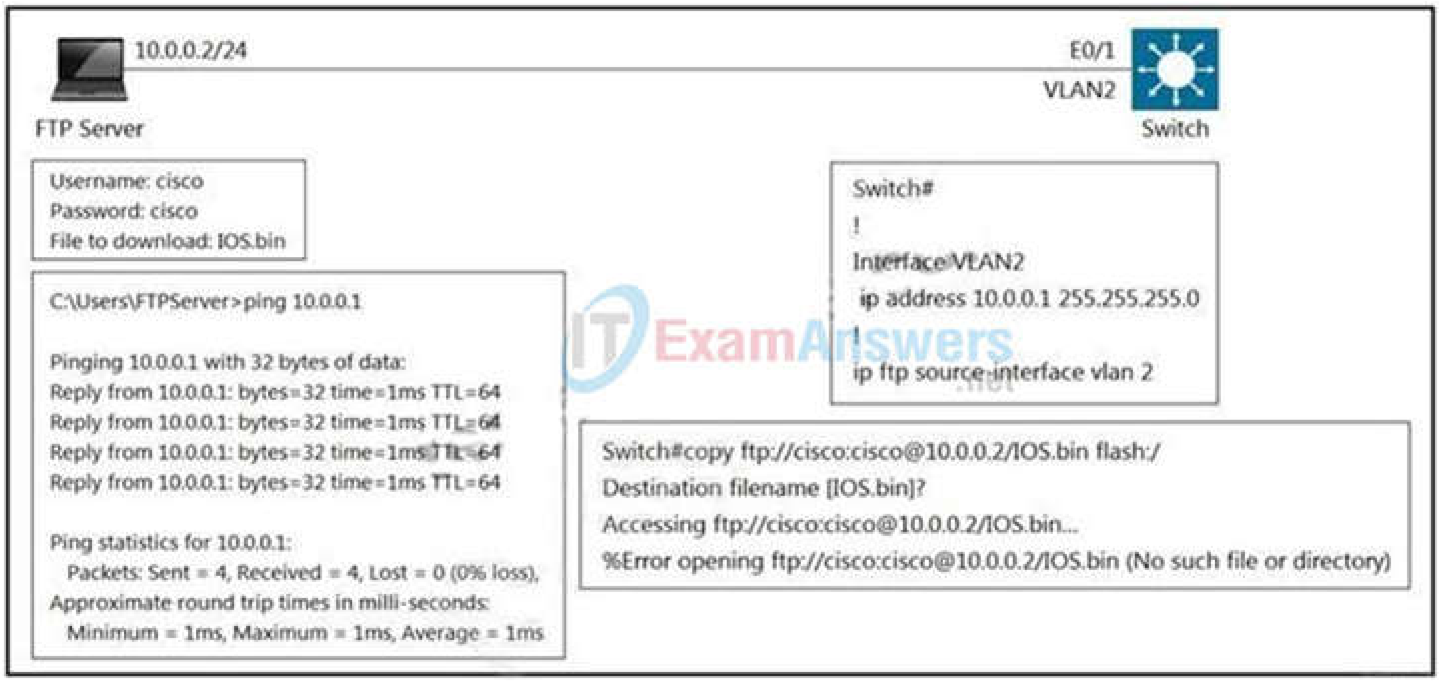
A. Create link dampening on links to protect the session.
B. Increase input queue on links to protect the session.
C. Create targeted hellos to protect the session.
D. Increase a hold-timer to protect the session.
E. Increase a session delay to protect the session.

Correct Answer: AC

Section: (none)
Explanation

Explanation/Reference:

QUESTION 273
Refer to the exhibit.



```
Username: cisco
Password: cisco
File to download: IOS.bin
```

```
C:\Users\FTPServer>ping 10.0.0.1

Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=1ms TTL=64
Reply from 10.0.0.1: bytes=32 time=1ms TTL=64
Reply from 10.0.0.1: bytes=32 time=1ms TTL=64
Reply from 10.0.0.1: bytes=32 time=1ms TTL=64

Ping statistics for 10.0.0.1:
   Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
   Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

```
Switch#
!
Interface VLAN2
 ip address 10.0.0.1 255.255.255.0
!
ip ftp source-interface vlan 2
```

```
Switch#copy ftp://cisco:cisco@10.0.0.2/IOS.bin flash:/
Destination filename [IOS.bin]?
Accessing ftp://cisco:cisco@10.0.0.2/IOS.bin...
%Error opening ftp://cisco:cisco@10.0.0.2/IOS.bin (No such file or directory)
```

An engineer cannot copy the IOS.bin
Which action resolves the issue?

A. Allow file permissions to download the file from the FTP server.
B. Add the IOS.bin file, which does not exist on FTP server.
C. Make memory space on the switch flash or USB drive to download the file.
D. Use the copy flash:/ ftp://cisco@10.0.0.2/IOS.bin command.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 274
What is an advantage of implementing BFD?

A. BFD provides faster updates for any flapping route.
B. BFD provides millisecond failure detection
C. BFD is deployed without the need to run any routing protocol
D. BFD provides better capabilities to maintain the routing table

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 275
What is the purpose of the DHCPv6 Guard?

A. It messages between a DHCPv6 server and a DHCPv6 client (or relay agent).
B. It shows that clients of a DHCPv5 server are affected.
C. It block DHCPv6 messages from relay agents to a DHCPv6 server.
D. It allows DHCPv6 replay and advertisements from (rouge) DHCPv6 servers.

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:

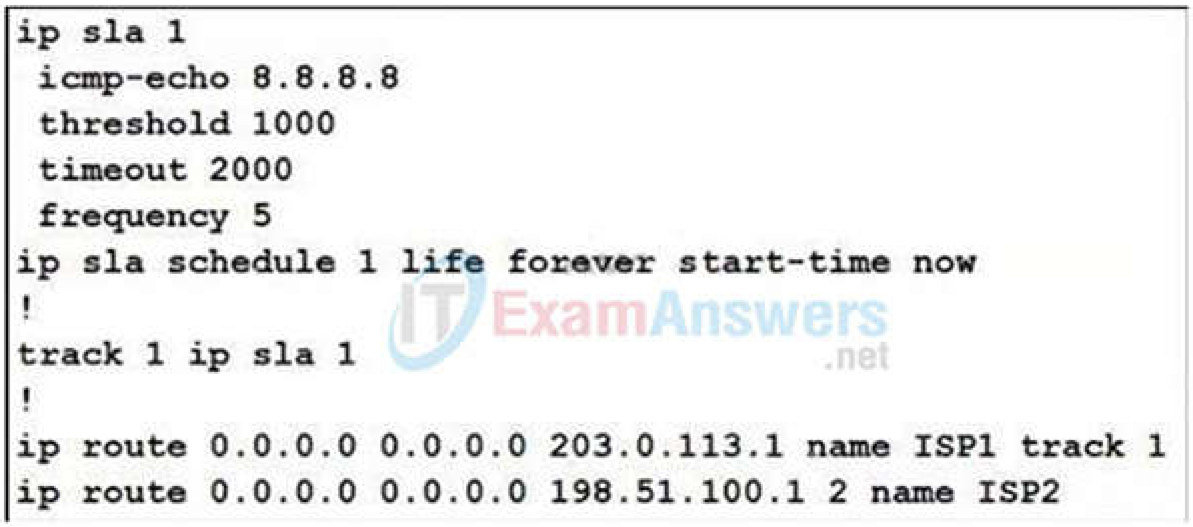
QUESTION 276
Which function does LDP provide in an MPLS topology?

A. It enables a MPLS topology to connect multiple VPNs to P routers.
B. It provides hop-by-hop forwarding in an MPLS topology for LSRs.
C. It exchanges routes for MPLS VPNs across different VRFs.
D. It provides a means for LSRs to exchange IP routes.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 277
Refer to the exhibit.



```
ip sla 1
 icmp-echo 8.8.8.8
 threshold 1000
 timeout 2000
 frequency 5
ip sla schedule 1 life forever start-time now
!
track 1 ip sla 1
!
ip route 0.0.0.0 0.0.0.0 203.0.113.1 name ISP1 track 1
ip route 0.0.0.0 0.0.0.0 198.51.100.1 2 name ISP2
```

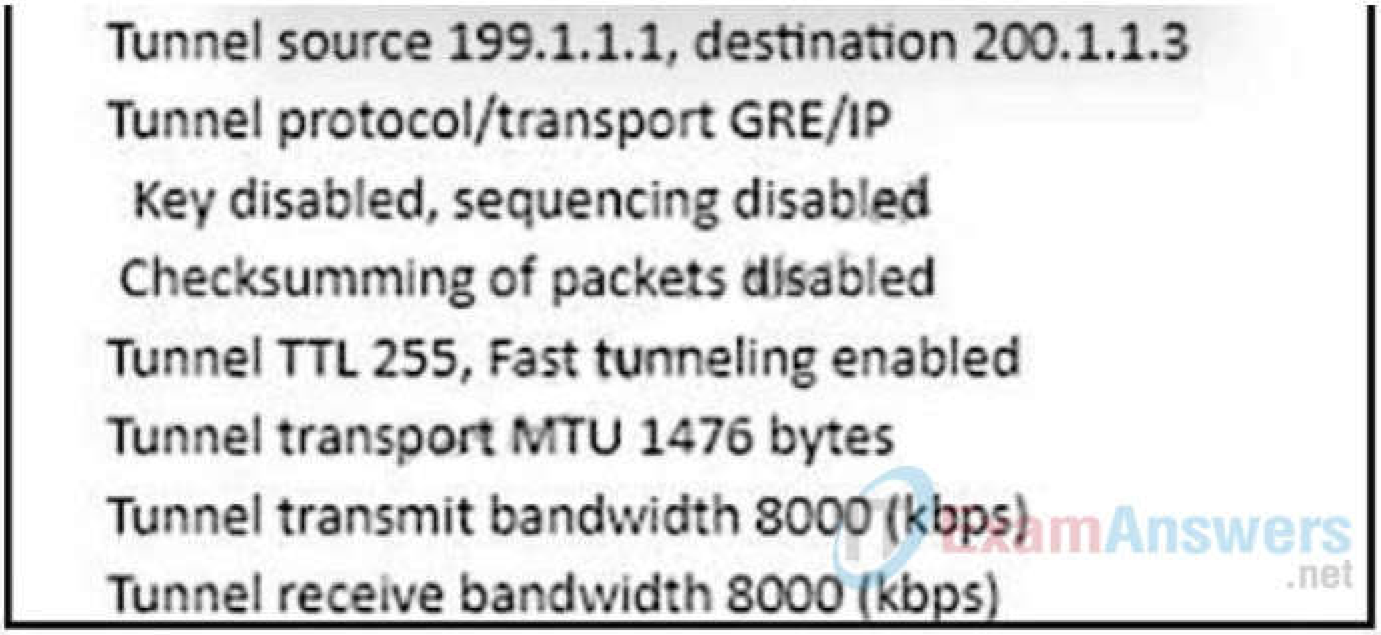
The administrator noticed that the connection was flapping between the two ISPs instead of switching to ISP2 when the ISP1 failed. Which action resolves the issue?

A. Include a valid source-interface keyword in the icmp-echo statement.
B. Reference the track object 1 on the default route through ISP2 instead of ISP1.
C. Modify the static routes to refer both to the next hop and the outgoing intertace.
D. Modify the threshold to match the administrative distance of the ISP2 route.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 278
Refer to the exhibit.



```
Tunnel source 199.1.1.1, destination 200.1.1.3
Tunnel protocol/transport GRE/IP
  Key disabled, sequencing disabled
 Checksumming of packets disabled
Tunnel TTL 255, Fast tunneling enabled
Tunnel transport MTU 1476 bytes
Tunnel transmit bandwidth 8000 (kbps)
Tunnel receive bandwidth 8000 (kbps)
```

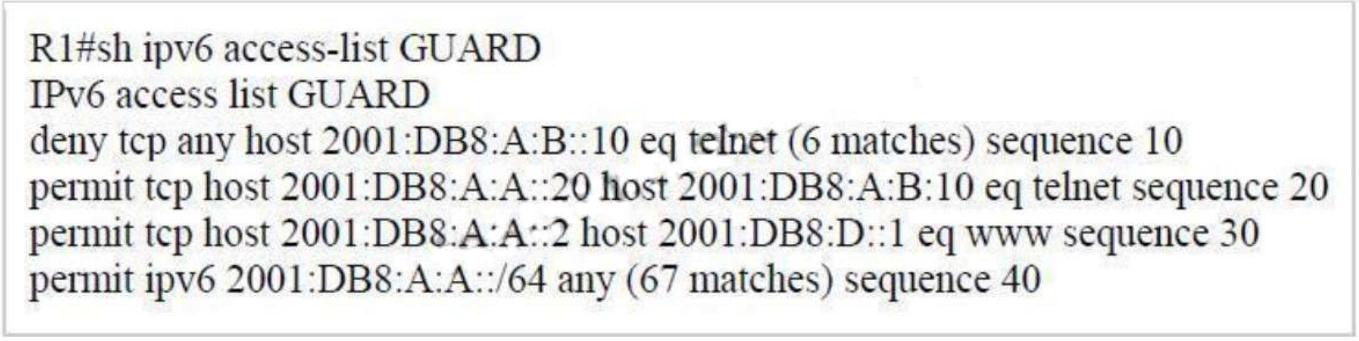
An engineer must establish a point-to-point GRE VPN between R1 and the remote site. Which configuration accomplishes the task for the remote site?

A. Interface Tunnel1
   tunnel source 199.1.1.1
   tunnel destination 200.1.1.3
   ip address 192.168.1.3 255.255.255.0
B. Interface Tunnel1
   tunnel source 200.1.1.3
   tunnel destination 199.1.1.1
   ip address 192.168.1.1.255.255.255.0
C. Interface Tunnel1
   tunnel source 200.1.1.3
   tunnel destination 199.1.1.1
   ip address 192.168.1.3.255.255.255.0
D. Interface Tunnel
   lunnel source 199.1.1.1
   tunnel destination 200.1.1.3
   ip address 192.168.1.1.255.255.255.0

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 279
Refer to Exhibit. PC2 is directly connected to R1. A user at PC2 cannot Telnet to 2001:db8:a:b::10. The user can ping 2001:db8:a:b::10 and receive DHCP-related information from the DHCP server. Which action resolves the issue?



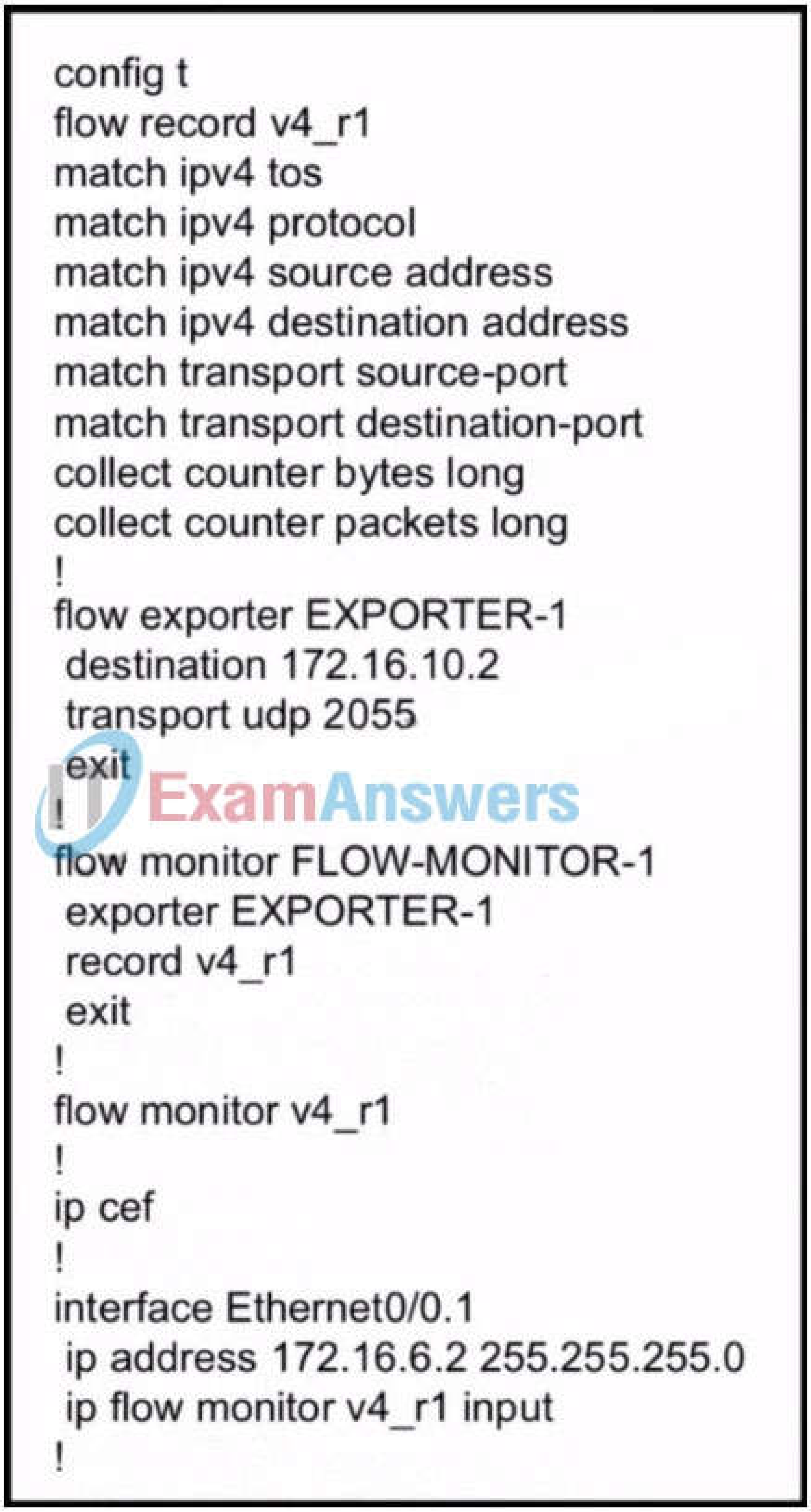
```
R1#sh ipv6 access-list GUARD
IPv6 access list GUARD
deny tcp any host 2001:DB8:A:B::10 eq telnet (6 matches) sequence 10
permit tcp host 2001:DB8:A:A::20 host 2001:DB8:A:B:10 eq telnet sequence 20
permit tcp host 2001:DB8:A:A::2 host 2001:DB8:D::1 eq www sequence 30
permit ipv6 2001:DB8:A:A::/64 any (67 matches) sequence 40
```

A. Remove sequence 10 and put it back as sequence 25.
B. Remove sequence 20 and put it back as sequence 45.
C. Remove sequence 30 and put it back as sequence 5.
D. Remove sequence 40 and put it back as sequence 15.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 280
Refer to the exhibit. The remote server is failing to receive the NetFlow data Which action resolves the issue?



```
config t
flow record v4_r1
match ipv4 tos
match ipv4 protocol
match ipv4 source address
match ipv4 destination address
match transport source-port
match transport destination-port
collect counter bytes long
collect counter packets long
!
flow exporter EXPORTER-1
 destination 172.16.10.2
 transport udp 2055
 exit
!
flow monitor FLOW-MONITOR-1
 exporter EXPORTER-1
 record v4_r1
 exit
!
flow monitor v4_r1
!
ip cef
!
interface Ethernet0/0.1
 ip address 172.16.6.2 255.255.255.0
 ip flow monitor v4_r1 input
!
```

A. Modify the flow transport command transport udp 2055 to move under flow monitor profile.
B. Modify the interlace command to Ip flow monitor FLOW-MONITOR-1 Input.
C. Modify the udp port under flow exporter profile to Ip transport udp 4739.
D. Modify the flow record command record v4_r1 to move under flow exporter profile.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
From the exhibit we see there are two flow monitors: the first one “FLOW-MONITOR-1” has been configured correctly but the second one “v4_r1” was left empty andinterface E0/0.1 is using it. So the remote server does not receive any NetFlow data.

QUESTION 281
What is a function of an end device configured with DHCPv6 guard?

A. If it is configured as a server, only prefix assignments are permitted.
B. If it is configured as a relay agent, only prefix assignments are permitted.
C. If it is configured as a client, messages are switched regardless of the assigned role.
D. If it is configured as a client, only DHCP requests are permitted.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The DHCPv6 Guard feature blocks reply and advertisement messages that come from unauthorized DHCP servers and relay agents.
Packets are classified into one of the three DHCP type messages. All client messages are always switched regardless of device role. DHCP server messages are only processed further if the device role is set to server. Further processing of server messages includes DHCP server advertisements (for source validation and server preference) and DHCP server replies (for permitted prefixes).
If the device is configured as a DHCP server, all the messages need to be switched, regardless of the device role configuration.

QUESTION 282
The network administrator configured the router for Control Plane Policing to limit OSPF traffic to be policed to 1 Mbps. Any traffic that exceeds this limit must also be allowed at this point for traffic analysis. The router configuration is:

```
access-list 100 permit ospf any any
!
class-map CM-OSPF
match access-group 100
!
policy-map PM-COPP
class CM-OSPF
police 1000000 conform-action transmit
!
control-plane
service-policy output PM-COPP
```

The Control Plane Policing failed to monitor and police OSPF traffic. Which configuration resolves this issue?

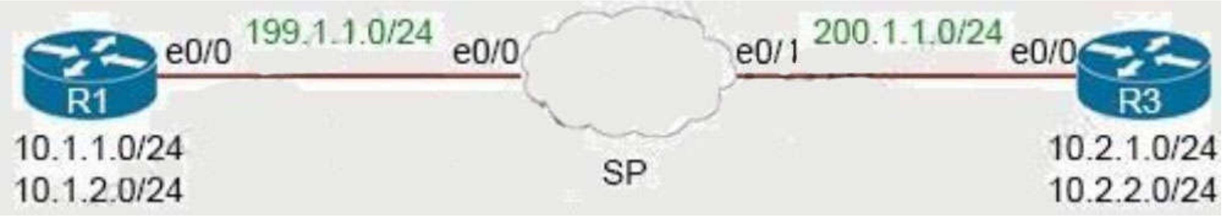
A.
```
policy-map PM-COPP
class CM-OSPF
no police 1000000 conform-action transmit
police 1000000 conform-action transmit
exceed-action transmit
!
control-plane
no service-policy output PM-COPP
```
B.
```
policy-map PM-COPP
class CM-OSPF
no police 1000000 conform-action transmit
police 1000000 conform-action transmit
exceed-action transmit
```
C.
```
control-plane
no service-policy output PM-COPP
service-policy input PM-COPP
```
D.
```
no access-list 100
access-list 100 deny ospf any any
access-list 100 permit ip any any
!
policy-map PM-COPP
class CM-OSPF
no police 1000000 conform-action transmit
police 1000000 conform-action transmit
exceed-action drop
!
control-plane
no service-policy output PM-COPP
service-policy input PM-COPP
```

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 283

Refer to the exhibit. An engineer must configure a LAN-to-LAN IPsec VPN between R1 and the remote router. Which IPsec Phase 1 configuration must the engineer use for the local router?



A. crypto isakmp policy 5
   authentication pre-share
   encryption 3des
   hash sha
   group 2
   !
   crypto isakmp key cisco123 address 200.1.1.3
B. crypto isakmp policy 5
   authentication pre-share
   encryption 3des
   hash md5
   group 2
   !
   crypto isakmp key cisco123 address 200.1.1.3
C. crypto isakmp policy 5
   authentication pre-share
   encryption 3des
   hash md5
   group 2
   !
   crypto isakmp key cisco123 address 199.1.1.1
D. crypto isakmp policy 5
   authentication pre-share
   encryption 3des
   hash md5
   group 2
   !
   crypto isakmp key cisco123! address 199.1.1.1

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
In the “crypto isakmp key … address ” command, the address must be of the IP address of the other end (which is 200.1.1.3 in this case) so Option A and Option B are correct. The difference between these two options are in the hash SHA or MD5 method but both of them can be used although SHA is better than MD5 so we choose Option A the best answer.
Note: Cisco no longer recommends using 3DES, MD5 and DH groups 1, 2 and 5.

QUESTION 284

A CoPP policy is applied for receiving SSH traffic from the WAN interface on a Cisco ISR4321 router. However, the SSH response from the router is abnormal and stuck during the high link utilization. The problem is identified as SSH traffic does not match in the ACL. Which action resolves the issue?

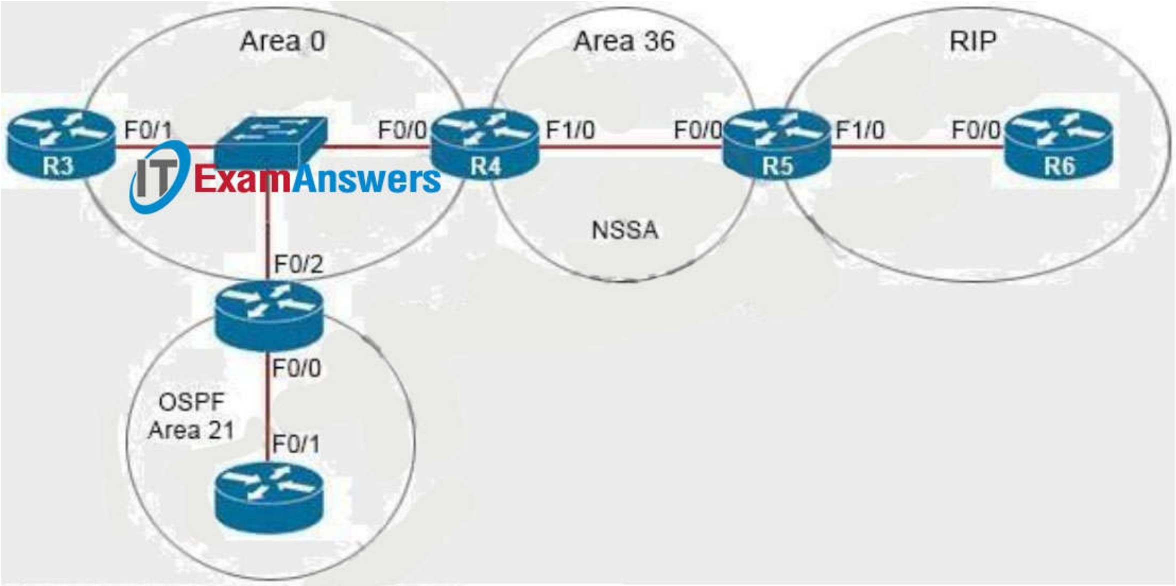
A. Rate-limit SSH traffic to ensure dedicated bandwidth.
B. Apply CoPP on the control plane interface.
C. Increase the IP precedence value of SSH traffic to 6.
D. Apply CoPP on the WAN interface inbound direction.

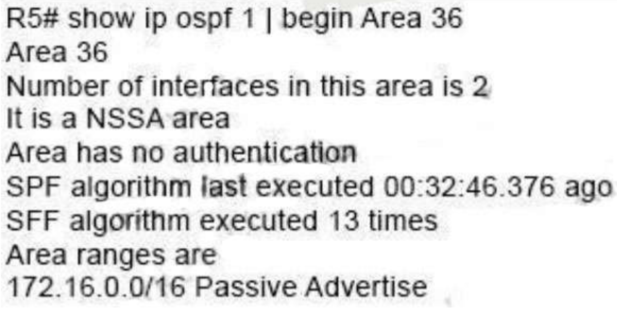
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The problem is “SSH traffic does not match in the ACL” and “CoPP policy is applied for receiving SSH traffic from the WAN interface” so we should apply CoPP on the control plane interface instead.

QUESTION 285

Refer to the exhibit. The network engineer configured the summarization of the RIP routes into the OSPF domain on R5 but still sees four different 172.16.0.0/24 networks on R4. Which action resolves the issue?





```
R5# show ip ospf 1 | begin Area 36
Area 36
Number of interfaces in this area is 2
It is a NSSA area
Area has no authentication
SPF algorithm last executed 00:32:46.376 ago
SFF algorithm executed 13 times
Area ranges are
172.16.0.0/16 Passive Advertise
```

A. R5(config)#router ospf 1
   R5(config-router)#no area
   R5(config-router)#summary-address 172.16.0.0 255.255.252.0
B. R4(config)#router ospf 99
   R4(config-router)#network 172.16.0.0 0.255.255.255 area 56
   R4(config-router)#area 56 range 172.16.0.0 255,255.255.0
C. R4(config)#router ospf 1
   R4(config-router)#no area
   R4(config-router)#summary-address 172.16.0.0 255.255.252.0
D. R5(config)#router ospf 99
   R5(config-router)#network 172.16.0.0 0.255.255.255 area 56
   R5(config-router)#area 56 range 172.16.0.0 255.255.255.0

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Area 36 is a NSSA so R5 is an ASBR so we can summarize external routes using the “summaryaddress” command. The command “area area-id range” can only be used on ABR so it is not correct.
The summarization must be done on the ASBR which is R5, not R4 so the correct answer must be started with “R5(config)#router ospf 1”.
Note: The “no area” command is used to remove any existing “area …” command (maybe “area 56 range …” command).

QUESTION 286
How are MPLS Layer 3 VPN services deployed?

A. The RD and RT values must match under the VRR
B. The RD and RT values under a VRF must match on the remote PE router
C. The import and export RT values under a VRF must always be the same.
D. The label switch path must be available between the local and remote PE routers.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Here (from cisco)

QUESTION 287
Which feature minimizes DoS attacks on an IPv6 network?

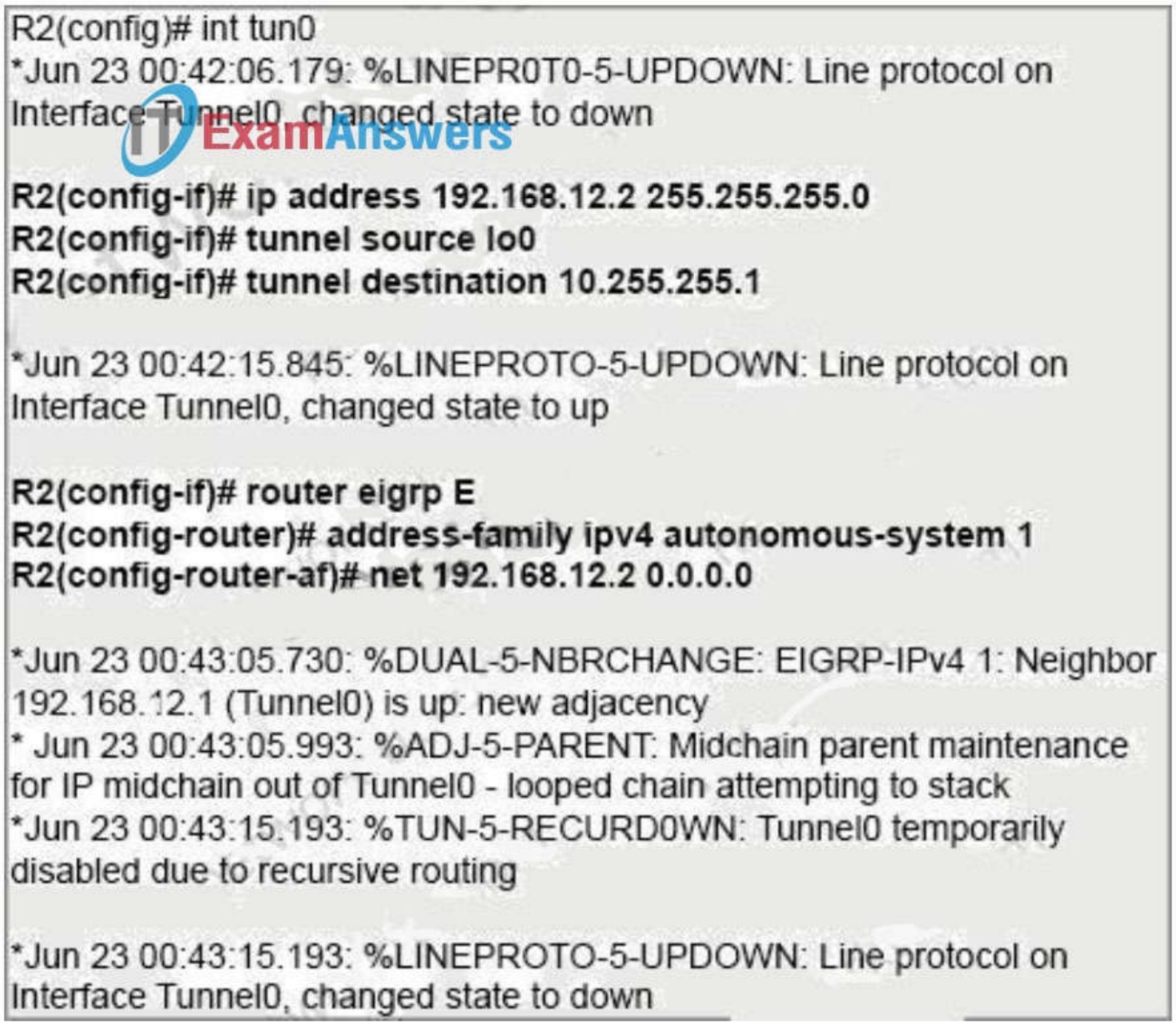
A. IPv6 Binding Security Table

B. IPv6 Router Advertisement Guard
C. IPv6 Prefix Guard
D. IPv6 Destination Guard

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
The Destination Guard feature helps in minimizing denial-of-service (DoS) attacks. It performs address resolutions only for those addresses that are active on the link, and requires the FHS binding table to be populated with the help of the IPv6 snooping feature.The feature enables the filtering of IPv6 traffic based on the destination address, and blocks the NDP resolution for destination addresses that are not found in the binding table. By default, the policy drops traffic coming for an unknown destination.

QUESTION 288
Refer to the exhibit. An administrator is configuring a GRE tunnel to establish an EIGRP neighbor to a remote router. The other tunnel endpoint is already configured. After applying the configuration as shown, the tunnel started flapping. Which action resolves the issue?



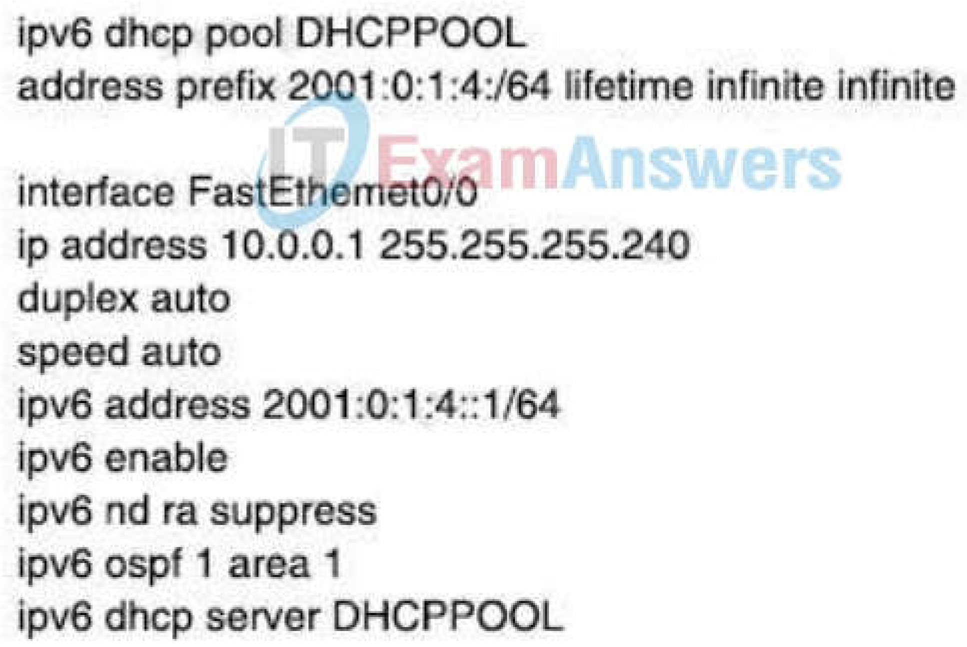
```
R2(config)# int tun0
*Jun 23 00:42:06.179: %LINEPR0T0-5-UPDOWN: Line protocol on
Interface Tunnel0, changed state to down

R2(config-if)# ip address 192.168.12.2 255.255.255.0
R2(config-if)# tunnel source lo0
R2(config-if)# tunnel destination 10.255.255.1

*Jun 23 00:42:15.845: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Tunnel0, changed state to up

R2(config-if)# router eigrp E
R2(config-router)# address-family ipv4 autonomous-system 1
R2(config-router-af)# net 192.168.12.2 0.0.0.0

*Jun 23 00:43:05.730: %DUAL-5-NBRCHANGE: EIGRP-IPv4 1: Neighbor
192.168.12.1 (Tunnel0) is up: new adjacency
* Jun 23 00:43:05.993: %ADJ-5-PARENT: Midchain parent maintenance
for IP midchain out of Tunnel0 - looped chain attempting to stack
*Jun 23 00:43:15.193: %TUN-5-RECURD0WN: Tunnel0 temporarily
disabled due to recursive routing

*Jun 23 00:43:15.193: %LINEPROTO-5-UPDOWN: Line protocol on
Interface Tunnel0, changed state to down
```

A. Modify the network command to use the Tunnel0 interface netmask
B. Advertise the Loopback0 interface from R2 across the tunnel
C. Stop sending a route matching the tunnel destination across the tunnel
D. Readdress the IP network on the Tunnel0 on both routers using the /31 netmask

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
In this question we are advertising the tunnel IP address 192.168.12.2 to the other side. When other end receives the EIGRP advertisement, it realizes it can reach the other side of the tunnel via EIGRP.
In other words, it reaches the tunnel destination through the tunnel itself -> This causes “recursive routing” error.
Note: In order to avoid this error, do not advertise the tunnel destination IP address on the tunnel interface to other side.

QUESTION 289
Refer to the exhibit. Reachability between servers in a network deployed with DHCPv6 is unstable. Which command must be removed from the configuration to make DHCPv6 function?



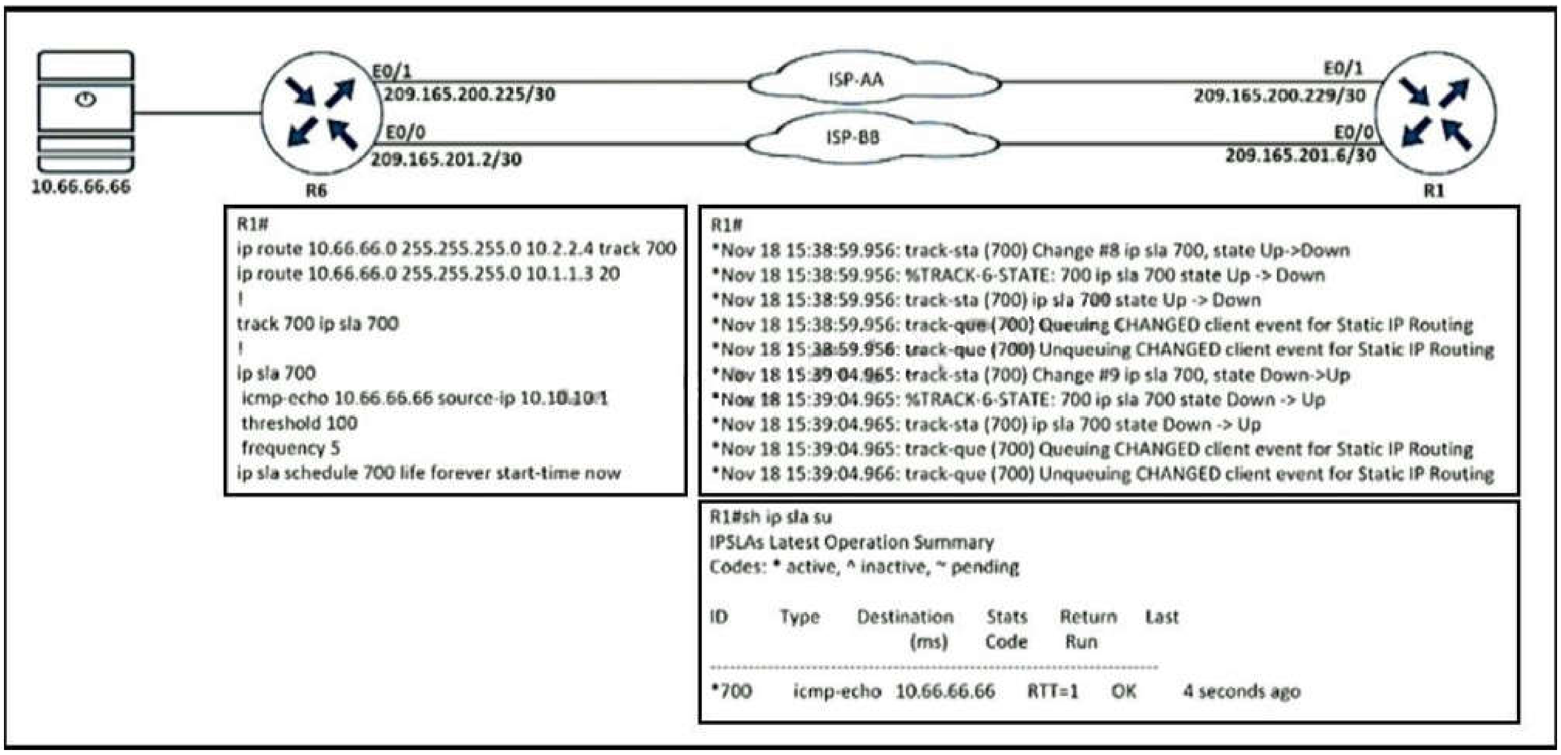
```
ipv6 dhcp pool DHCPPOOL
address prefix 2001:0:1:4:/64 lifetime infinite infinite

interface FastEthemet0/0
ip address 10.0.0.1 255.255.255.240
duplex auto
speed auto
ipv6 address 2001:0:1:4::1/64
ipv6 enable
ipv6 nd ra suppress
ipv6 ospf 1 area 1
ipv6 dhcp server DHCPPOOL
```

A. ipv6 address 2001:0:1:4::1/64
B. ipv6 dhcp server DHCPPOOL
C. ipv6 nd ra suppress
D. address prefix 2001:0:1:4::/64 lifetime infinite infinite

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 290
Refer to the exhibit. R1 is configured with IP SLA to check the availability of the server behind R6 but it kept failing. Which configuration resolves the issue?



```
R1#
ip route 10.66.66.0 255.255.255.0 10.2.2.4 track 700
ip route 10.66.66.0 255.255.255.0 10.1.1.3 20
!
track 700 ip sla 700
!
ip sla 700
 icmp-echo 10.66.66.66 source-ip 10.10.10.1
 threshold 100
 frequency 5
ip sla schedule 700 life forever start-time now
```

```
R1#
*Nov 18 15:38:59.956: track-sta (700) Change #8 ip sla 700, state Up->Down
*Nov 18 15:38:59.956: %TRACK-6-STATE: 700 ip sla 700 state Up -> Down
*Nov 18 15:38:59.956: track-sta (700) ip sla 700 state Up -> Down
*Nov 18 15:38:59.956: track-que (700) Queuing CHANGED client event for Static IP Routing
*Nov 18 15:38:59.956: track-que (700) Unqueuing CHANGED client event for Static IP Routing
*Nov 18 15:39:04.965: track-sta (700) Change #9 ip sla 700, state Down->Up
*Nov 18 15:39:04.965: %TRACK-6-STATE: 700 ip sla 700 state Down -> Up
*Nov 18 15:39:04.965: track-sta (700) ip sla 700 state Down -> Up
*Nov 18 15:39:04.965: track-que (700) Queuing CHANGED client event for Static IP Routing
*Nov 18 15:39:04.966: track-que (700) Unqueuing CHANGED client event for Static IP Routing
```

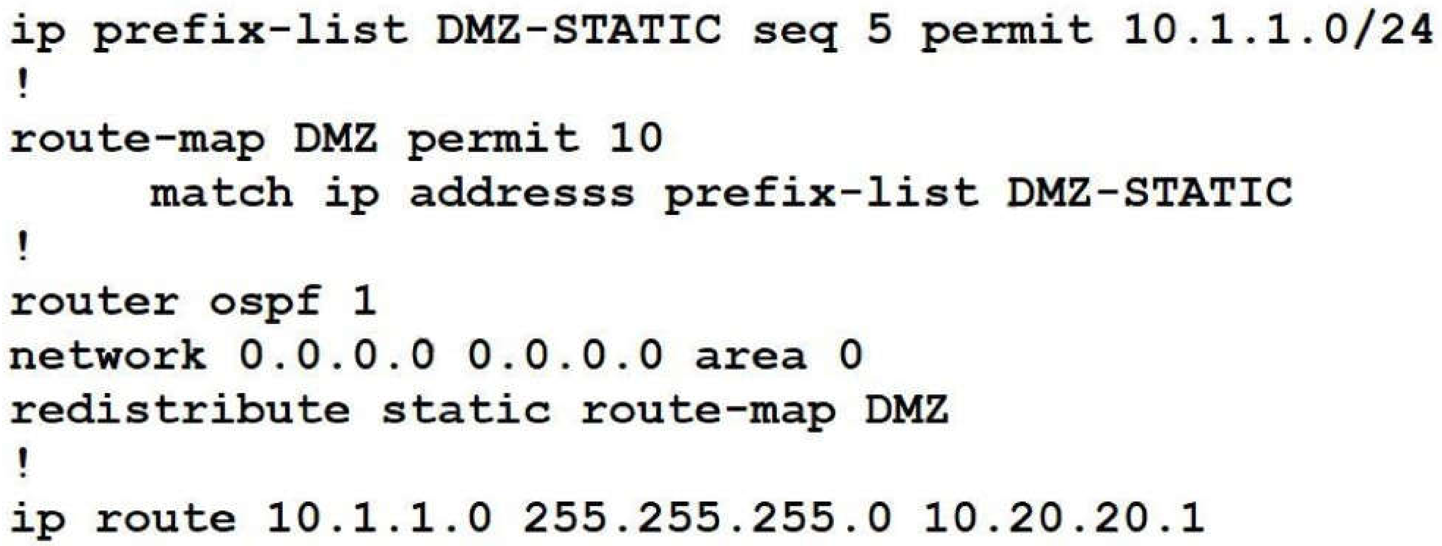
```
R1#sh ip sla su
IPSLAs Latest Operation Summary
Codes: * active, ^ inactive, ~ pending

ID      Type       Destination    Stats    Return    Last
                         (ms)     Code     Run
-------------------------------------------------------------
*700     icmp-echo  10.66.66.66     RTT=1     OK       4 seconds ago
```

A. R1(config)# ip sla 700
R1(config-track)# delay down 30 up 20
B. R1(config)# ip sla 700
R1(config-track)# delay down 20 up 30
C. R1(config)# track 700 ip sla 700
R1(config-track)# delay down 30 up 20
D. R1(config)# track 700 ip sla 700
R1(config-track)# delay down 20 up 30

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 291
Refer to the exhibit. The static route is not present in the routing table of an adjacent OSPF neighbor router. Which action resolves the issue?



```
ip prefix-list DMZ-STATIC seq 5 permit 10.1.1.0/24
!
route-map DMZ permit 10
     match ip addresss prefix-list DMZ-STATIC
!
router ospf 1
network 0.0.0.0 0.0.0.0 area 0
redistribute static route-map DMZ
!
ip route 10.1.1.0 255.255.255.0 10.20.20.1
```

A. Configure the next hop of 10.20.20.1 in the prefix list DMZ-STATIC
B. Configure the next-hop interface at the end of the static router for it to get redistributed
C. Configure a permit 20 statement to the route map to redistribute the static route
D. Configure the subnets keyword in the redistribution command

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 292
Which IPv6 feature enables a device to reject traffic when it is originated from an address that is not stored in the device binding table?

A. IPv6 Snooping
B. IPv6 Source Guard
C. IPv6 DAD Proxy
D. IPv6 RA Guard

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: Here (from cisco)

QUESTION 293
An engineer configured a router with this configuration

```
ip access-hst DENY TELNET
10 deny tcp any any eq 23 log-input
```

The router console starts receiving log message :

```
%SEC-6-IPACCESSLOGP: list DENY_TELNET denied tcp
192.168.1.10(1022)(FastEthernet1/0 D508.89gb.003f) ->192.168.2.20(23), 1 packet
```

Which action stops messages on the console while still denying Telnet?

A. Configure a 20 permit ip any any command
B. Remove log-Input keyword from the access list.
C. Replace log-input keyword with the log keyword in the access list.
D. Configure a 20 permit ip any any log-input command.

Correct Answer: B
Section: (none)

Explanation

Explanation/Reference:

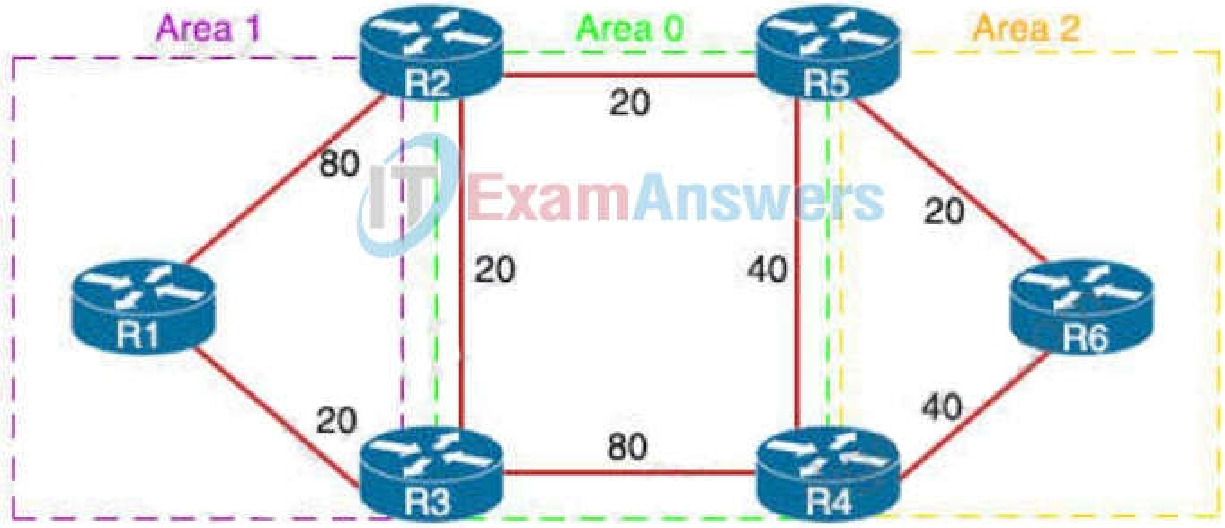
QUESTION 294
Which configuration feature should be used to block rogue router advertisements instead of using the IPv6 Router Advertisement Guard feature?

A. VACL blocking broadcast frames from nonauthorized hosts
B. IPv4 ACL blocking route advertisements from nonauthorized hosts
C. PVLANs with promiscuous ports associated to route advertisements and isolated ports for nodes
D. PVLANs with community ports associated to route advertisements and isolated ports for nodes

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 295
Refer to the exhibit. R6 should reach R1 via R5>R2>R1. Which action resolves the issue?

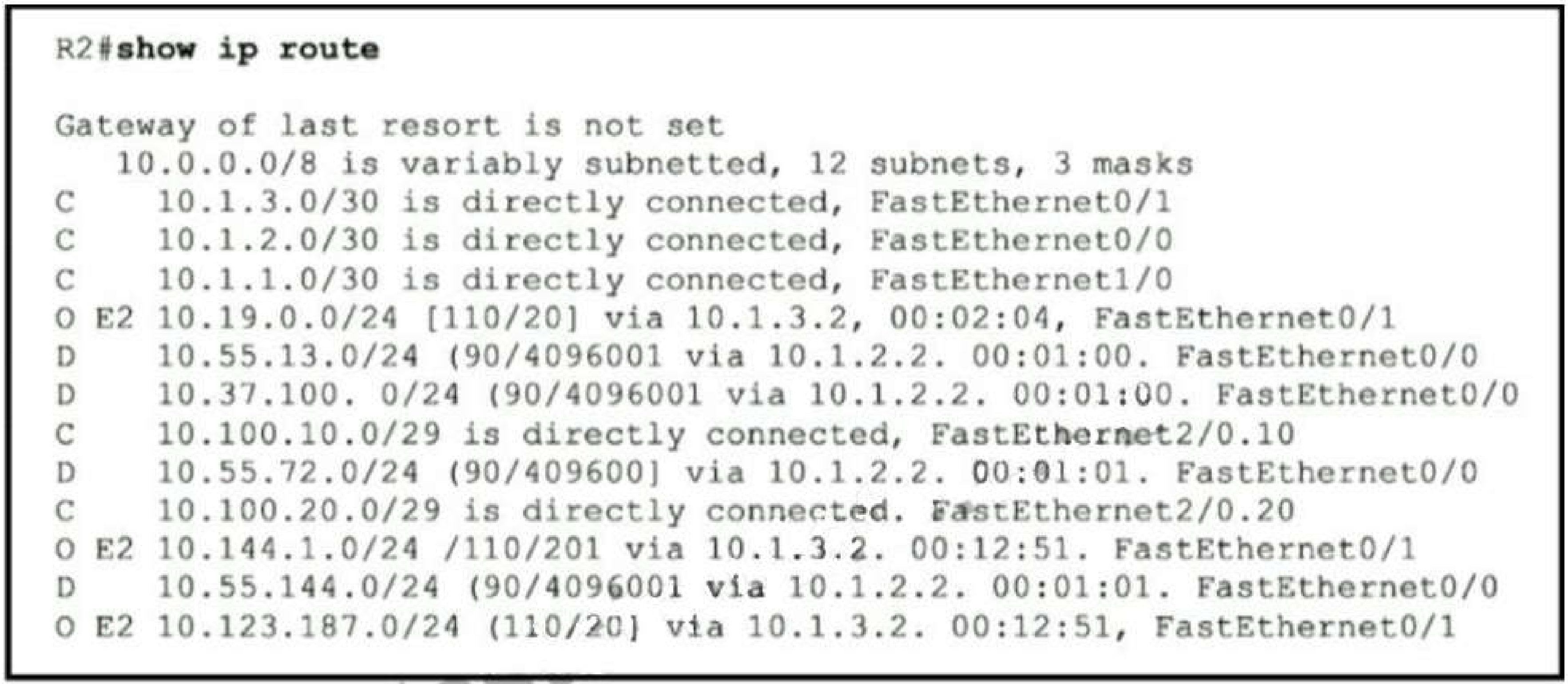


A. Decrease the cost to 2 between R6-R5-R2.
B. Decrease the cost to 41 between R2 and R1.
C. Increase the cost to 61 between R2 and R3.
D. Increase the cost to 61 between R2-R3-R1.

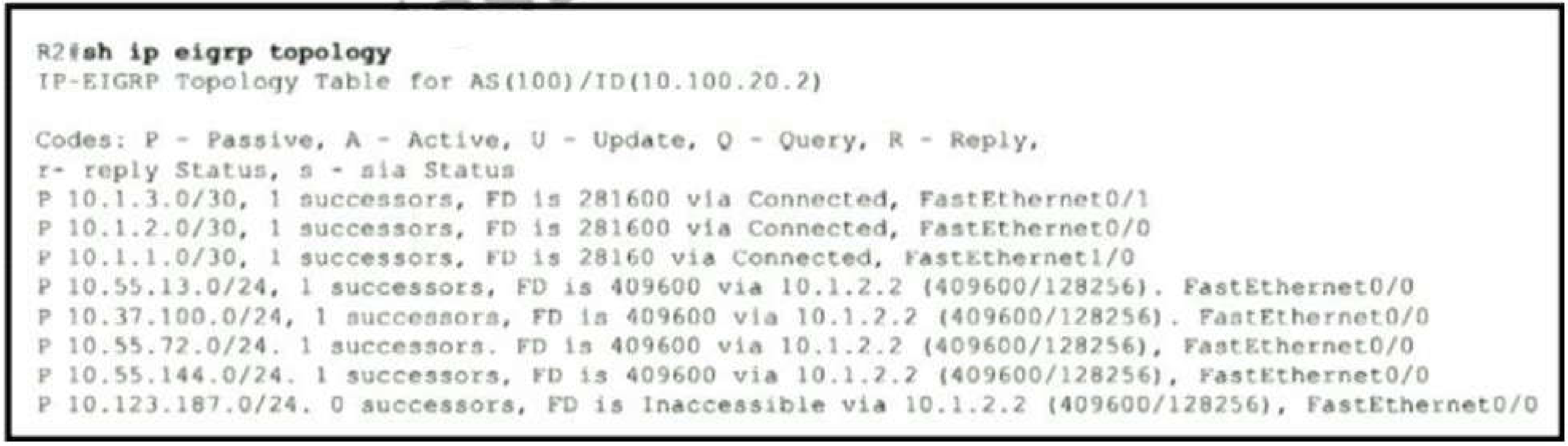
Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
The correct answer should be C.
Answer B cannot be correct because in this case, traffic will be forwarded via R2-R3-R1 (which has a total cost of 40 and is not the desired path) . R2-R1 has a total cost of 41 which is not lower than 40.
Increasing the cost between R2 and R3 to 61 will be our best choice because the total cost via R2-R3-R1 will be 81 so this will not be the best path, making our desired path R2-R1 the best one (with a cost of 80).

QUESTION 296
Router R2 should be learning the route for 10.123.187.0/24 via EIGRP. Which action resolves the issue without introducing more issues?



```
R2#show ip route

Gateway of last resort is not set
   10.0.0.0/8 is variably subnetted, 12 subnets, 3 masks
C     10.1.3.0/30 is directly connected, FastEthernet0/1
C     10.1.2.0/30 is directly connected, FastEthernet0/0
C     10.1.1.0/30 is directly connected, FastEthernet1/0
O E2 10.19.0.0/24 [110/20] via 10.1.3.2, 00:02:04, FastEthernet0/1
D     10.55.13.0/24 (90/4096001 via 10.1.2.2. 00:01:00. FastEthernet0/0
D     10.37.100. 0/24 (90/4096001 via 10.1.2.2. 00:01:00. FastEthernet0/0
C     10.100.10.0/29 is directly connected, FastEthernet2/0.10
D     10.55.72.0/24 (90/409600] via 10.1.2.2. 00:01:01. FastEthernet0/0
C     10.100.20.0/29 is directly connected. FastEthernet2/0.20
O E2 10.144.1.0/24 /110/201 via 10.1.3.2. 00:12:51. FastEthernet0/1
D     10.55.144.0/24 (90/4096001 via 10.1.2.2. 00:01:01. FastEthernet0/0
O E2 10.123.187.0/24 (110/20] via 10.1.3.2. 00:12:51, FastEthernet0/1
```



```
R2#sh ip eigrp topology
IP-EIGRP Topology Table for AS(100)/ID(10.100.20.2)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
r- reply Status, s - sia Status
P 10.1.3.0/30, 1 successors, FD is 281600 via Connected, FastEthernet0/1
P 10.1.2.0/30, 1 successors, FD is 281600 via Connected, FastEthernet0/0
P 10.1.1.0/30, 1 successors, FD is 28160 via Connected, FastEthernet1/0
P 10.55.13.0/24, 1 successors, FD is 409600 via 10.1.2.2 (409600/128256). FastEthernet0/0
P 10.37.100.0/24, 1 successors, FD is 409600 via 10.1.2.2 (409600/128256). FastEthernet0/0
P 10.55.72.0/24. 1 successors. FD is 409600 via 10.1.2.2 (409600/128256), FastEthernet0/0
P 10.55.144.0/24. 1 successors, FD is 409600 via 10.1.2.2 (409600/128256), FastEthernet0/0
P 10.123.187.0/24. 0 successors, FD is Inaccessible via 10.1.2.2 (409600/128256), FastEthernet0/0
```

A. Remove route redistribution in R2 for this route in OSPF.
B. Use distribute-list to modify the route as an internal EIGRP route.
C. Redistribute the route in EIGRP with metric, delay, and reliability.
D. Use distribute-list to filter the external router in OSPF

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 297
What are the two goals of micro BFD sessions? (Choose two.)

A. The high bandwidth member link of a link aggregation group must run BFD
B. Run the BFD session with 3×3 ms hello timer
C. Continuity for each member link of a link aggregation group must be verified
D. Eny member link on a link aggregation group must run BFD
E. Each member link of a link aggregation group must run BFD.

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 298

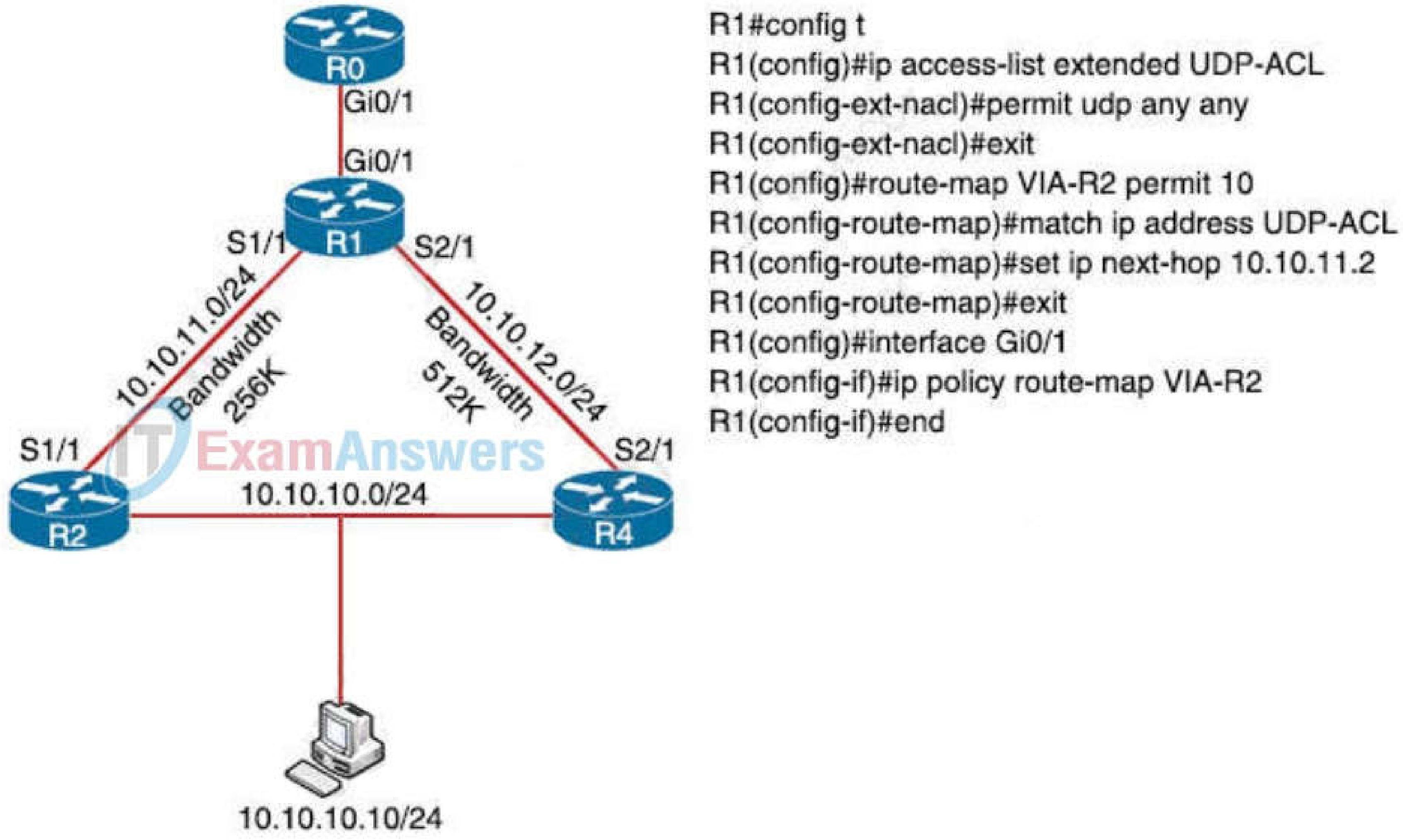
Which two components are required for MPLS Layer 3 VPN configuration? (Choose two)

A. Use pseudowire for Layer 2 routes
B. Use MP-BGP for customer routes
C. Use OSPF between PE and CE
D. Use a unique RD per customer VRF
E. Use LDP for customer routes

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 299
Refer to the exhibit.TCP traffic should be reaching host 10.10.10.10/24 via R2. Which action resolves the issue?



```
R1#config t
R1(config)#ip access-list extended UDP-ACL
R1(config-ext-nacl)#permit udp any any
R1(config-ext-nacl)#exit
R1(config)#route-map VIA-R2 permit 10
R1(config-route-map)#match ip address UDP-ACL
R1(config-route-map)#set ip next-hop 10.10.11.2
R1(config-route-map)#exit
R1(config)#interface Gi0/1
R1(config-if)#ip policy route-map VIA-R2
R1(config-if)#end
```

A. Allow TCP in the access list with no changes to the route map.
B. Set IP next-hop to 10.10.12.2 under the route-map permit 10 to allow TCP traffic.
C. Add a permit 20 statement in the route map to allow TCP traffic.
D. TCP traffic will reach the destination via R2 without any changes.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
If we add a “permit 20” statement in the route-map then we will allow other traffic to pass through (in fact Policy-based routing allows other traffic to pass through by default). But the bandwidth of R1-R4 is higher than that of R1-R2 so TCP traffic might go through R4 instead of R2. Therefore we should allow TCP in the ACL so that TCP traffic is forwarded via R2.

QUESTION 300
A customer requested a GRE tunnel through the provider network between two customer sites using loopback to hide internal networks. Which configuration on R2 establishes the tunnel with R1?

A. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0

R2(config-if)#ip mtu 1500
R2(config-if}#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 192.168.20.1
R2(config-if)#tunnel destination 10.10.1.1

B. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1400
R2(config-if)#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 192.168.20.1
R2(config-if)#tunnel destination 192.168.10.1

C. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1400
R2(config-if)#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 10.10.2.2
R2(config-if)#tunnel destination 10.10.1.1

D. R2(config)#interface Tunnel1
R2(config-if)#ip address 172.20.1.2 255.255.255.0
R2(config-if)#ip mtu 1500
R2(config-if)#ip tcp adjust-mss 1360
R2(config-if)#tunnel source 10.10.2.2
R2(config-if)#tunnel destination 10.10.1.1

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

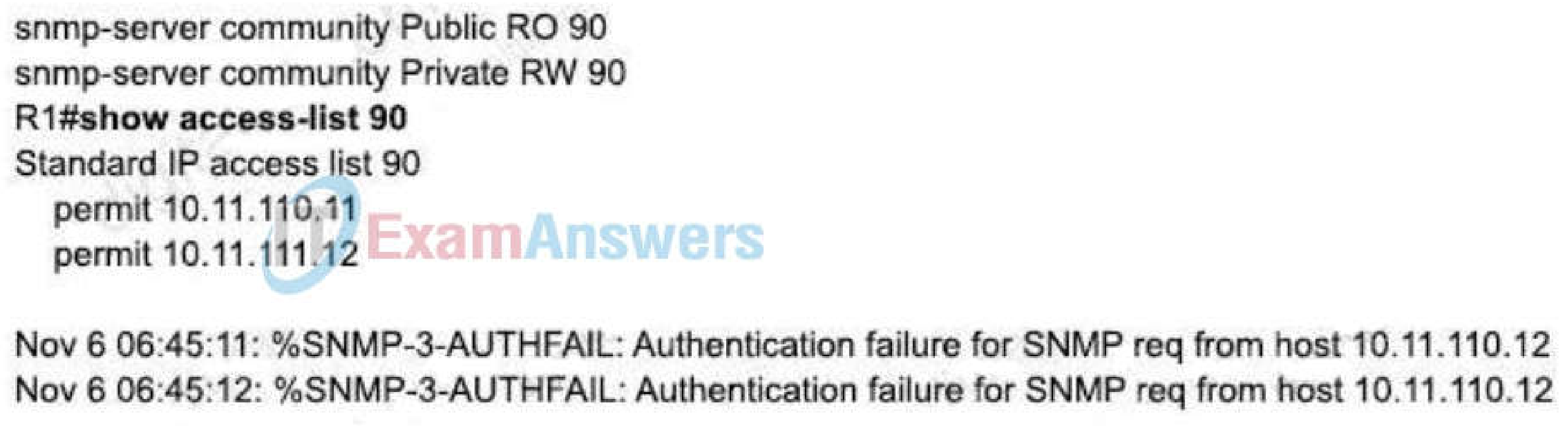
QUESTION 301
An engineer failed to run diagnostic commands on devices using Cisco DNA center, which action in Cisco DNA center resolves the issue?

A. Enable Secure Shell.
B. Enable Command Runner.
C. Enable APIs
D. Enable CDP.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 302
Refer to the exhibit. A network administrator notices these console messages from host 10.11.110.12 originating from interface E1/0. The administrator considers this an unauthorized attempt to access SNMP on R1. Which action prevents the attempts to reach R1 E1/0?



```
snmp-server community Public RO 90
snmp-server community Private RW 90
R1#show access-list 90
Standard IP access list 90
   permit 10.11.110.11
   permit 10.11.111.12

Nov 6 06:45:11: %SNMP-3-AUTHFAIL: Authentication failure for SNMP req from host 10.11.110.12
Nov 6 06:45:12: %SNMP-3-AUTHFAIL: Authentication failure for SNMP req from host 10.11.110.12
```

A. Configure IOS management plane protection using ACL 90 on interface E1/0.
B. Configure IOS control plane protection using ACL 90 on interface E1/0.
C. Add a permit statement including the host 10.11.110.12 into ACL 90.
D. Create an inbound ACL on interface E1/0 to deny SNMP from host 10.11.110.12.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

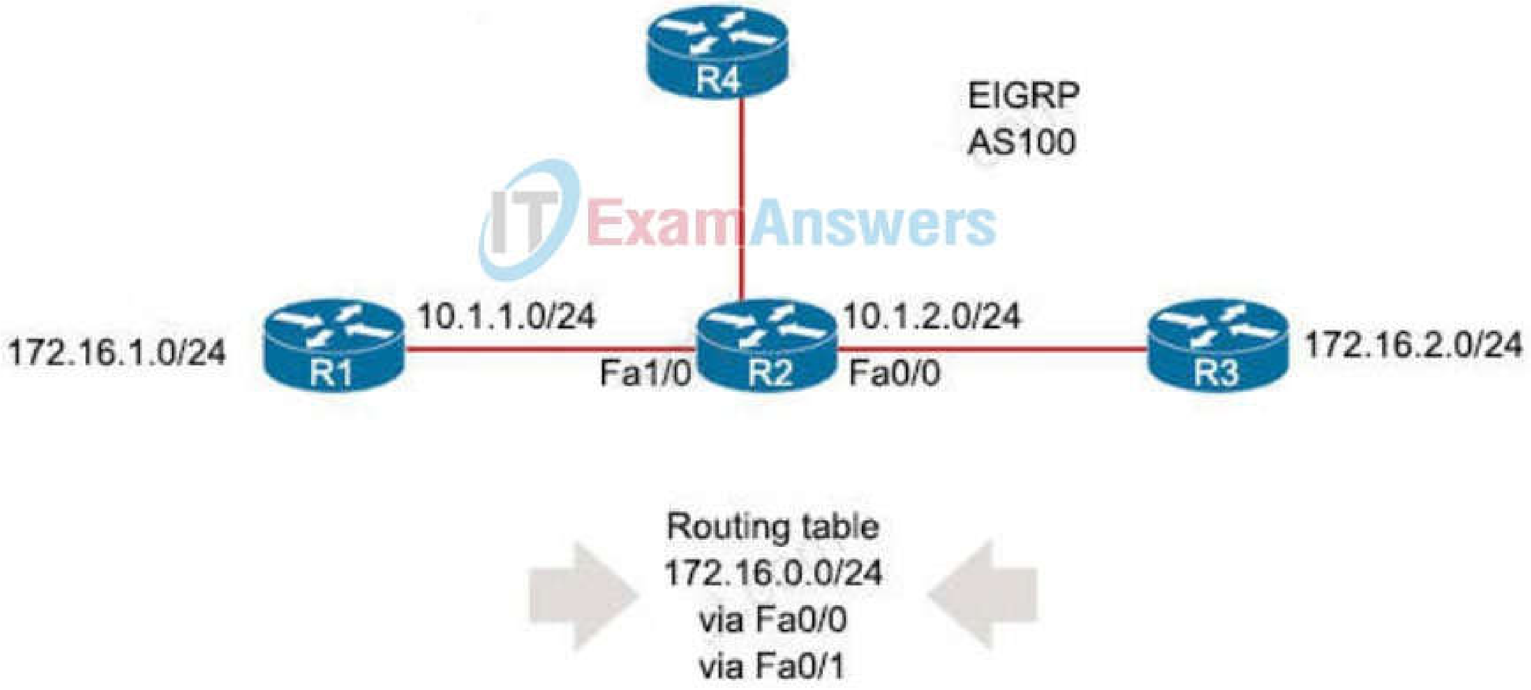
QUESTION 303
A network administrator added a new spoke site with dynamic IP on the DMVPN network. Which configuration command passes traffic on the DMVPN tunnel from the spoke router?

A. ip nhrp registration dynamic
B. ip nhrp registration ignore
C. ip nhrp registration no-registration
D. ip nhrp registration no-unique

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
“ip nhrp registration no-unique”: allow the client to not set the unique flag in the NHRP packets. This is useful when a station has a dynamic IP address that could change over time.

QUESTION 304
Refer to the exhibit.R4 is experiencing packet drop when trying to reach 172.16.2.7 behind R2. Which action resolves the issue?



A. Insert a /24 floating static route on R2 toward R3 with metric 254.
B. Disable auto summarization on R2.
C. Insert a /16 floating static route on R2 toward R3 with metric 254.
D. Enable auto summarization on all three routers R1, R2, and R3.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 305
Which two components are required for MPLS Layer 3 VPN configuration? (Choose two)

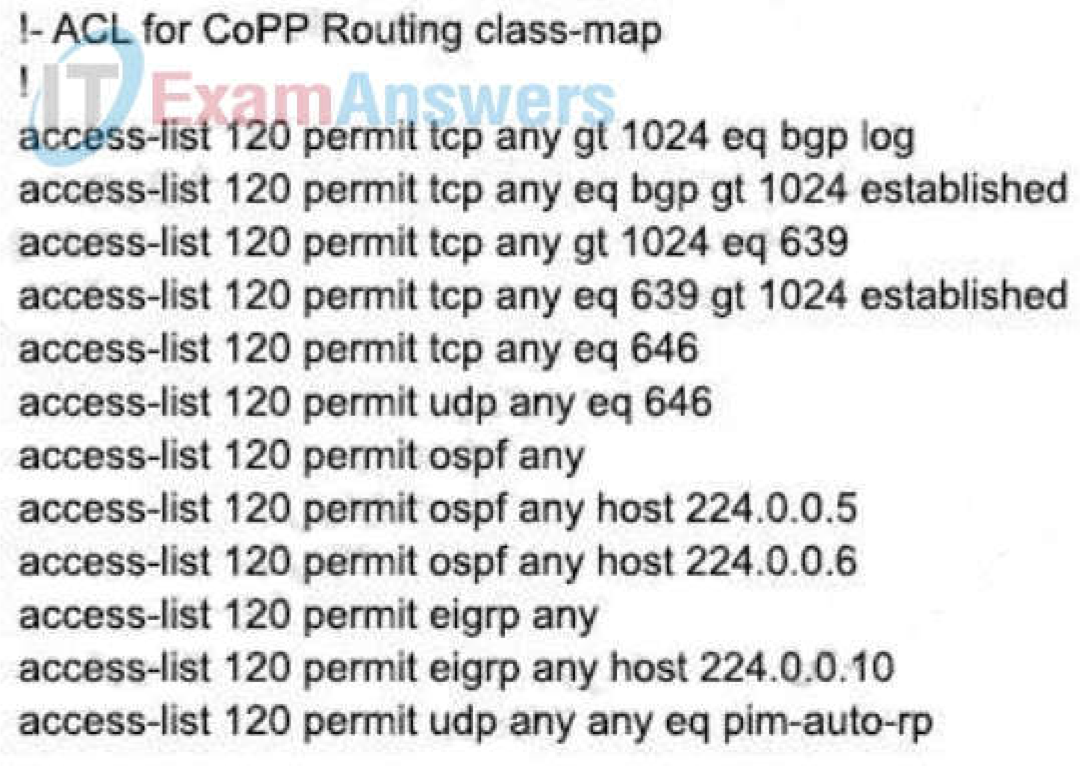
A. Use MP-BGP for customer routes.
B. Use LDP for customer routes.
C. Use a unique RD per customer VRF.
D. Use pseudowire for Layer 2 routes
E. Use OSPF between PE and CE

Correct Answer: AC

Section: (none)
Explanation

Explanation/Reference:

QUESTION 306
Refer to the exhibit.The control plane is heavily impacted after the CoPP configuration is applied to the router. Which command removal lessens the impact on the control plane?



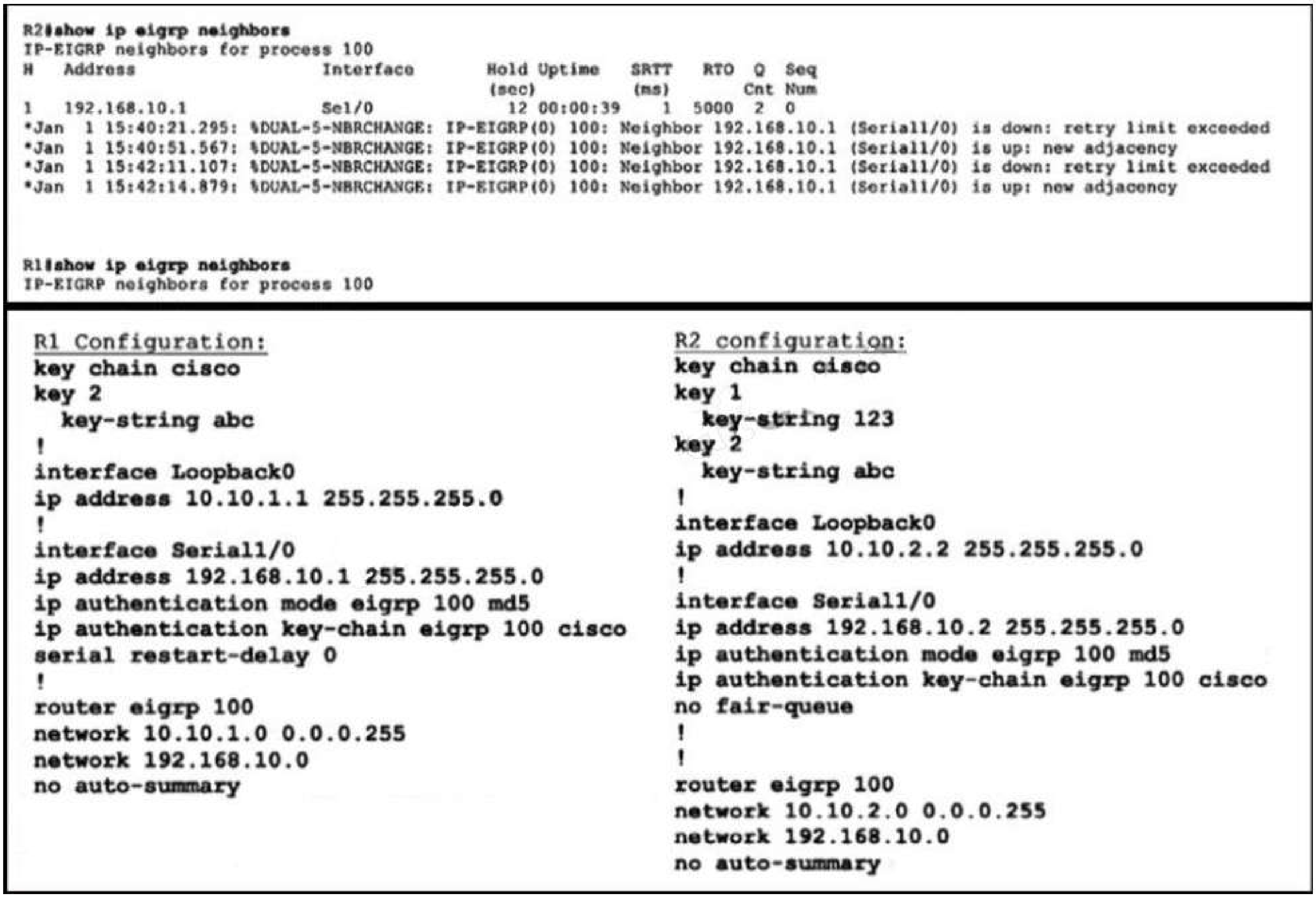
```
!- ACL for CoPP Routing class-map
!
access-list 120 permit tcp any gt 1024 eq bgp log
access-list 120 permit tcp any eq bgp gt 1024 established
access-list 120 permit tcp any gt 1024 eq 639
access-list 120 permit tcp any eq 639 gt 1024 established
access-list 120 permit tcp any eq 646
access-list 120 permit udp any eq 646
access-list 120 permit ospf any
access-list 120 permit ospf any host 224.0.0.5
access-list 120 permit ospf any host 224.0.0.6
access-list 120 permit eigrp any
access-list 120 permit eigrp any host 224.0.0.10
access-list 120 permit udp any any eq pim-auto-rp
```

A. access-list 120 permit eigrp any host 224.0.0.10
B. access-list 120 permit ospf any
C. access-list 120 permit udp any any eq pim-auto-rp
D. access-list 120 permit tcp any gt 1024 eq bgp log

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 307
Refer to the exhibit. R1 and R2 are configured for EIGRP peering using authentication and the neighbors failed to come up. Which action resolves the issue?



```
R2#show ip eigrp neighbors
IP-EIGRP neighbors for process 100
H   Address                 Interface       Hold Uptime   SRTT   RTO  Q  Seq
                                            (sec)         (ms)       Cnt Num
1   192.168.10.1            Se1/0             12 00:00:39    1   5000  2  0
*Jan  1 15:40:21.295: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 100: Neighbor 192.168.10.1 (Serial1/0) is down: retry limit exceeded
*Jan  1 15:40:51.567: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 100: Neighbor 192.168.10.1 (Serial1/0) is up: new adjacency
*Jan  1 15:42:11.107: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 100: Neighbor 192.168.10.1 (Serial1/0) is down: retry limit exceeded
*Jan  1 15:42:14.879: %DUAL-5-NBRCHANGE: IP-EIGRP(0) 100: Neighbor 192.168.10.1 (Serial1/0) is up: new adjacency


R1#show ip eigrp neighbors
IP-EIGRP neighbors for process 100
```

```
R1 Configuration:
key chain cisco
key 2
  key-string abc
!
interface Loopback0
ip address 10.10.1.1 255.255.255.0
!
interface Serial1/0
ip address 192.168.10.1 255.255.255.0
ip authentication mode eigrp 100 md5
ip authentication key-chain eigrp 100 cisco
serial restart-delay 0
!
router eigrp 100
network 10.10.1.0 0.0.0.255
network 192.168.10.0
no auto-summary
```

```
R2 configuration:
key chain cisco
key 1
  key-string 123
key 2
  key-string abc
!
interface Loopback0
ip address 10.10.2.2 255.255.255.0
!
interface Serial1/0
ip address 192.168.10.2 255.255.255.0
ip authentication mode eigrp 100 md5
ip authentication key-chain eigrp 100 cisco
no fair-queue
!
!
router eigrp 100
network 10.10.2.0 0.0.0.255
network 192.168.10.0
no auto-summary
```

A. Configure a matching key-id number on both routers.
B. Configure a matching lowest key-id on both routers.
C. Configure a matching key-chain name on both routers.
D. Configure a matching authentication type on both routers.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

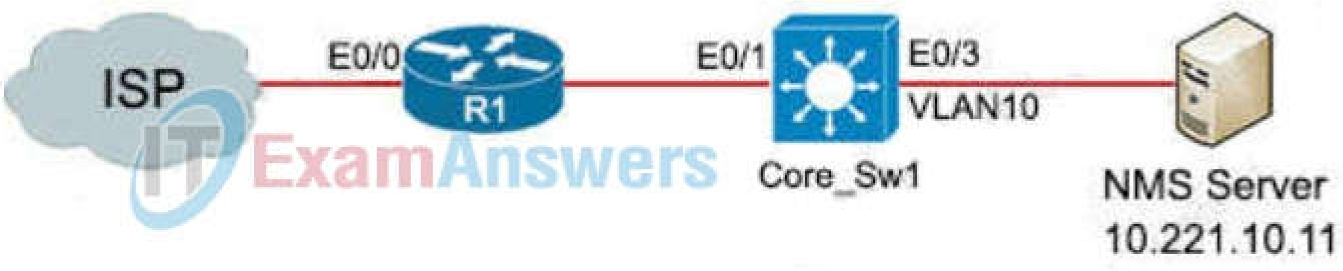
QUESTION 308
Which method provides failure detection in BFD?

A. short duration, high overhead
B. short duration, low overhead
C. long duration, high overhead
D. long duration, low overhead

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 309
Refer to the exhibit. During ISP router maintenance, the network produced many alerts because of the flapping interface. Which configuration on R1 resolves the issue?



A. snmp trap ip verify drop-rate
B. no snmp trap link-status
C. ip verify drop-rate notify hold-down 60
D. snmp trap link-status down

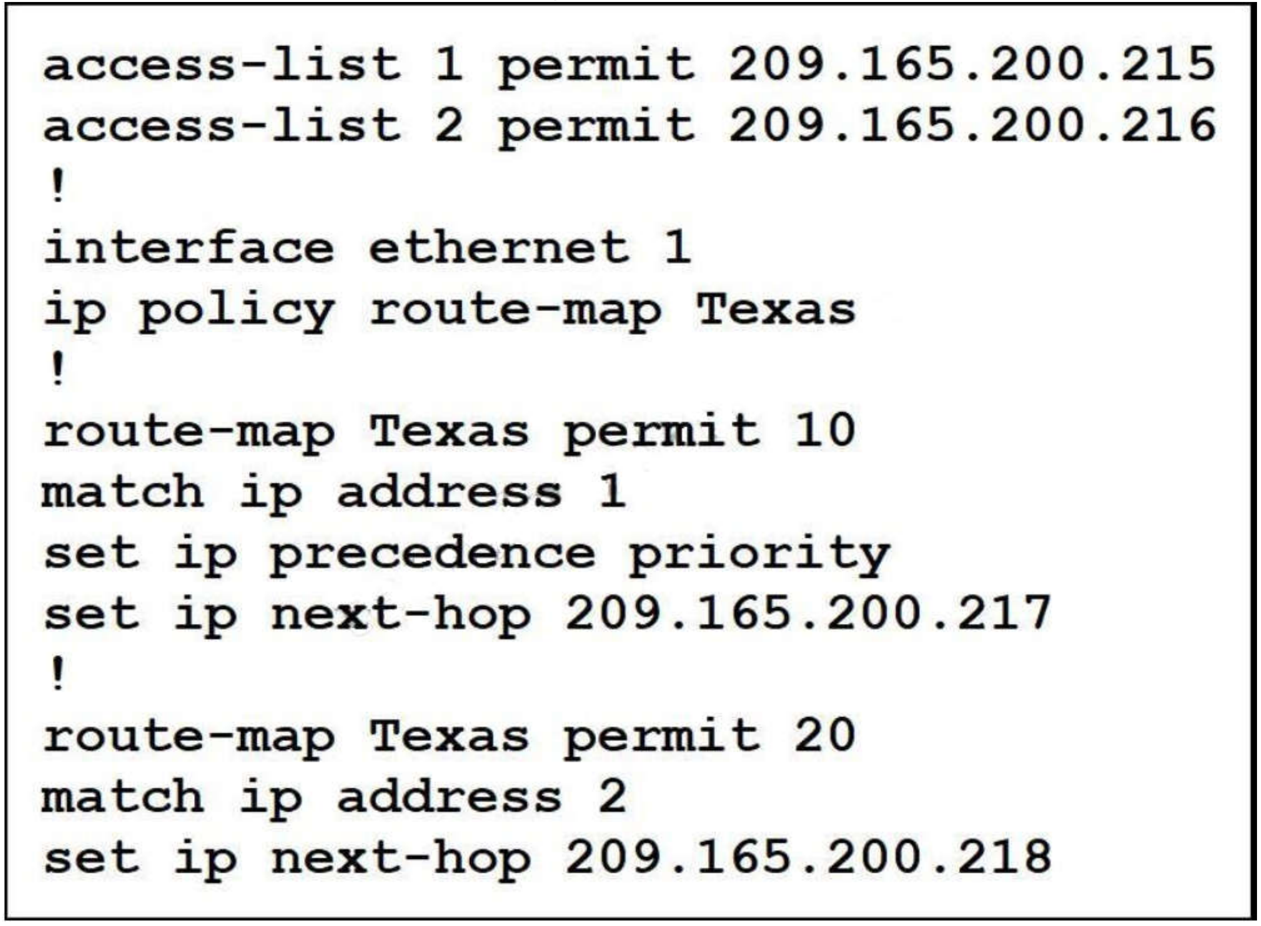
Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
The command “snmp trap link-status” (and “no” form) enables or disable the sending of SNMP traps when an interface goes up and down. This command is useful on interfaces that you expect to change state frequently (for example, dial-on-demand interfaces). You may not want to send an SNMP trap to your network management stations whenever these interfaces change state.

Here (from cisco)Here (from cisco)

Note: The command “ip verify drop-rate notify hold-down …” configures the minimum time, in seconds, between Unicast RPF drop-rate notifications. But RPF is not a concern in this question.

QUESTION 310
Refer to the exhibit. Packets arriving from source 209.165.200.215 must be sent with the precedence bit set to 1, and packets arriving from source 209.165.200.216 must be sent with the precedence bit set to 5. Which action resolves the issue?



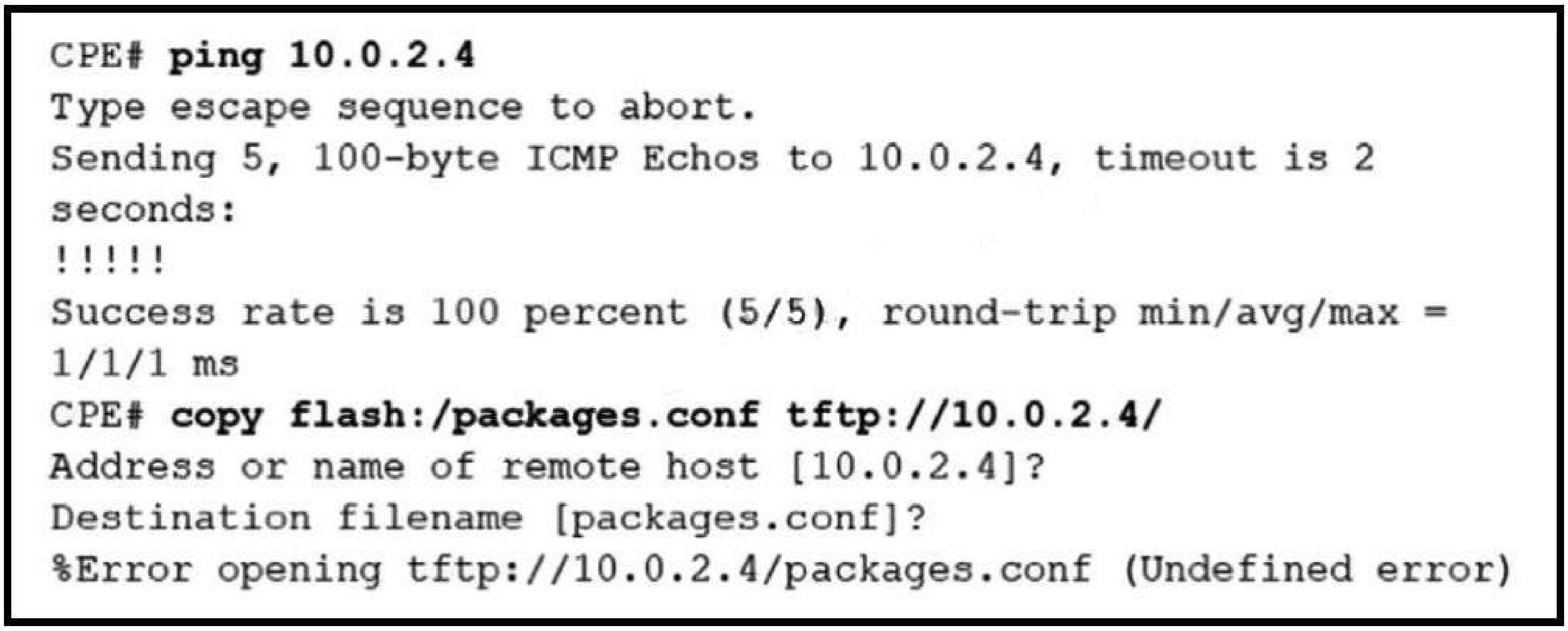
```
access-list 1 permit 209.165.200.215
access-list 2 permit 209.165.200.216
!
interface ethernet 1
ip policy route-map Texas
!
route-map Texas permit 10
match ip address 1
set ip precedence priority
set ip next-hop 209.165.200.217
!
route-map Texas permit 20
match ip address 2
set ip next-hop 209.165.200.218
```

A. set ip precedence critical in route-map Texas permit 10
B. set ip precedence critical in route-map Texas permit 20
C. set ip precedence immediate in route-map Texas permit 10
D. set ip precedence priority in route-map Texas permit 20

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 311
Refer to the exhibit. The administrator is trying to overwrite an existing file on the TFTP server that was previously uploaded by another router. However, the attempt to update the file fails. Which action resolves this issue?



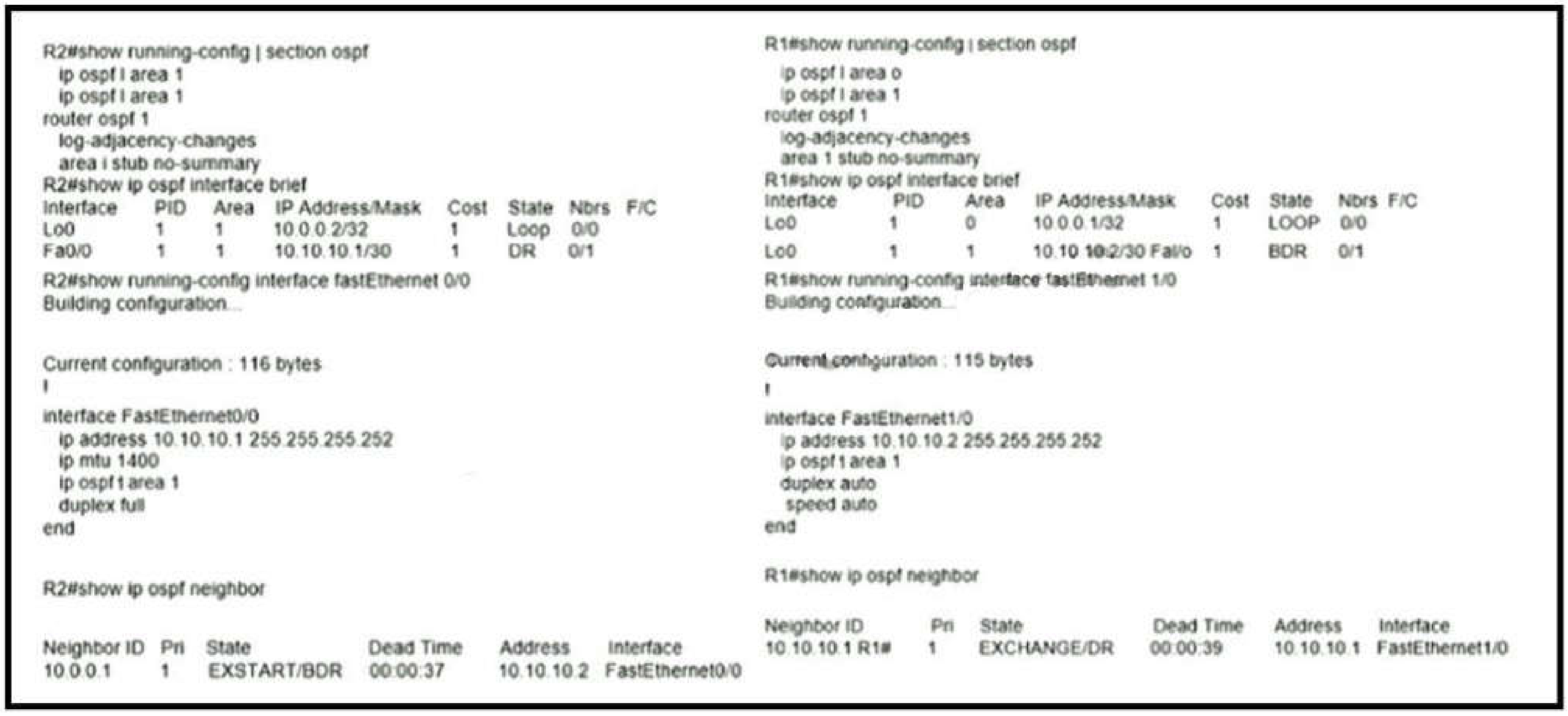
```
CPE# ping 10.0.2.4
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.2.4, timeout is 2
seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max =
1/1/1 ms
CPE# copy flash:/packages.conf tftp://10.0.2.4/
Address or name of remote host [10.0.2.4]?
Destination filename [packages.conf]?
%Error opening tftp://10.0.2.4/packages.conf (Undefined error)
```

A. Make the packages.conf file executable by all on the TFTP server
B. Make the packages.conf file writable by all on the TFTP server
C. Make sure to run the TFTP service on the TFTP server
D. Make the TFTP folder writable by all on the TFTP server

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 312
Refer to the exhibit. Which action restores OSPF adjacency between R1 and R2?



```
R2#show running-config | section ospf
  ip ospf l area 1
  ip ospf l area 1
router ospf 1
  log-adjacency-changes
  area i stub no-summary
R2#show ip ospf interface brief
Interface    PID    Area    IP Address/Mask    Cost    State    Nbrs    F/C
Lo0          1      1       10.0.0.2/32        1       Loop     0/0
Fa0/0        1      1       10.10.10.1/30      1       DR       0/1
R2#show running-config interface fastEthernet 0/0
Building configuration...

Current configuration : 116 bytes
!
interface FastEthernet0/0
  ip address 10.10.10.1 255.255.255.252
  ip mtu 1400
  ip ospf 1 area 1
  duplex full
end

R2#show ip ospf neighbor

Neighbor ID   Pri   State          Dead Time   Address      Interface
10.0.0.1      1     EXSTART/BDR    00:00:37    10.10.10.2   FastEthernet0/0
```

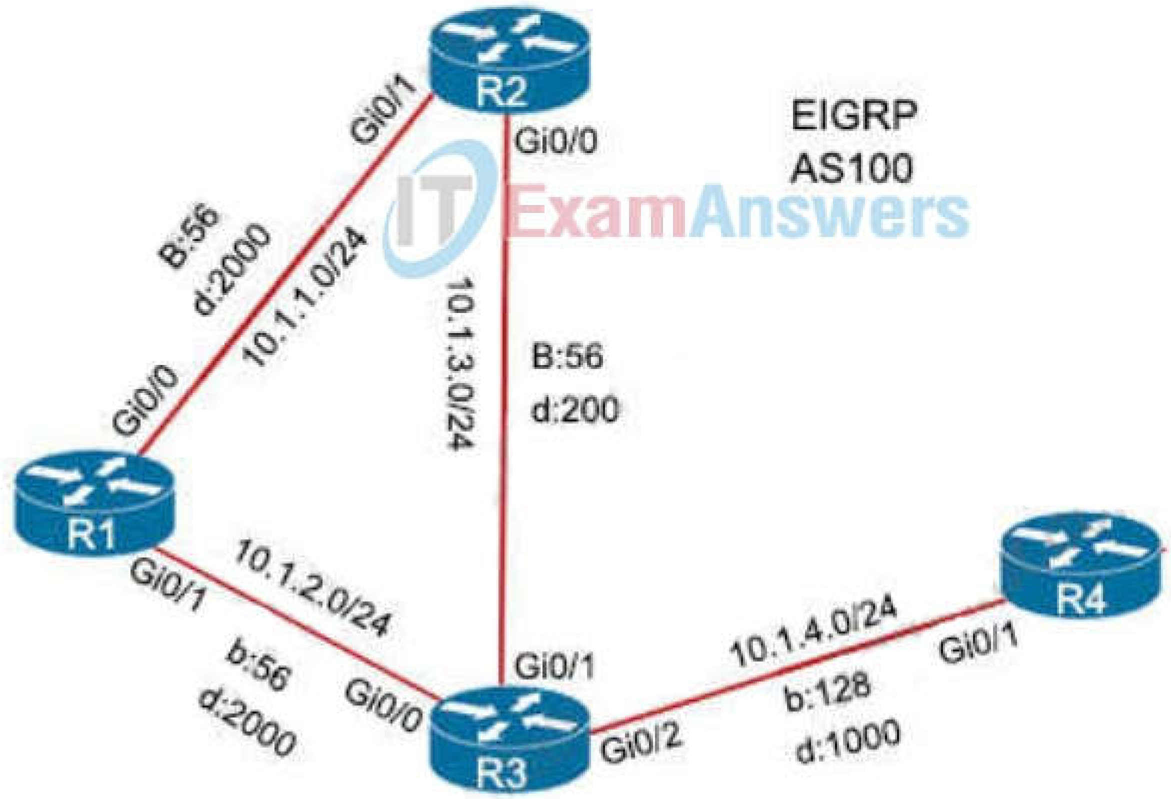
```
R1#show running-config | section ospf
  ip ospf l area o
  ip ospf l area 1
router ospf 1
  log-adjacency-changes
  area 1 stub no-summary
R1#show ip ospf interface brief
Interface    PID    Area    IP Address/Mask          Cost    State    Nbrs  F/C
Lo0          1      0       10.0.0.1/32              1       LOOP     0/0
Lo0          1      1       10.10.10.2/30 Fa1/o      1       BDR      0/1
R1#show running-config interface fastEthernet 1/0
Building configuration...

Current configuration : 115 bytes
!
interface FastEthernet1/0
  ip address 10.10.10.2 255.255.255.252
  ip ospf 1 area 1
  duplex auto
   speed auto
end

R1#show ip ospf neighbor

Neighbor ID     Pri   State            Dead Time   Address      Interface
10.10.10.1 R1#  1     EXCHANGE/DR      00:00:39    10.10.10.1   FastEthernet1/0
```

A. Change the IP MTU of R1 Fa1/0 to 1300
B. Change the IP MTU of R2 Fa0/0 to 1300
C. Change the IP MTU of R1 Fa1/0 to 1500
D. Change the IP MTU of R2 Fa0/0 to 1500

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 313
Refer to the exhibit. A loop occurs between R1, R2, and R3 while EIGRP is run with poison reverse enabled. Which action prevents the loop between R1, R2, and R3?



A. Configure route tagging.
B. Enable split horizon.
C. Configure R3 as stub receive-only.
D. Configure route filtering.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
In Cisco devices, split horizon is always used along with poison reverse (via the command “ip split-horizon”) so in this question split horizon is already turned on. To prevent loop we can only use route filtering.

QUESTION 314
Which IPv6 first hop security feature controls the traffic necessary for proper discovery of neighbor device operation and performance?

A. RA Throttling
B. Source or Destination Guard
C. ND Multicast Suppression
D. IPv6 Snooping

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 315
A customer reports that traffic is not passing on an EIGRP enabled multipoint interface on a router configured as below:

```
interface Serial0/0/0
no ip address
```

```
interface Serial0/0/0.9 multipoint
ip address 10.1.1.1 255.255.255.248
ip split-horizon eigrp 1
```

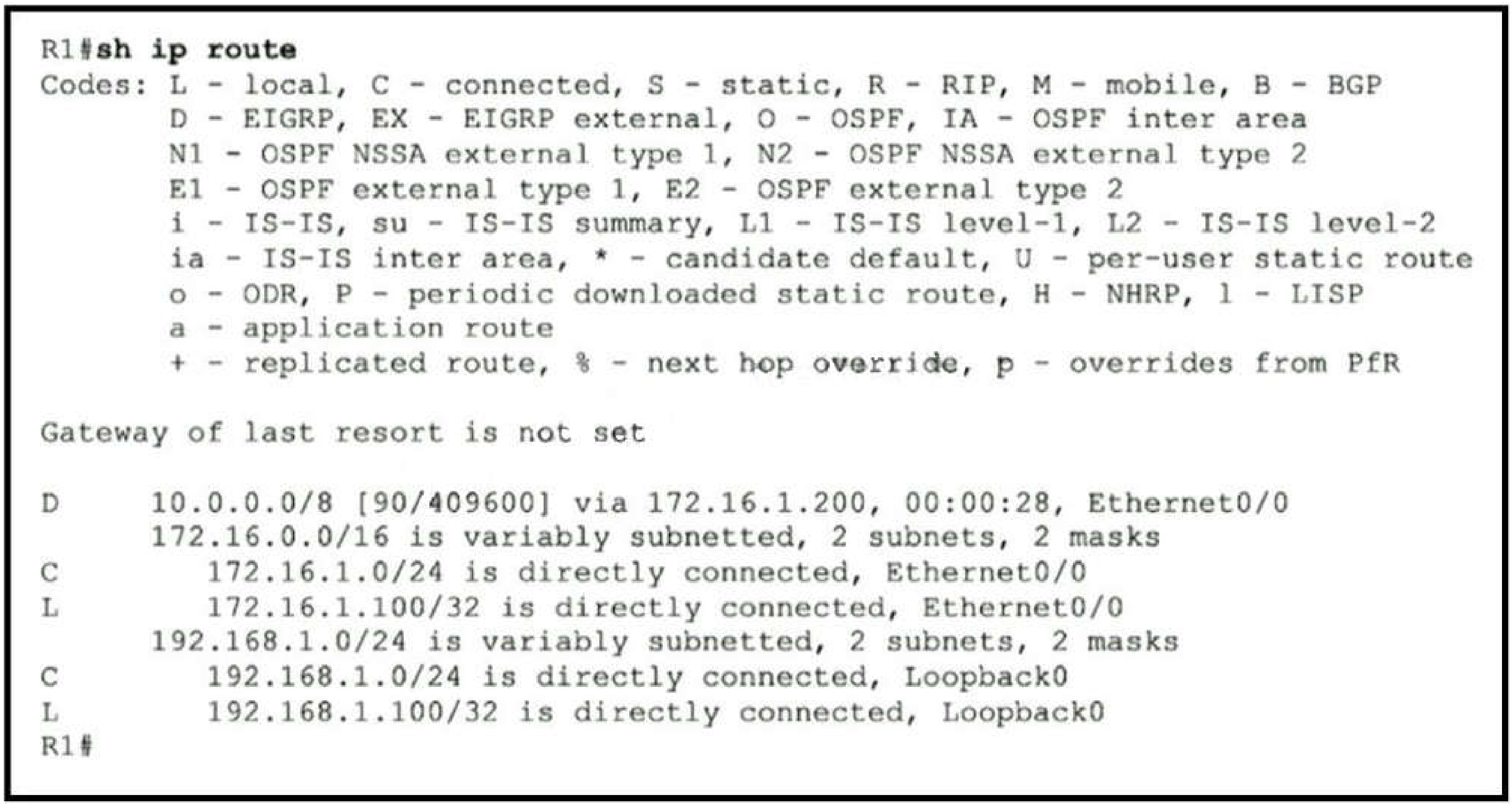
Which action resolves the issue?

A. Enable split horizon.
B. Disable poison reverse.
C. Disable split horizon.
D. Enable poison reverse.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
In this question sub-interface is used so we have to turn off split-horizon for EIGRP.

QUESTION 316
Refer to the exhibit. The R2 loopback interface is advertised with RIP and EIGRP using default values. Which configuration changes make R1 reach the R2 loopback using RIP?



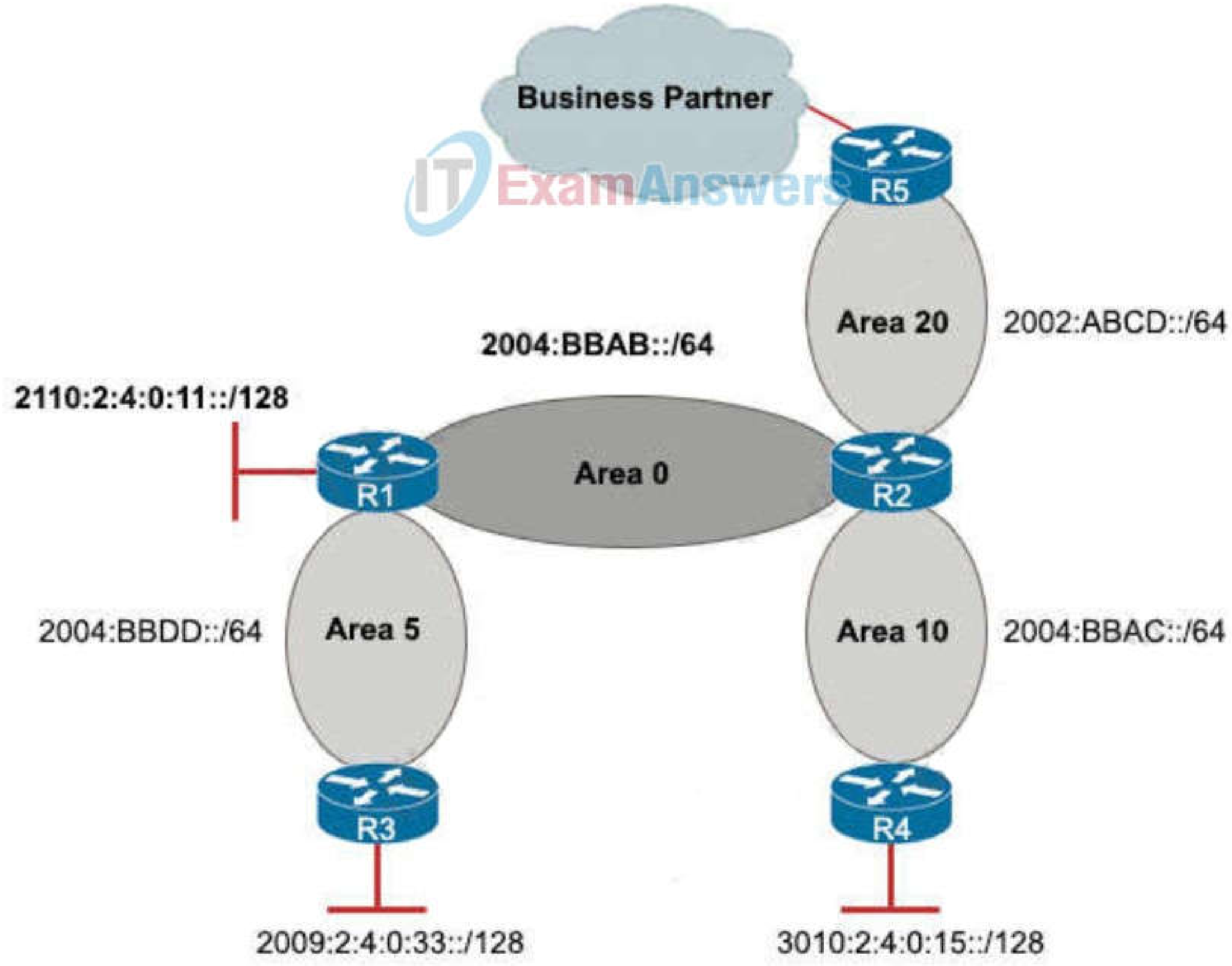
```
R1#sh ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2
       i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

Gateway of last resort is not set

D     10.0.0.0/8 [90/409600] via 172.16.1.200, 00:00:28, Ethernet0/0
      172.16.0.0/16 is variably subnetted, 2 subnets, 2 masks
C        172.16.1.0/24 is directly connected, Ethernet0/0
L        172.16.1.100/32 is directly connected, Ethernet0/0
      192.168.1.0/24 is variably subnetted, 2 subnets, 2 masks
C        192.168.1.0/24 is directly connected, Loopback0
L        192.168.1.100/32 is directly connected, Loopback0
R1#
```

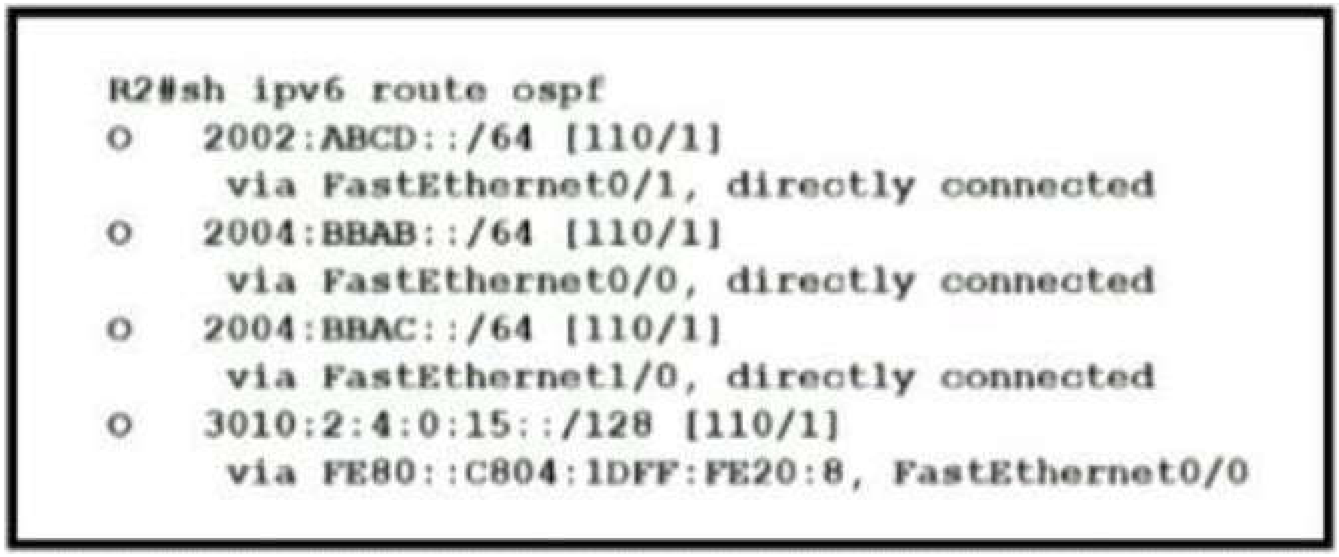
A. R1(config)# router rip
R1(config-router)# distance 90
B. R1(config)# router rip
R1(config-router)# distance 100
C. R1(config)# router eigrp 1
R1(config-router)# distance eigrp 130 120
D. R1(config)# router eigrp 1
R1(config-router)# distance eigrp 120 120

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 317
Refer to the exhibit. A network engineer applied a filter for LSA traffic on OSPFv3 interarea routes on the area 5 ABR to protect advertising the internal routes of area 5 to the business partner network. All other areas should receive the area 5 internal routes. After the respective route filtering configuration is applied on the ABR, area 5 routes are not visible on any of the areas. How must the filter list be applied on the ABR to resolve this issue?





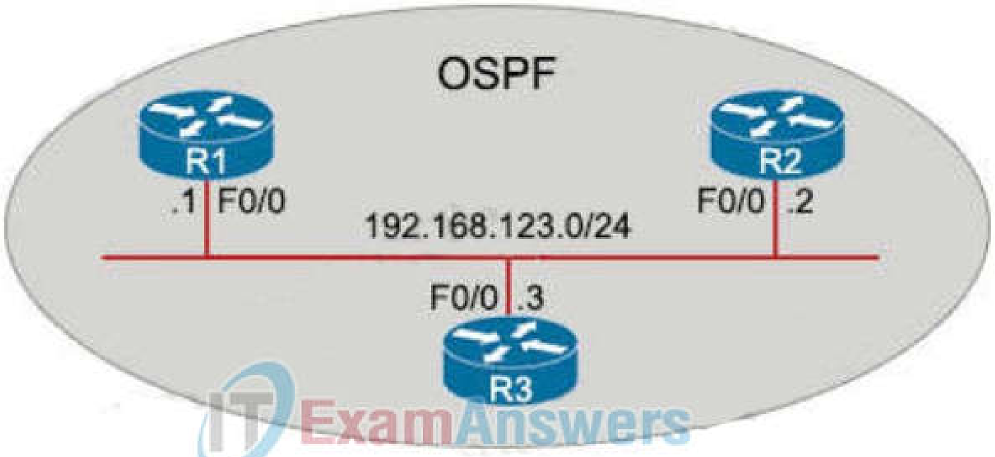
```
R2#sh ipv6 route ospf
O    2002:ABCD::/64 [110/1]
      via FastEthernet0/1, directly connected
O    2004:BBAB::/64 [110/1]
      via FastEthernet0/0, directly connected
O    2004:BBAC::/64 [110/1]
      via FastEthernet1/0, directly connected
O    3010:2:4:0:15::/128 [110/1]
      via FE80::C804:1DFF:FE20:8, FastEthernet0/0
```

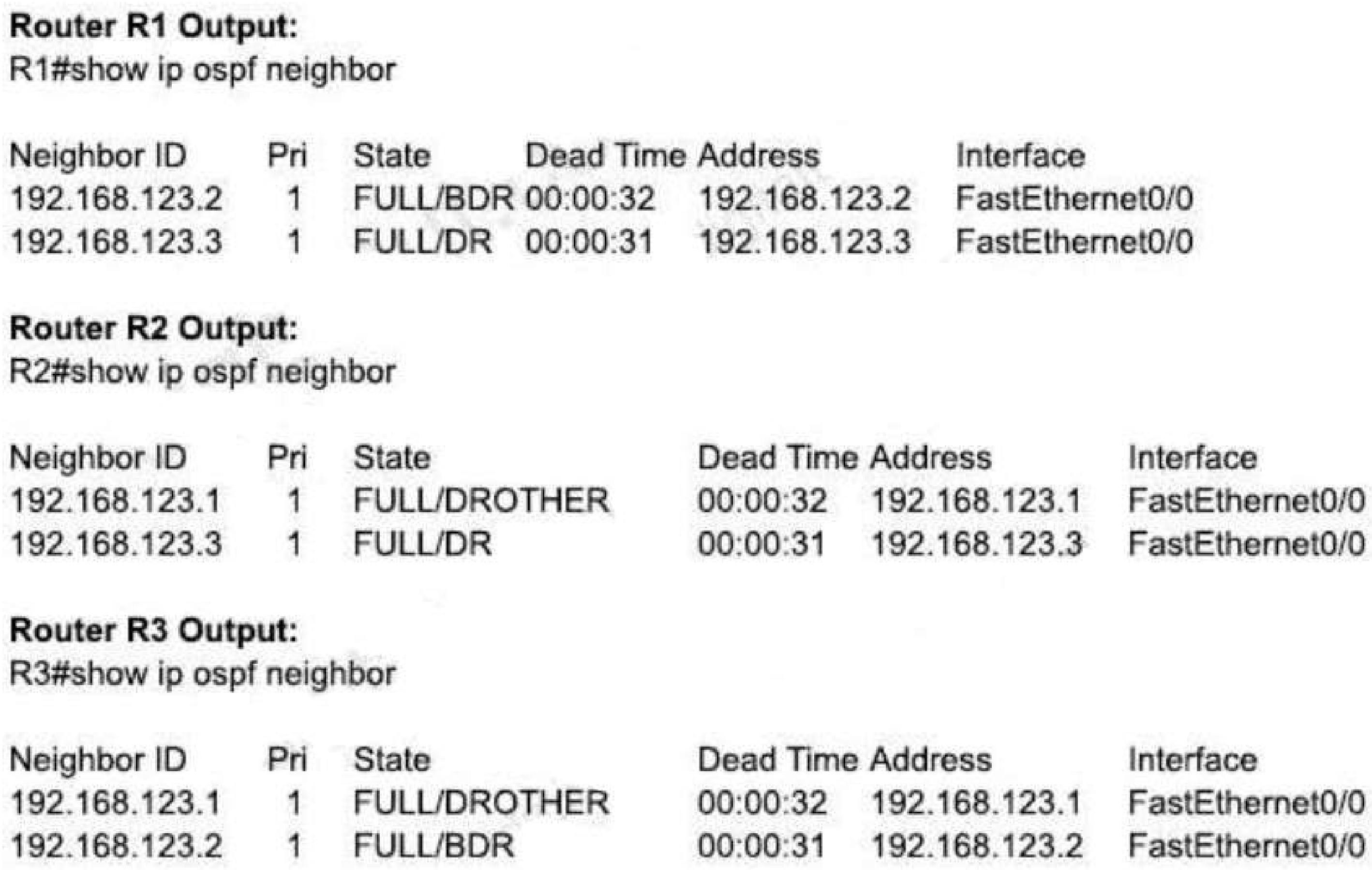
A. in the “out” direction for area 20 on router R2
B. in the “in” direction for area 5 on router R1
C. in the “out” direction for area 5 on router R1
D. in the “in” direction for area 20 on router R2

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 318
Refer to the exhibit. An administrator wanted to make R1 always elected as DR, R2 as BDR, and R3 as DROTHER but could not achieve the desired results. Which two configurations resolve the issue? (Choose two)





Router R1 Output:

```
R1#show ip ospf neighbor

Neighbor ID     Pri   State      Dead Time Address        Interface
192.168.123.2    1    FULL/BDR 00:00:32    192.168.123.2  FastEthernet0/0
192.168.123.3    1    FULL/DR  00:00:31    192.168.123.3  FastEthernet0/0
```

Router R2 Output:

```
R2#show ip ospf neighbor

Neighbor ID     Pri   State              Dead Time Address        Interface
192.168.123.1    1    FULL/DROTHER       00:00:32   192.168.123.1  FastEthernet0/0
192.168.123.3    1    FULL/DR            00:00:31   192.168.123.3  FastEthernet0/0
```

Router R3 Output:

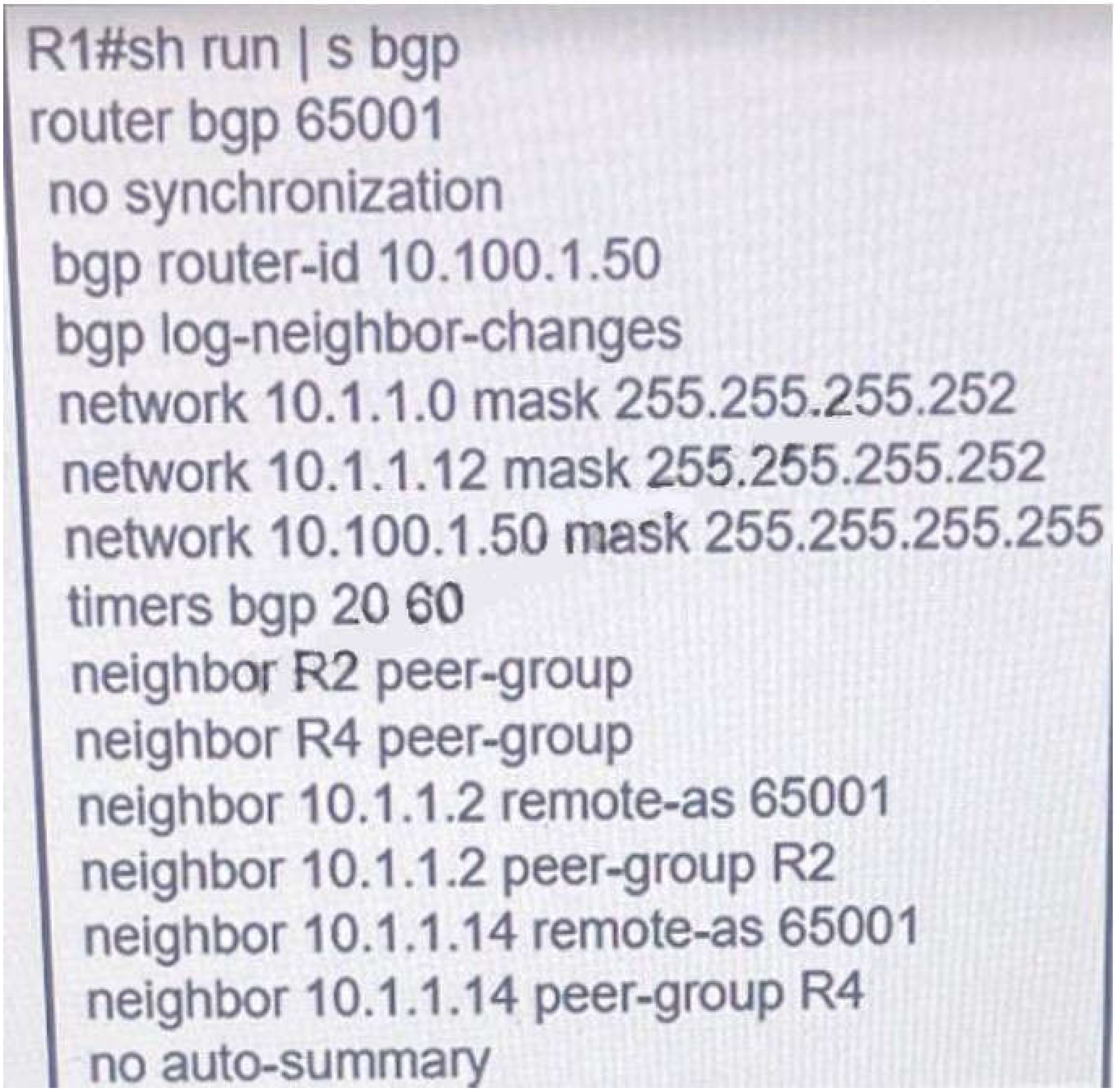
```
R3#show ip ospf neighbor

Neighbor ID     Pri   State              Dead Time Address        Interface
192.168.123.1    1    FULL/DROTHER       00:00:32   192.168.123.1  FastEthernet0/0
192.168.123.2    1    FULL/BDR           00:00:31   192.168.123.2  FastEthernet0/0
```

A. On the R2 F0/0 interface, configure OSPF priority to 200
B. On the R1 F0/0 interface, configure OSPF priority to 202
C. On the R2 F0/0 interface, configure OSPF priority to 201
D. On the R1 F0/0 interface, configure OSPF priority to 255
E. On the R3 F0/0 interface, configure OSPF priority to 201

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 319
Refer to the exhibit. While troubleshooting a BGP route reflector configuration, an engineer notices that reflected routes are missing from neighboring routers. Which two BGP configurations are needed to resolve the issue? (Choose two)



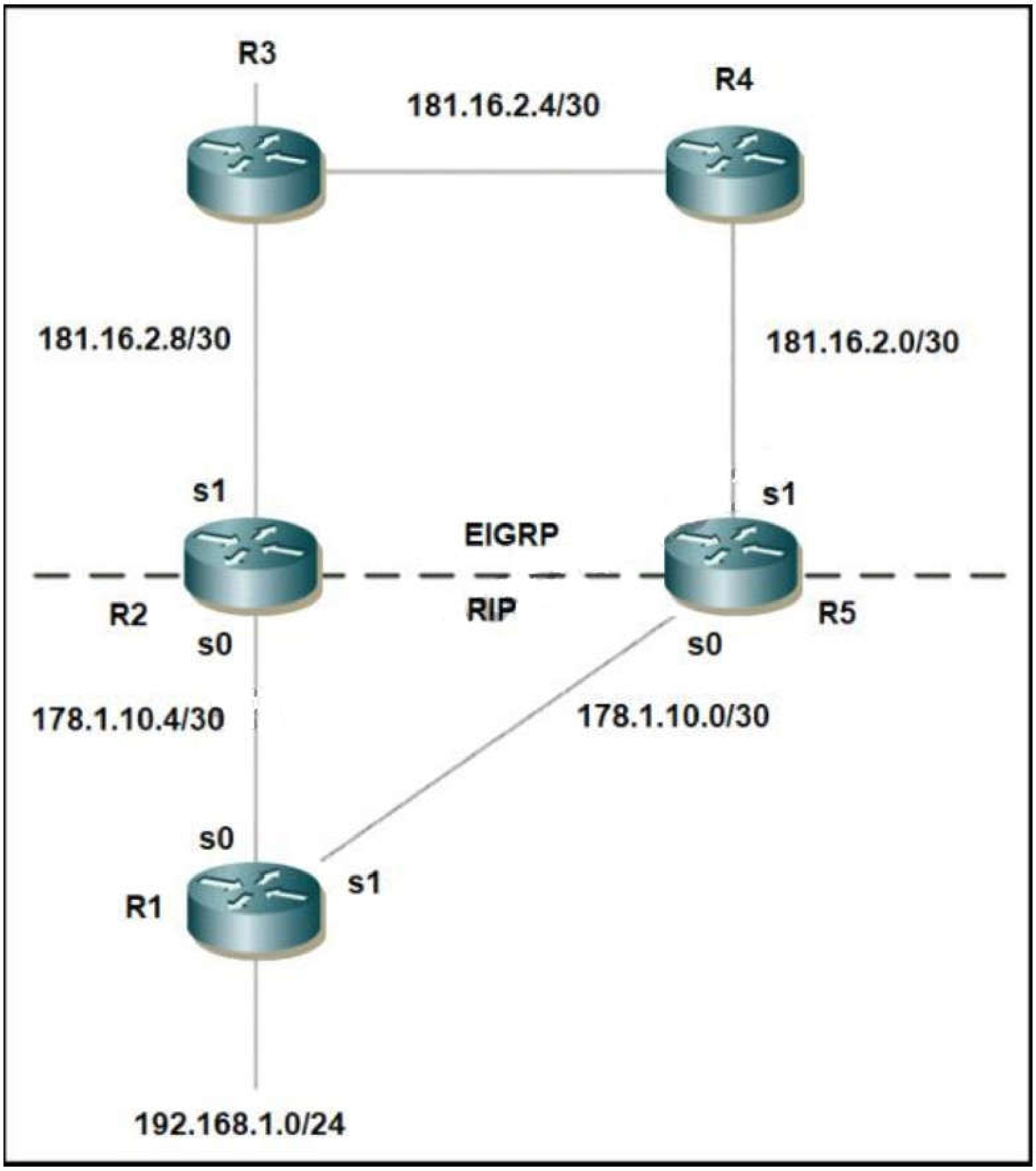
```
R1#sh run | s bgp
router bgp 65001
 no synchronization
 bgp router-id 10.100.1.50
 bgp log-neighbor-changes
 network 10.1.1.0 mask 255.255.255.252
 network 10.1.1.12 mask 255.255.255.252
 network 10.100.1.50 mask 255.255.255.255
 timers bgp 20 60
 neighbor R2 peer-group
 neighbor R4 peer-group
 neighbor 10.1.1.2 remote-as 65001
 neighbor 10.1.1.2 peer-group R2
 neighbor 10.1.1.14 remote-as 65001
 neighbor 10.1.1.14 peer-group R4
 no auto-summary
```

A. neighbor 10.1.1.14 route-reflector-client
B. neighbor R2 route-reflector-client
C. neighbor 10.1.1.2 allowas-in
D. neighbor R4 route-reflector-client
E. neighbor 10.1.1.2 route-reflector-client

Correct Answer: AE
Section: (none)
Explanation

Explanation/Reference:

QUESTION 320
Refer to the exhibit. Mutual redistribution is enabled between RIP and EIGRP on R2 and R5. Which configuration resolves the routing loop for the 192.168.1.0/24 network?



A. R2:

```
router eigrp 10
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s1
!
router rip
network 178.1.0.0
redistribute eigrp 10 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
R5:
router eigrp 10
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s0
!
router rip
network 178.1.0.0
redistribute eigrp 10 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
```

B. R2:

```
router eigrp 10
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s0
```

```
!
router rip
network 178.1.0.0
redistribute eigrp 10 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
R5:
router eigrp 10
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s0
!
router rip
network 178.1.0.0
redistribute eigrp 10 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
```

C. R2:

```
router eigrp 10
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s0
!
router rip
network 178.1.0.0
redistribute eigrp 10 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any

R5:
router eigrp 10
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s1
!
router rip
network 178.1.0.0
redistribute eigrp 10 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
```

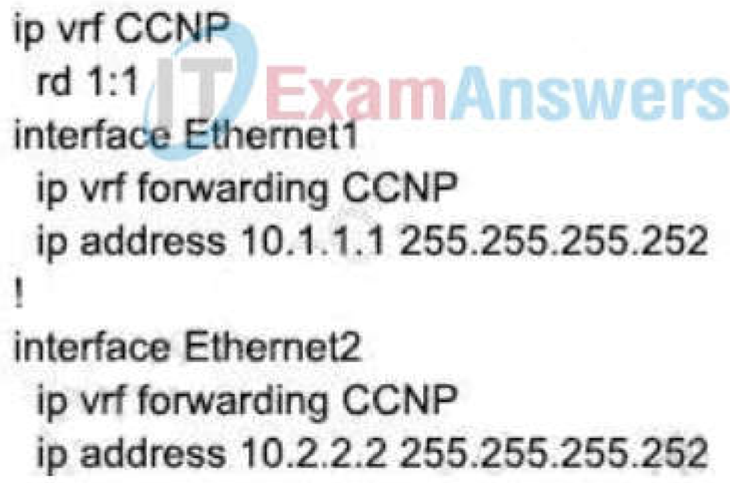
D. R2:

```
router eigrp 7
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s1
!
router rip
network 178.1.0.0
redistribute eigrp 7 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
R5:
router eigrp 7
network 181.16.0.0
redistribute rip metric 1 1 1 1 1
distribute-list 1 in s1
!
router rip
network 178.1.0.0
redistribute eigrp 7 metric 2
!
access-list 1 deny 192.168.1.0
access-list 1 permit any
```

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 321
Refer to the exhibit. Which configuration enables OSPF for area 0 interfaces to establish adjacency with a neighboring router with the same VRF?



```
ip vrf CCNP
 rd 1:1
interface Ethernet1
 ip vrf forwarding CCNP
 ip address 10.1.1.1 255.255.255.252
!
interface Ethernet2
 ip vrf forwarding CCNP
 ip address 10.2.2.2 255.255.255.252
```

A. router ospf 1 vrf CCNP
network 10.1.1.1 0.0.0.0 area 0
network 10.2.2.2 0.0.0.0 area 0

B. router ospf 1
interface Ethernet1
ip ospf 1 area 0.0.0.0
interface Ethernet2
ip ospf 1 area 0.0.0.0

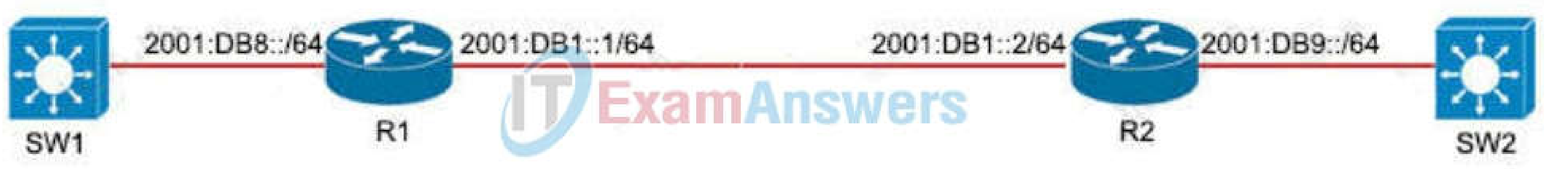
C. router ospf 1 vrf CCNP
interface Ethernet1
ip ospf 1 area 0.0.0.0
interface Ethernet2
ip ospf 1 area 0.0.0.0

D. router ospf 1 vrf CCNP
network 10.0.0.0 0.0.255.255 area 0

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 322
Refer to the exhibit. An engineer must advertise routes into IPv6 MP-BGP and failed. Which configuration resolves the issue on R1?



A. router bgp 65000
no bgp default ipv4-unicast
address-family ipv6 multicast
network 2001:DB8::/64

B. router bgp 65000
no bgp default ipv4-unicast
address-family ipv6 unicast
network 2001:DB8::/64

C. router bgp 64900
no bgp default ipv4-unicast
address-family ipv6 multicast
neighbor 2001:DB8:7000::2 translate-update ipv6 multicast

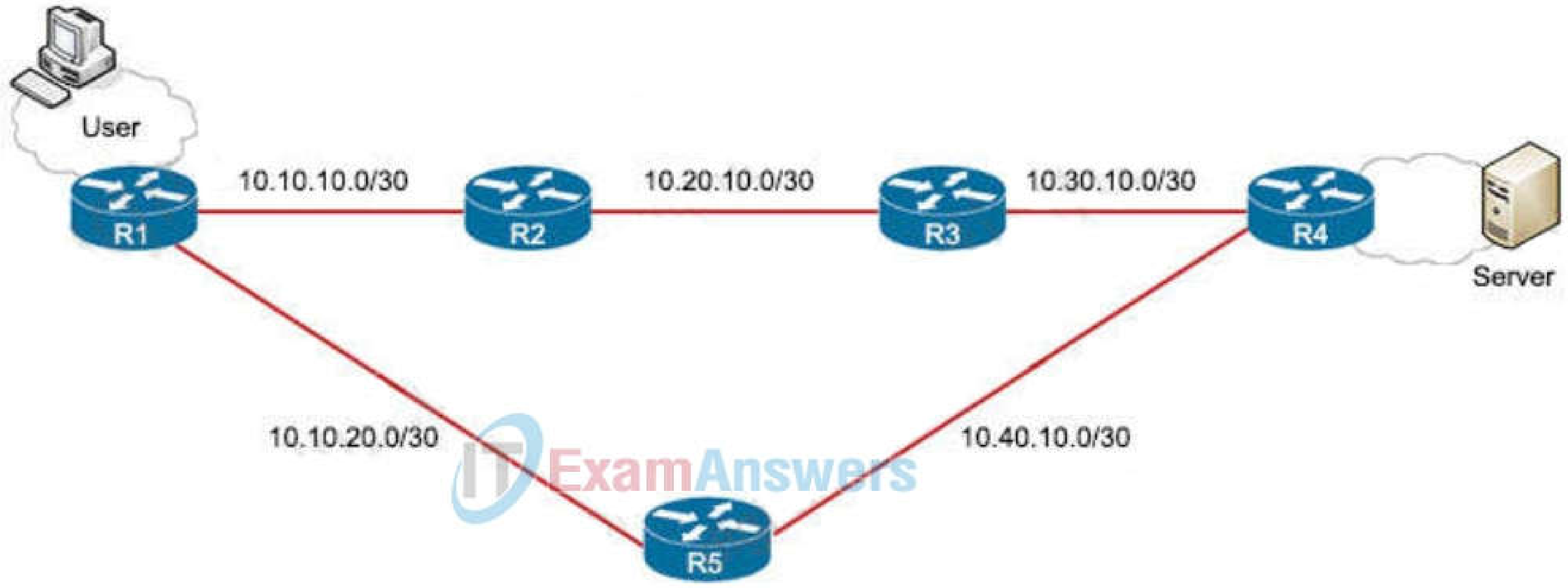
D. router bgp 64900
no bgp default ipv4-unicast
address-family ipv6 unicast
redistribute ospf
network 2001:DB9::/64

Correct Answer: B

Section: (none)
Explanation

Explanation/Reference:

QUESTION 323
Refer to the exhibit. Routers R1, R2, R3, and R4 use EIGRP. However, traffic always prefers R1 to R5 backup links in non failure scenarios. Which configuration resolves the issue?



```
R1#show ip route
1.0.0.0/32 is subnetted, 1 subnets
C 1.1.1.1/32 is directly connected, Loopback0
2.0.0.0/32 is subnetted, 1 subnets
O 2.2.2.2/32 [110/2] via 10.10.10.2, 00:09:30, GigabitEthernet0/0/0
10.0.0.0/8 is variably subnetted, 7 subnets, 2 masks
C 10.10.10.0/30 is directly connected, GigabitEthernet0/0/0
L 10.10.10.1/32 is directly connected, GigabitEthernet0/0/0
C 10.10.20.0/30 is directly connected, GigabitEthernet0/0/1
L 10.10.20.1/32 is directly connected, GigabitEthernet0/0/1
D 10.20.10.0/30 [90/3072] via 10.10.10.2, 00:09:30, GigabitEthernet0/0/0
O 10.30.10.0/30 [90/3328] via 10.10.10.2, 00:05:48, GigabitEthernet0/0/0
S 10.40.10.0/30 [1/0] via 10.10.20.2
```

A. R1(config)#no ip route 10.40.10.0 255.255.255.252 10.10.20.2
R1(config)#ip route 10.40.10.0 255.255.255.252 10.10.20.2 115

B. R1(config)#int gigabitEthernet 0/0/0
R1 (config-if)#bandwidth 10000000

C. R1(config-if)#int gigabitEthernet 0/0/0
R1(config-if)#bandwidth 10000

D. R1(config)#no ip route 10.40.10.0 255.255.255.252 10.10.20.2
R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.2

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

QUESTION 324
A newly installed spoke router is configured for DMVPN with the ip mtu 1400 command. Which configuration allows the spoke to use fragmentation with the maximum negotiated TCP MTU over GRE?

A. ip tcp adjust-mss 1360
crypto ipsec fragmentation after-encryption

B. ip tcp adjust-mss 1360
crypto ipsec fragmentation mtu-discovery

C. ip tcp payload-mtu 1360
crypto ipsec fragmentation mtu-discovery

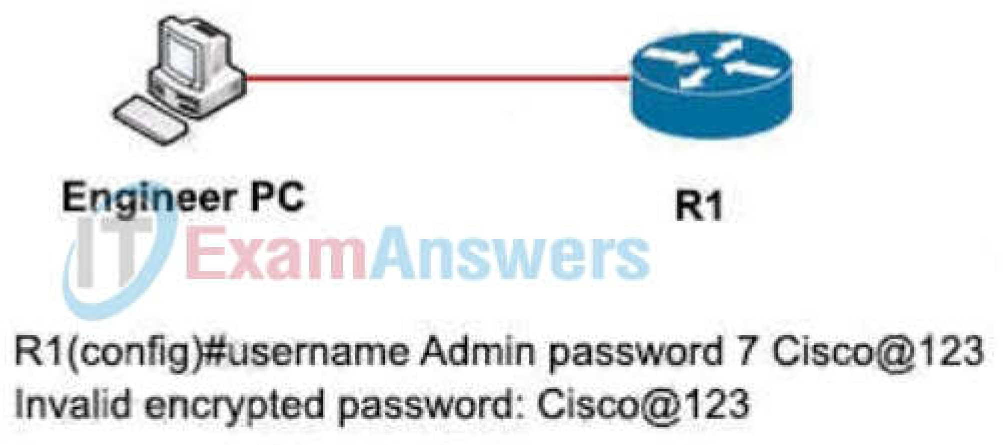
D. ip tcp payload-mtu 1360
crypto ipsec fragmentation after-encryption

Correct Answer: A

Section: (none)
Explanation

Explanation/Reference:
There is no “ip tcp payload-mtu” command so the correct answer should be “ip tcp adjust-mss”.
Note: The “ip tcp adjust-mss 1360” command will signal the source and destination device during the three-way handshake to use the TCP MSS size of 1360 bytes so that if they create the full size packet there will still not be any drop/fragmentation on the router.
We tested with Cisco IOSv15.4 but could not find the “crypto ipsec fragmentation mtu-discovery” command.

QUESTION 325
Refer to the exhibit. An engineer is trying to add an encrypted user password that should not be visible in the router configuration. Which two configuration commands resolve the issue? (Choose two)



```
R1(config)#username Admin password 7 Cisco@123
Invalid encrypted password: Cisco@123
```

A. A. service password-encryption
B. username Admin password 5 Cisco@123
C. no service password-encryption
D. username Admin password Cisco@123
E. password encryption aes
F. username Admin secret Cisco@123

Correct Answer: AF
Section: (none)
Explanation

Explanation/Reference:
We can use the “service password-encryption” to encrypt all current and future passwords. Or we can use the “secret” keyword to encrypt the password with MD5 (although MD5 is not secured nowadays).

Note: The command “service password-encryption” enables the AES password encryption feature (type 6) but we have to converts existing plain or weakly encrypted passwords to type-6 encrypted passwords with the “encryption re-encrypt obfuscated” command.

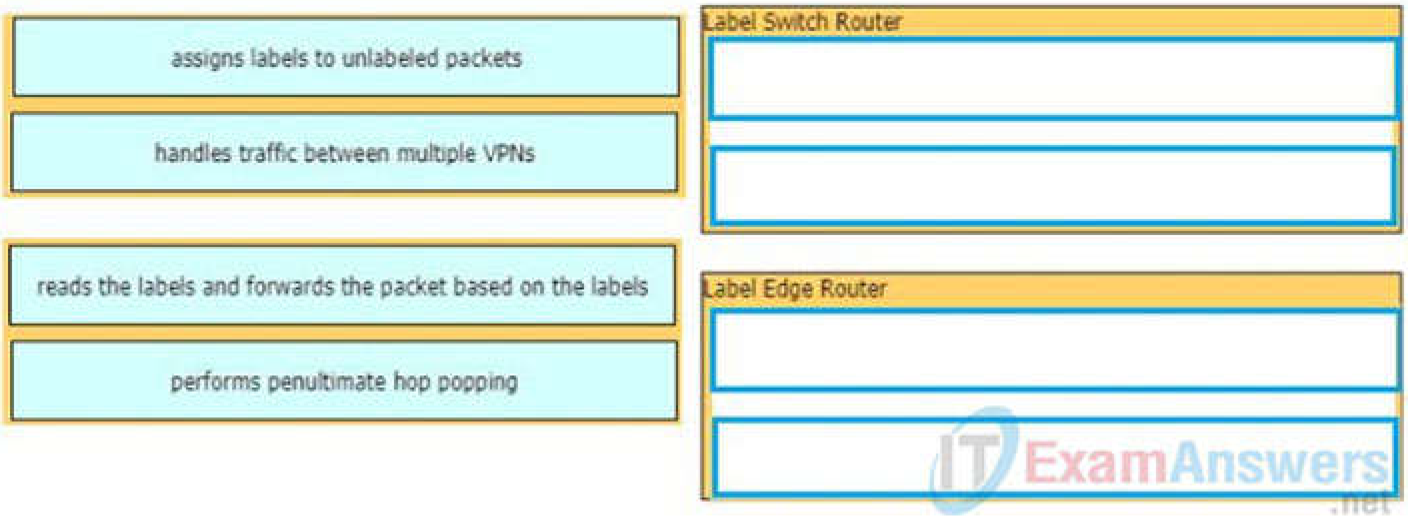
You can enable the AES password encryption feature without a primary key, but encryption starts only when a primary key is present in the system with the command key config-key password-encrypt super-secret-password.

Here (from cisco)Here (from cisco)

Drag and Drop

QUESTION 1
Drag and drop the operations from the left onto the locations where the operations are performed on the right.

Select and Place:



assigns labels to unlabeled packets

handles traffic between multiple VPNs

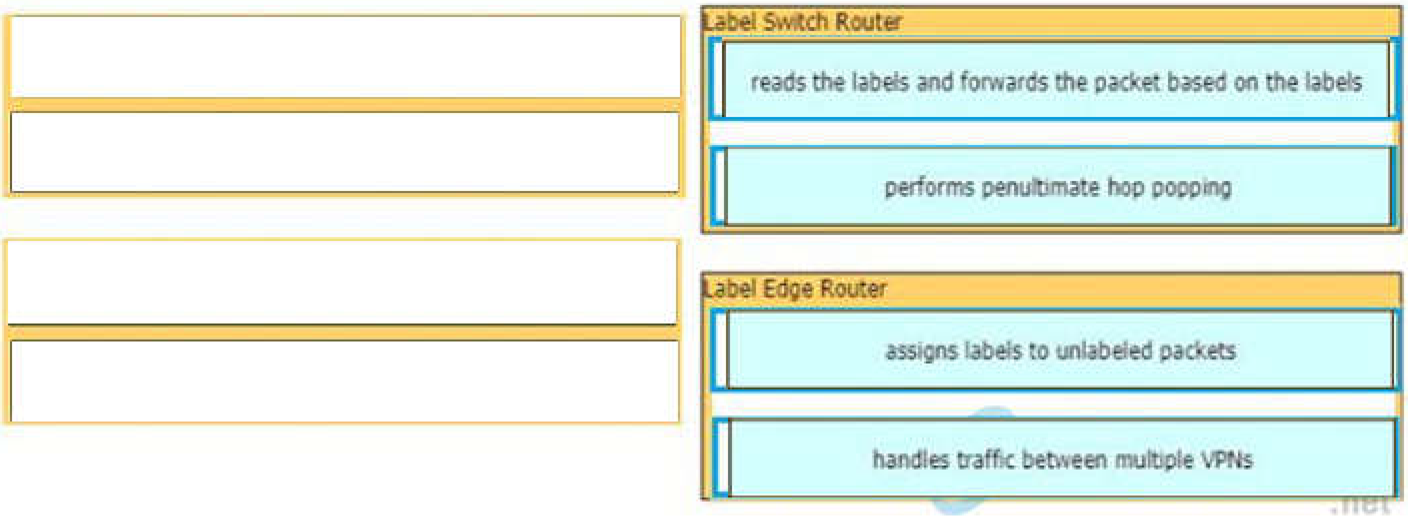
reads the labels and forwards the packet based on the labels

performs penultimate hop popping

Label Switch Router

Label Edge Router

Correct Answer:



Label Switch Router

- reads the labels and forwards the packet based on the labels
- performs penultimate hop popping

Label Edge Router

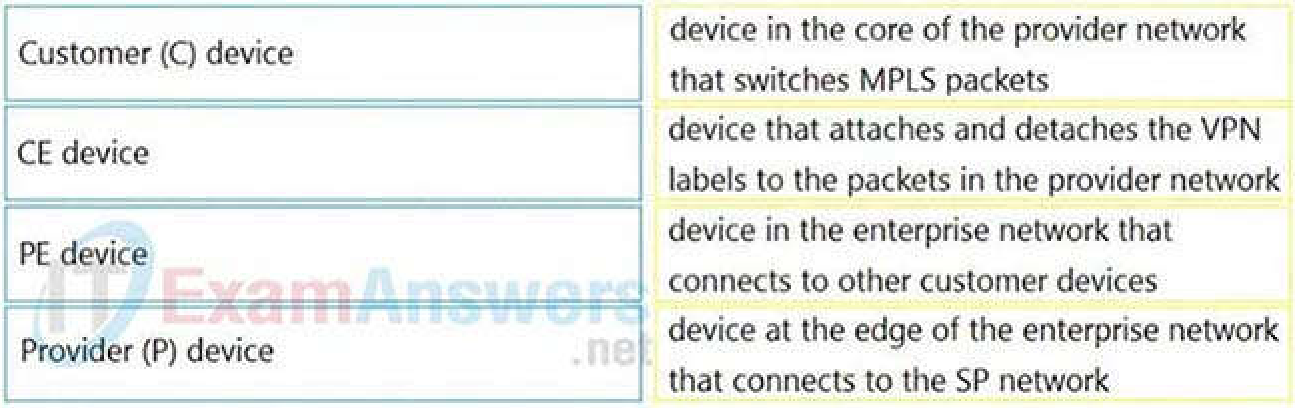
- assigns labels to unlabeled packets
- handles traffic between multiple VPNs

Section: (none)
Explanation

Explanation/Reference:

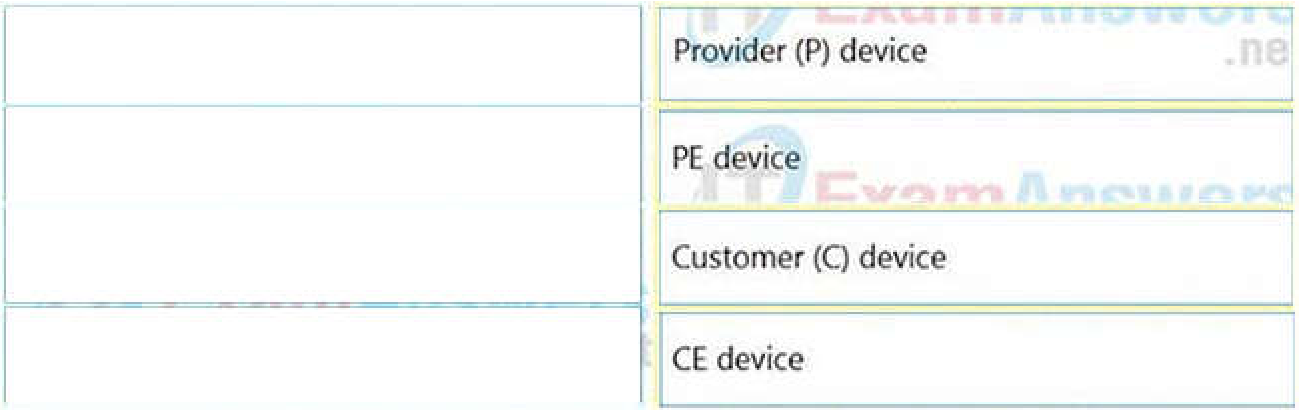
QUESTION 2
Drag and drop the MPLS VPN device types from me left onto the definitions on the right.

Select and Place:



Customer (C) device	device in the core of the provider network that switches MPLS packets
CE device	device that attaches and detaches the VPN labels to the packets in the provider network
PE device	device in the enterprise network that connects to other customer devices
Provider (P) device	device at the edge of the enterprise network that connects to the SP network

Correct Answer:



Provider (P) device

PE device

Customer (C) device

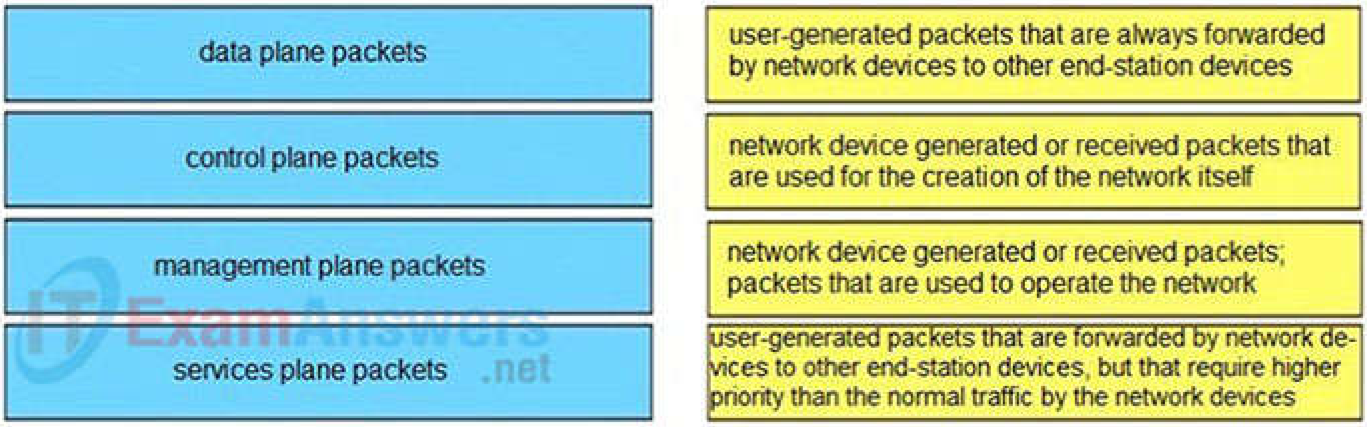
CE device

Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
Drag and drop the packet types from the left onto the correct descriptions on the right.

Select and Place:



data plane packets

control plane packets

management plane packets

services plane packets

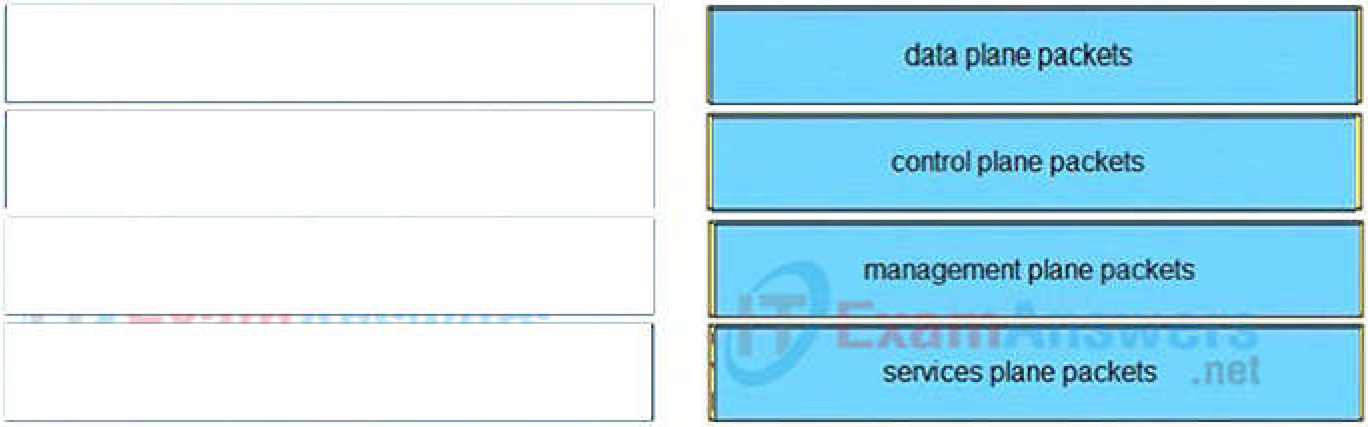
user-generated packets that are always forwarded by network devices to other end-station devices

network device generated or received packets that are used for the creation of the network itself

network device generated or received packets; packets that are used to operate the network

user-generated packets that are forwarded by network devices to other end-station devices, but that require higher priority than the normal traffic by the network devices

Correct Answer:



data plane packets

control plane packets

management plane packets

services plane packets

Section: (none)
Explanation

Explanation/Reference:
Unlike legacy network technologies such as ISDN, Frame Relay, and ATM that defined separate data and control channels, IP carries all packets within a single pipe. Thus, IP network devices such as routers and switches must be able to distinguish between data plane, control plane, and management plane packets to treat each packet appropriately.

From an IP traffic plane perspective, packets may be divided into four distinct, logical groups:

1. Data plane packets – End-station, user-generated packets that are always forwarded by network devices to other end-station devices. From the perspective of the network device, data plane packets always have a transit destination IP address and can be handled by normal, destination IP addressbased forwarding processes.

2. Control plane packets – Network device generated or received packets that are used for the creation and operation of the network itself. From the perspective of the network device, control plane packets always have a receive destination IP address and are handled by the CPU in the network device route processor. Examples include protocols such as ARP, BGP, OSPF, and other protocols that glue the network together.

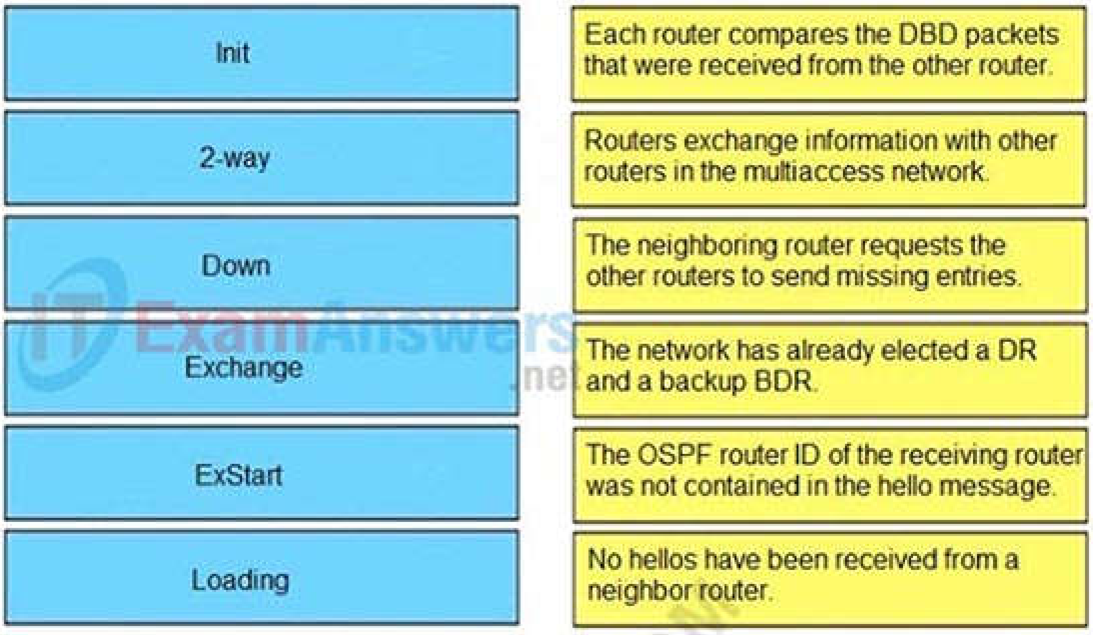
3. Management plane packets – Network device generated or received packets, or management station generated or received packets that are

used to manage the network. From the perspective of the network device, management plane packets always have a receive destination IP address and are handled by the CPU in the network device route processor. Examples include protocols such as Telnet, Secure Shell (SSH), TFTP, SNMP, FTP, NTP, and other protocols used to manage the device and/or network.

4. Services plane packets – A special case of data plane packets, services plane packets are also user -generated packets that are also forwarded by network devices to other end-station devices, but that require high-touch handling by the network device (above and beyond normal, destination IP address-based forwarding) to forward the packet. Examples of high-touch handling include such functions as GRE encapsulation, QoS, MPLS VPNs, and SSL/IPsec encryption/decryption, etc. From the perspective of the network device, services plane packets may have a transit destination IP address, or may have a receive destination IP address (for example, in the case of a VPN tunnel endpoint).

QUESTION 4
Drag and drop the OSPF adjacency states from the left onto the correct descriptions on the right.

Select and Place:



Init

2-way

Down

Exchange

ExStart

Loading

Each router compares the DBD packets that were received from the other router.

Routers exchange information with other routers in the multiaccess network.

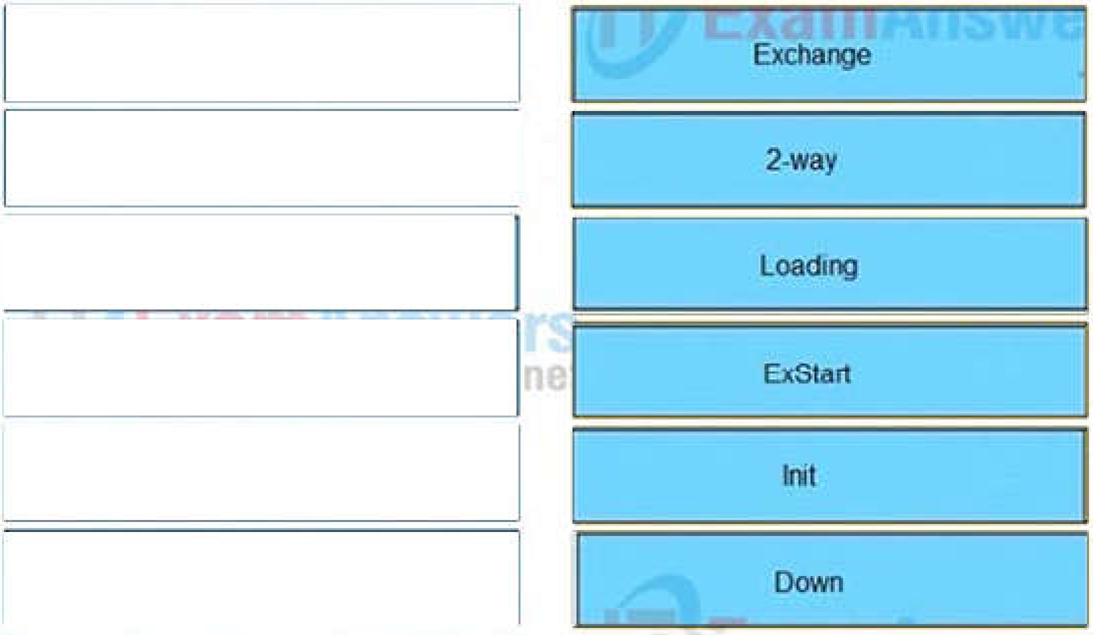
The neighboring router requests the other routers to send missing entries.

The network has already elected a DR and a backup BDR.

The OSPF router ID of the receiving router was not contained in the hello message.

No hellos have been received from a neighbor router.

Correct Answer:



Exchange

2-way

Loading

ExStart

Init

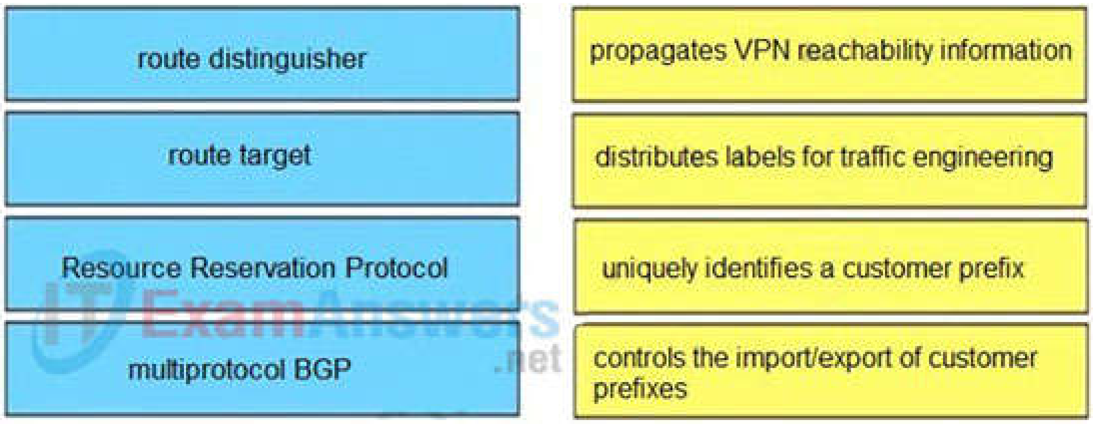
Down

Section: (none)
Explanation

Explanation/Reference:

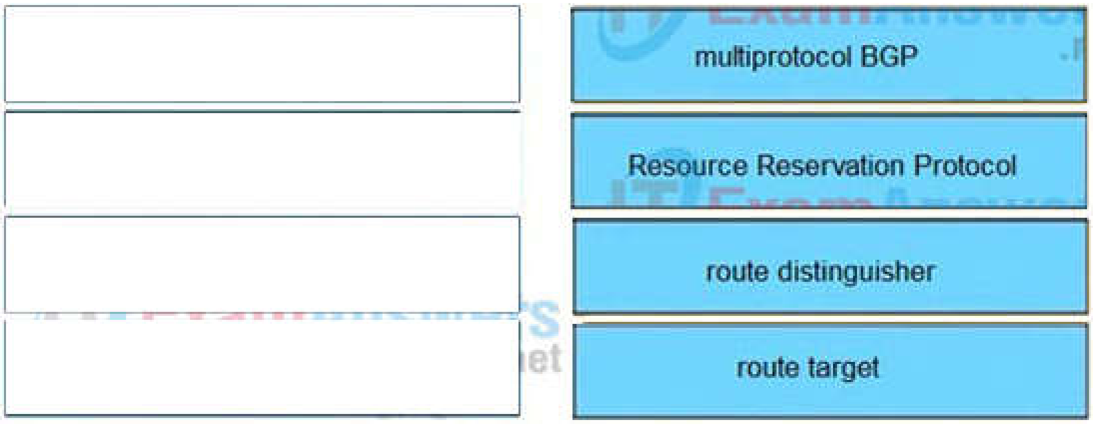
QUESTION 5
Drag and drop the MPLS VPN concepts from the left onto the correct descriptions on the right.

Select and Place:



route distinguisher	propagates VPN reachability information
route target	distributes labels for traffic engineering
Resource Reservation Protocol	uniquely identifies a customer prefix
multiprotocol BGP	controls the import/export of customer prefixes

Correct Answer:



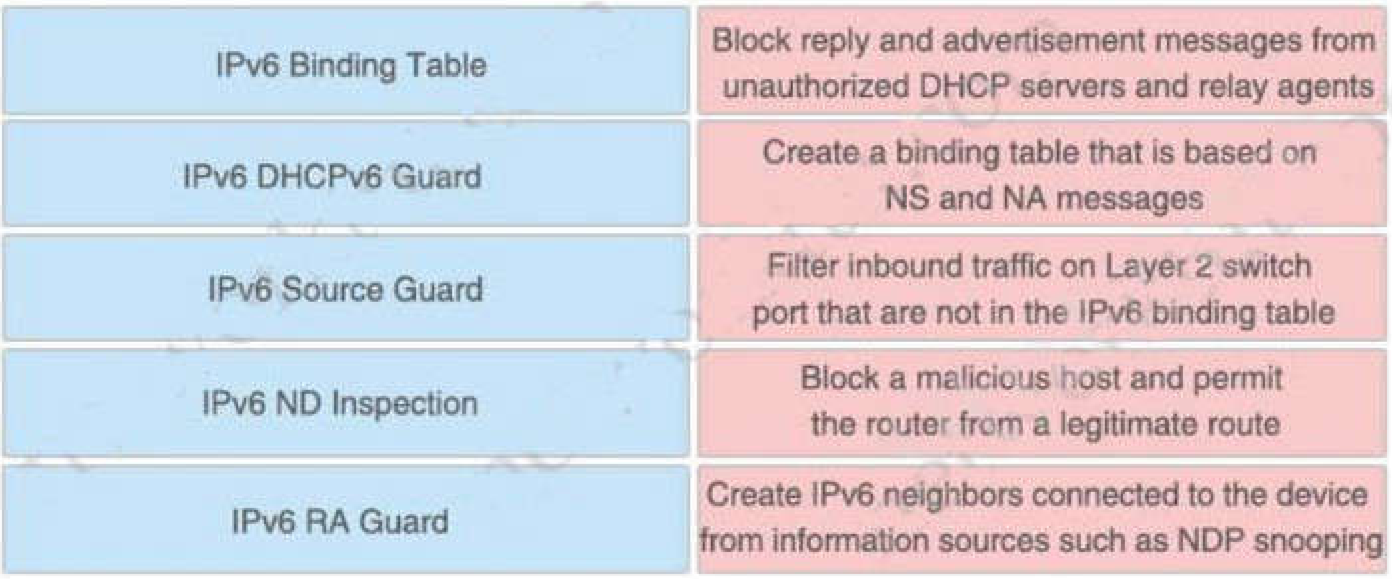
	multiprotocol BGP
	Resource Reservation Protocol
	route distinguisher
	route target

Section: (none)
Explanation

Explanation/Reference:
https://www.rogerperkin.co.uk/ccie/mpls/route-distinguisher-vs-route-target/

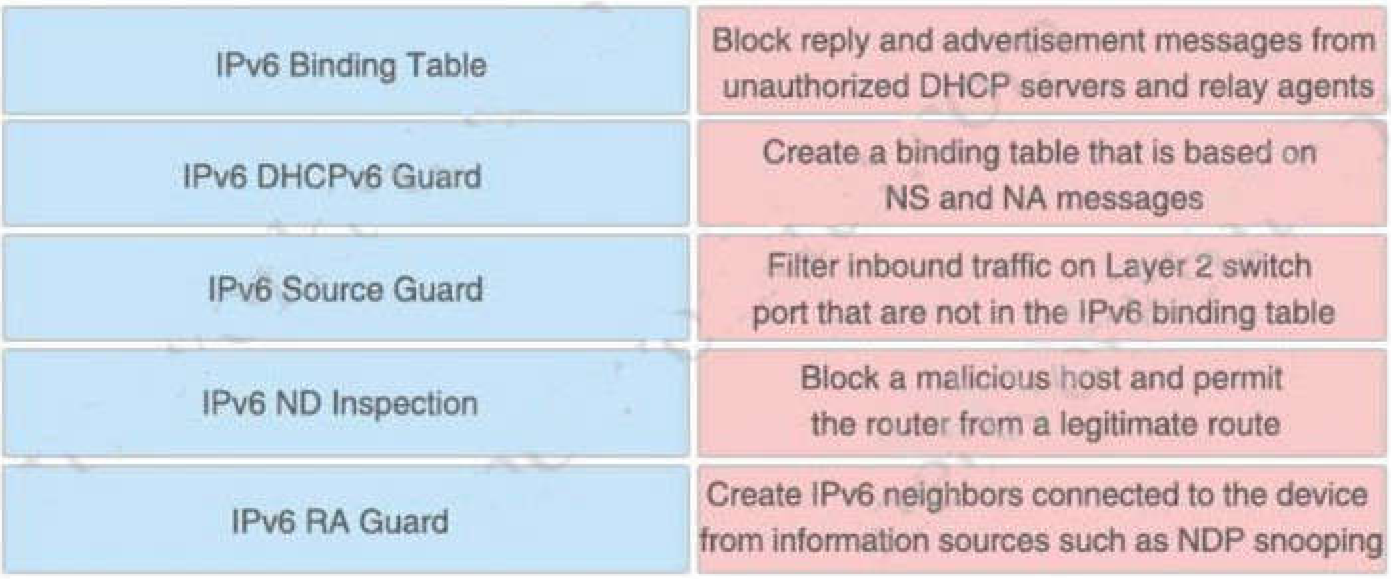
QUESTION 6
Drag and Drop the IPv6 First-Hop Security features from the left onto the definitions on the right.

Select and Place:



IPv6 Binding Table	Block reply and advertisement messages from unauthorized DHCP servers and relay agents
IPv6 DHCPv6 Guard	Create a binding table that is based on NS and NA messages
IPv6 Source Guard	Filter inbound traffic on Layer 2 switch port that are not in the IPv6 binding table
IPv6 ND Inspection	Block a malicious host and permit the router from a legitimate route
IPv6 RA Guard	Create IPv6 neighbors connected to the device from information sources such as NDP snooping

Correct Answer:

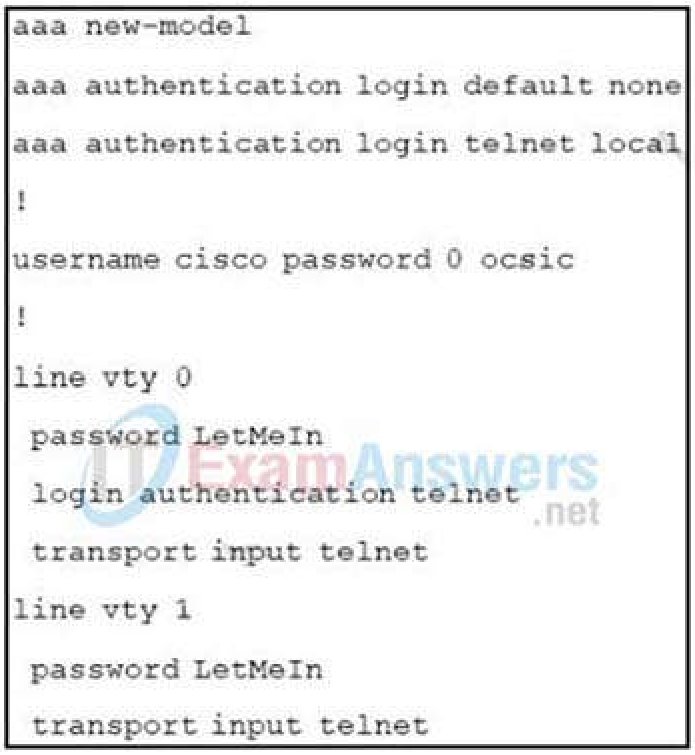


IPv6 Binding Table	Block reply and advertisement messages from unauthorized DHCP servers and relay agents
IPv6 DHCPv6 Guard	Create a binding table that is based on NS and NA messages
IPv6 Source Guard	Filter inbound traffic on Layer 2 switch port that are not in the IPv6 binding table
IPv6 ND Inspection	Block a malicious host and permit the router from a legitimate route
IPv6 RA Guard	Create IPv6 neighbors connected to the device from information sources such as NDP snooping

Section: (none)
Explanation

Explanation/Reference:
+ Block reply and advertisement messages from unauthorized DHCP servers and relay agents: IPv6 DHCPv6 Guard
+ Create a binding table that is based on NS and NA messages: IPv6 ND Inspection
+ Filter inbound traffic on Layer 2 switch port that are not in the IPv6 binding table: IPv6 Source Guard
+ Block a malicious host and permit the router from a legitimate route: IPv6 RA Guard
+ Create IPv6 neighbors connected to the device from information sources such as NDP snooping: IPv6 Binding Table

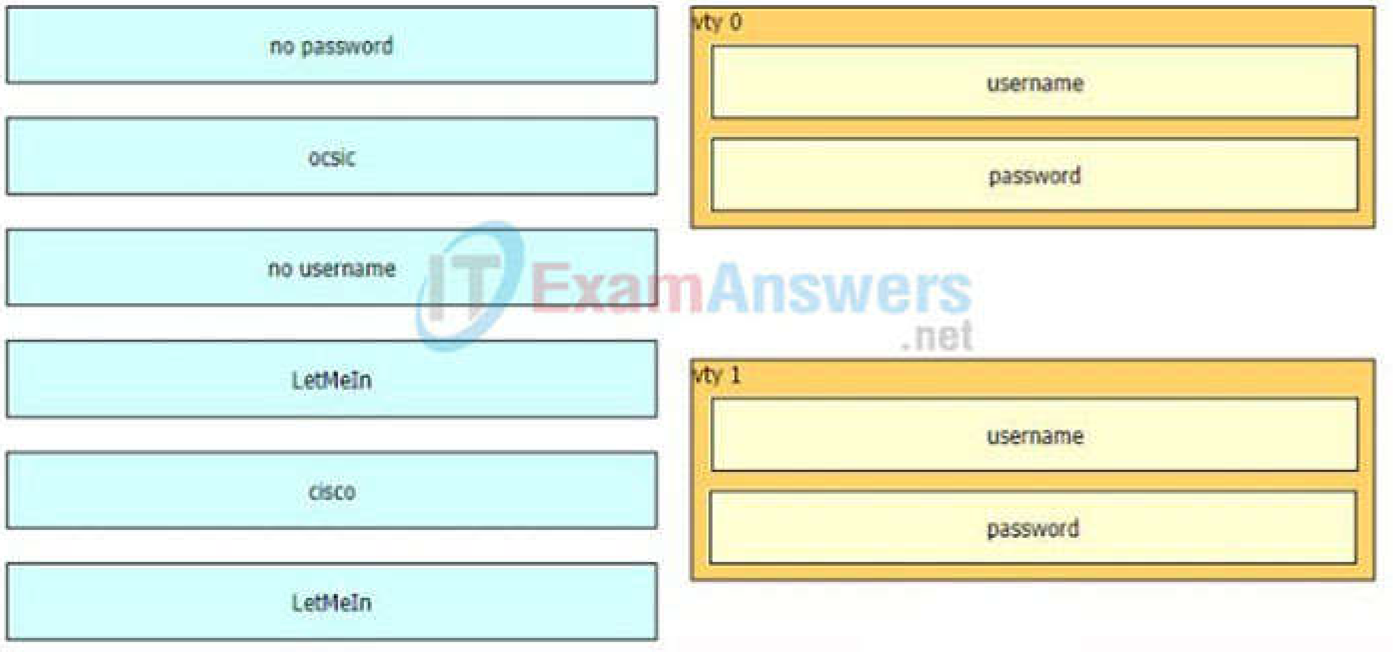
QUESTION 7
Refer to the exhibit.



```
aaa new-model
aaa authentication login default none
aaa authentication login telnet local
!
username cisco password 0 ocsic
!
line vty 0
 password LetMeIn
 login authentication telnet
 transport input telnet
line vty 1
 password LetMeIn
 transport input telnet
```

Drag and drop the credentials from the left onto the remote login information on the right to resolve a failed login attempt to vtys. Not all credentials are uf SLA by defining frequency and schedulingsed

Select and Place:



no password

ocsic

no username

LetMeIn

cisco

LetMeIn

vty 0

username

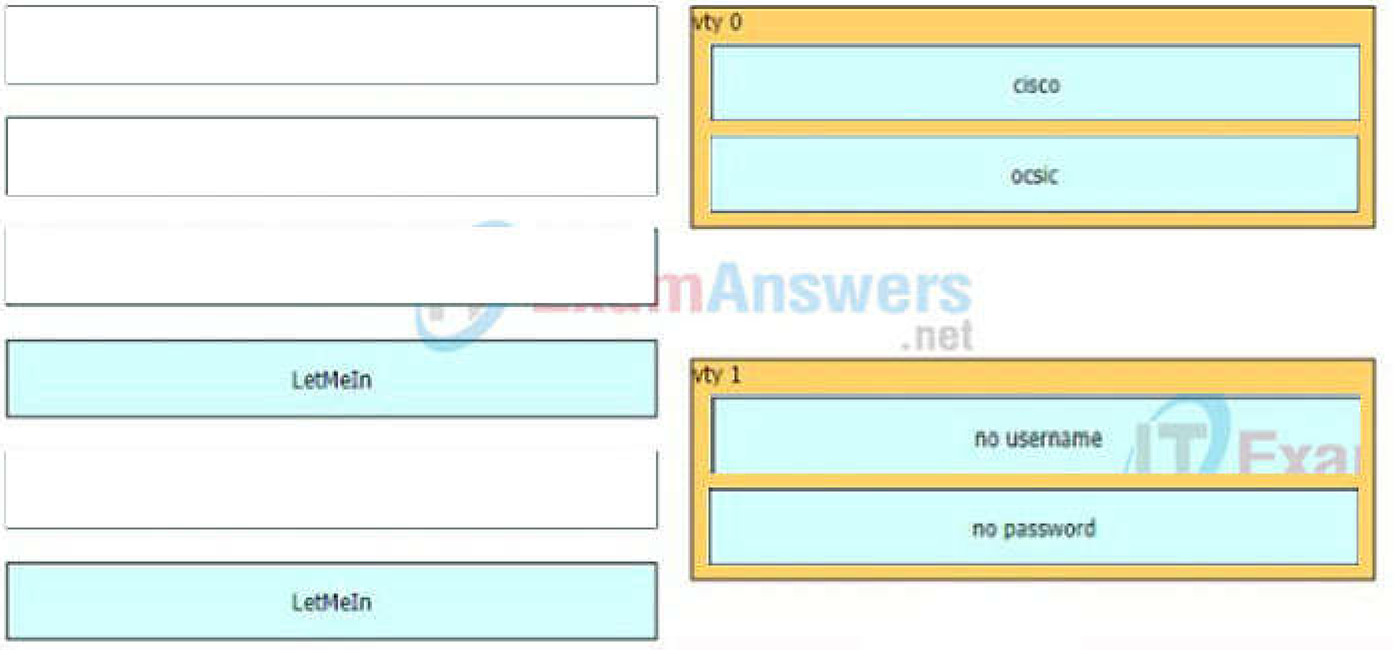
password

vty 1

username

password

Correct Answer:



LetMeIn

LetMeIn

vty 0

cisco

ocsic

vty 1

no username

no password

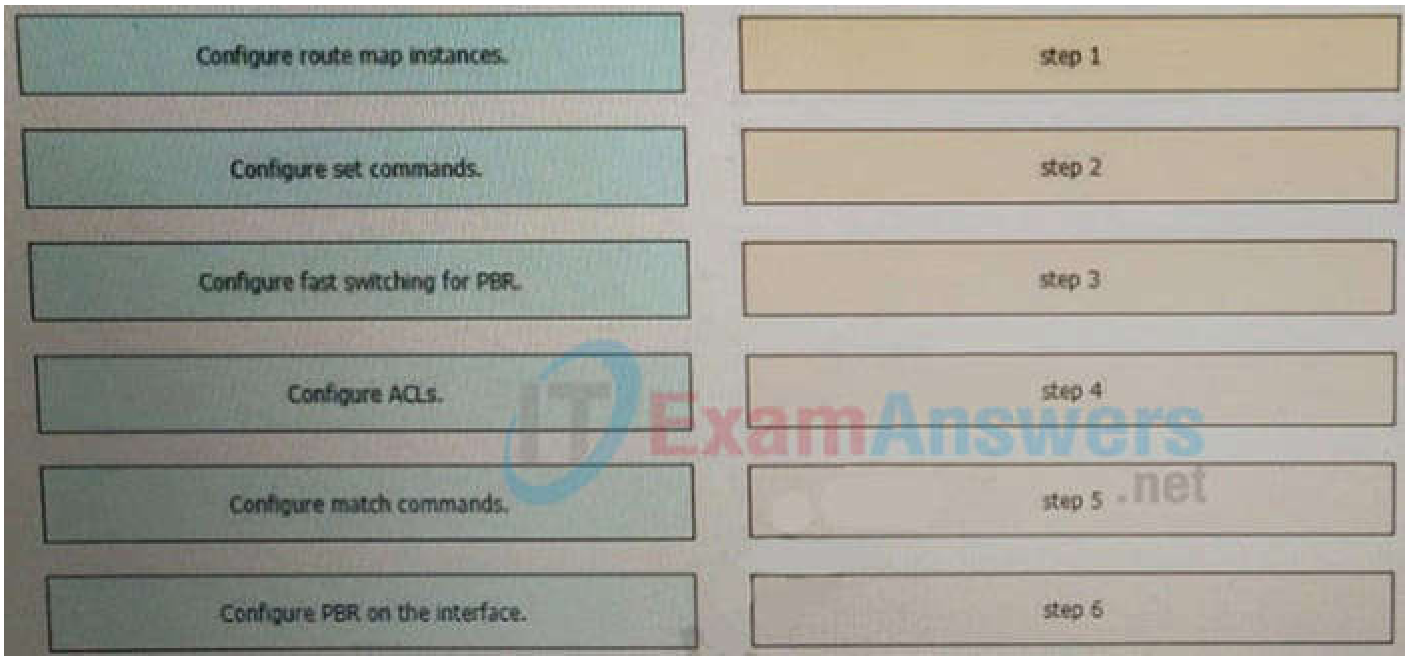
Section: (none)
Explanation

Explanation/Reference:
vty 0:
+ cisco
+ 0csic
vty 1:
+ no username
+ no password

The command “aaa authentication login default none” means no authentication is required when access to the device via Console/VTY/AUX so if one interface does not specify another login authentication method (via the “login authentication …” command), it will allow to access without requiring username or password. In this case VTY 1 does not specify another authentication login method so it will use the default method (which is “none” in this case).

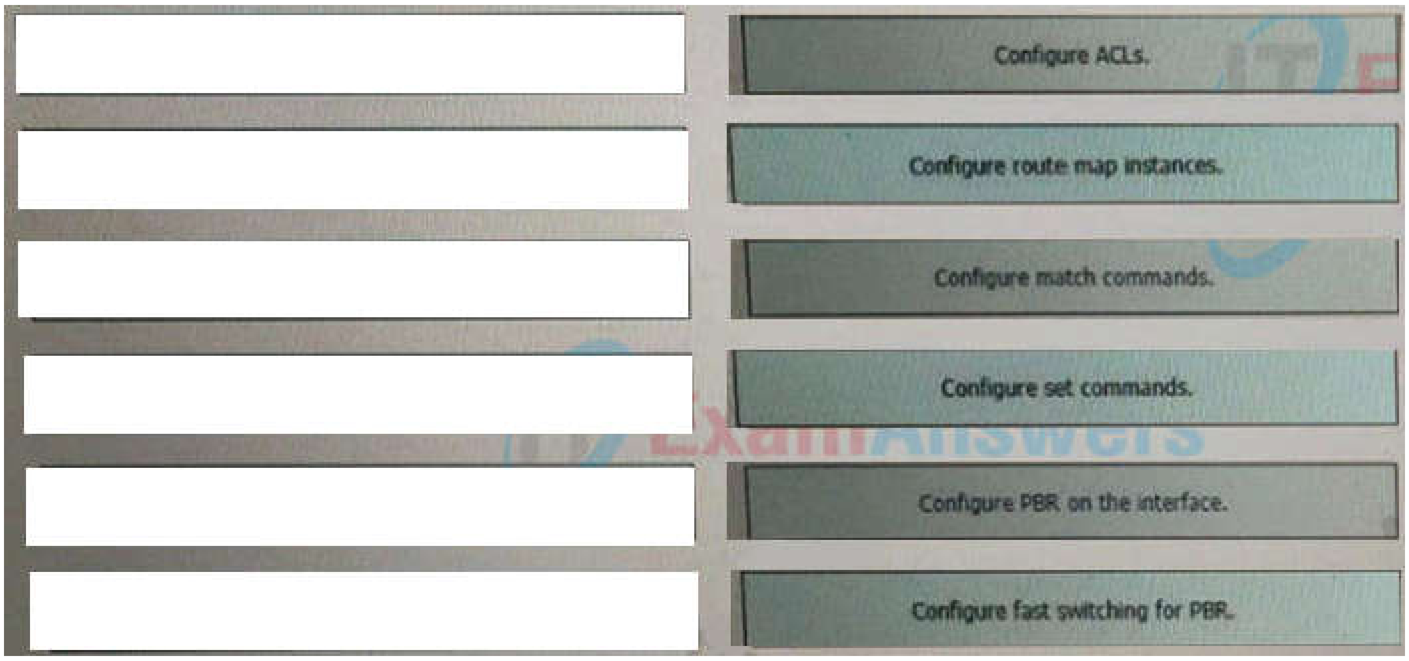
QUESTION 8
Drag and drop the actions from the left into the correct order on the right to configure a policy to avoid following packet forwarding based on the normal routing path.

Select and Place:



Configure route map instances.	step 1
Configure set commands.	step 2
Configure fast switching for PBR.	step 3
Configure ACLs.	step 4
Configure match commands.	step 5
Configure PBR on the interface.	step 6

Correct Answer:



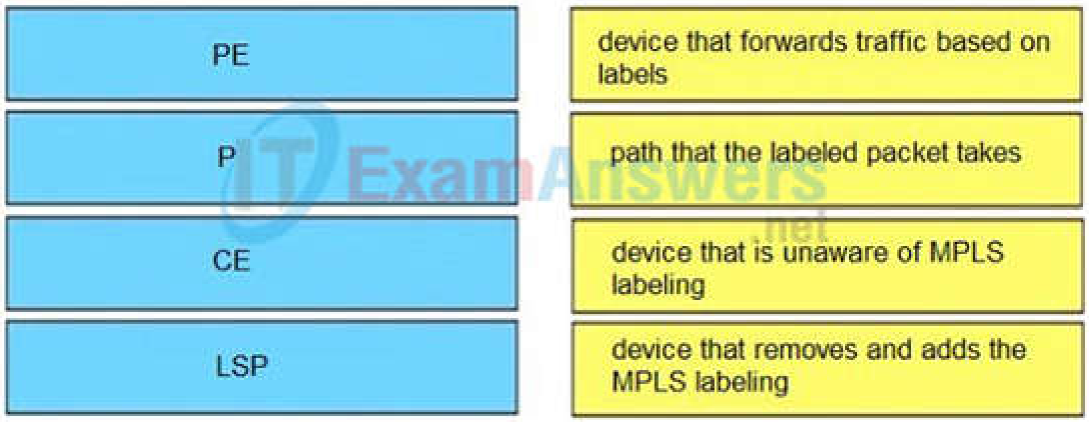
	Configure ACLs.
	Configure route map instances.
	Configure match commands.
	Configure set commands.
	Configure PBR on the interface.
	Configure fast switching for PBR.

Section: (none)
Explanation

Explanation/Reference:
https://community.cisco.com/t5/networking-documents/how-to-configure-pbr/ta-p/3122774

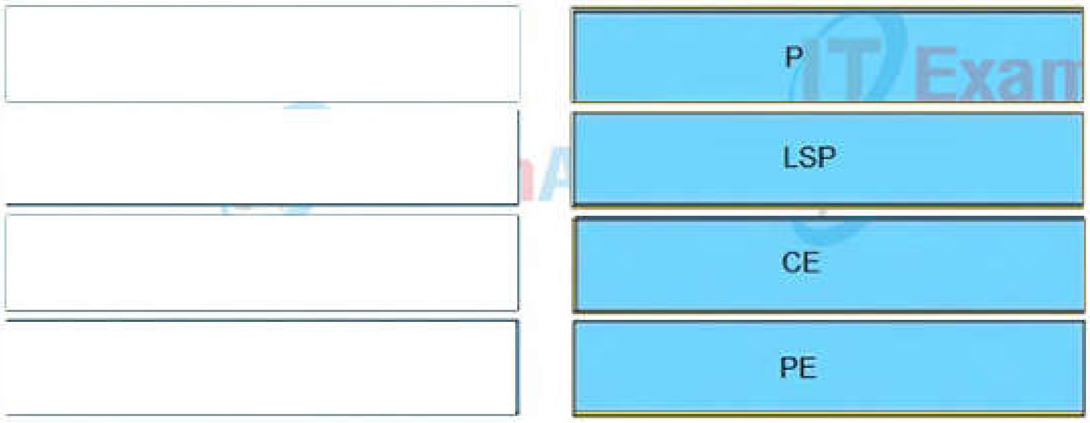
QUESTION 9
Drag and drop the MPLS terms from the left onto the correct definitions on the right.

Select and Place:



PE	device that forwards traffic based on labels
P	path that the labeled packet takes
CE	device that is unaware of MPLS labeling
LSP	device that removes and adds the MPLS labeling

Correct Answer:



P

LSP

CE

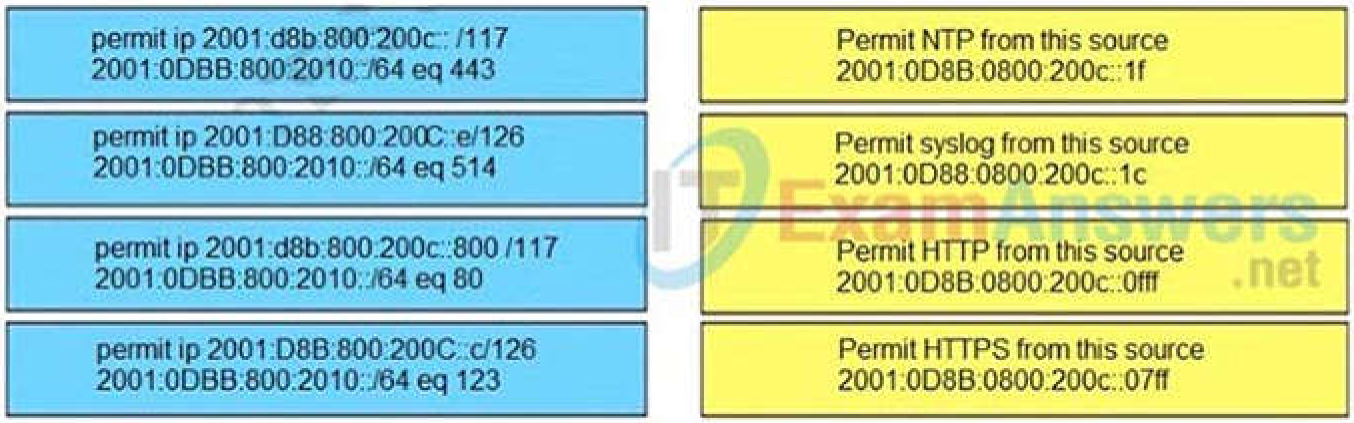
PE

Section: (none)
Explanation

Explanation/Reference:

QUESTION 10
Drag and drop the addresses from the left onto the correct IPv6 filter purposes on the right.

Select and Place:



permit ip 2001:d8b:800:200c:: /117
2001:0DBB:800:2010::/64 eq 443

permit ip 2001:D88:800:200C::e/126
2001:0DBB:800:2010::/64 eq 514

permit ip 2001:d8b:800:200c::800 /117
2001:0DBB:800:2010::/64 eq 80

permit ip 2001:D8B:800:200C::c/126
2001:0DBB:800:2010::/64 eq 123

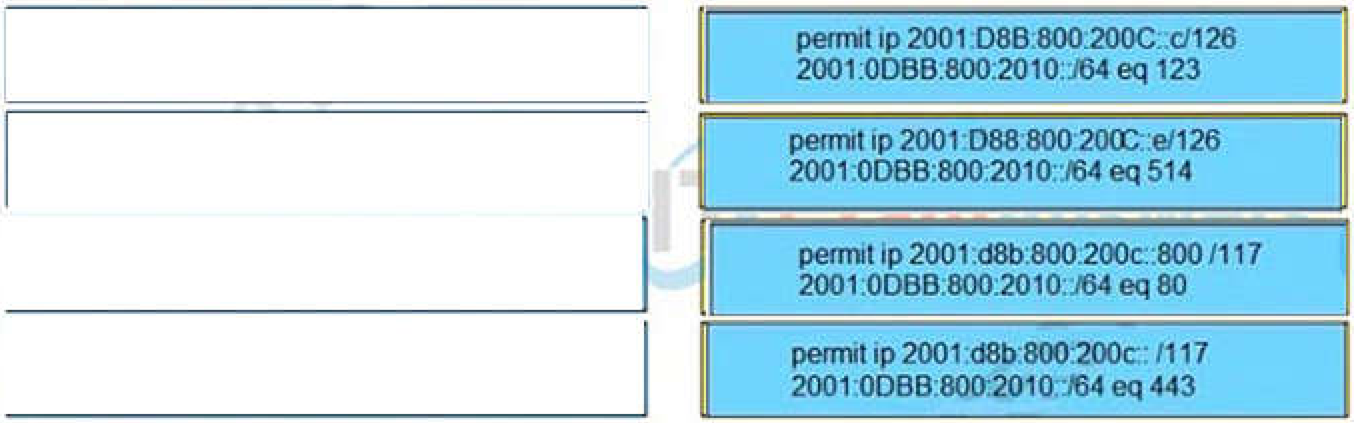
Permit NTP from this source
2001:0D8B:0800:200c::1f

Permit syslog from this source
2001:0D88:0800:200c::1c

Permit HTTP from this source
2001:0D8B:0800:200c::0fff

Permit HTTPS from this source
2001:0D8B:0800:200c::07ff

Correct Answer:



permit ip 2001:D8B:800:200C::c/126
2001:0DBB:800:2010::/64 eq 123

permit ip 2001:D88:800:200C::e/126
2001:0DBB:800:2010::/64 eq 514

permit ip 2001:d8b:800:200c::800 /117
2001:0DBB:800:2010::/64 eq 80

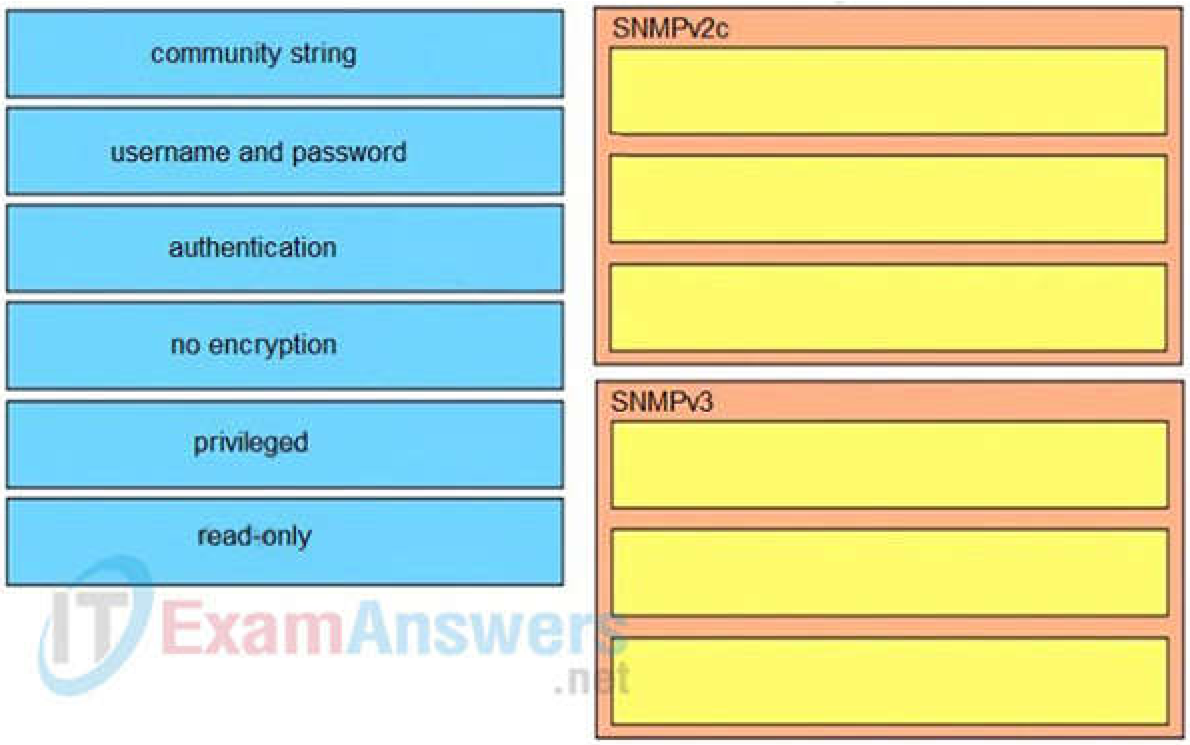
permit ip 2001:d8b:800:200c:: /117
2001:0DBB:800:2010::/64 eq 443

Section: (none)
Explanation

Explanation/Reference:
HTTP and HTTPs run on TCP port 80 and 443, respectively and we have to remember them.
Syslog runs on UDP port 514 while NTP runs on UDP port 123 so if we remember them we can find out the matching answers easily. But maybe there is some typos in this question as
2001:d88:800:200c::c/126 only ranges from 2001:d88:800:200c:0:0:0:c to 2001:d88:800:200c:0:0:0:f
(4 hosts in total). It does not cover host 2001:0D88:0800:200c::1f. Same for
2001:D88:800:200c::e/126, which also ranges from 2001:d88:800:200c:0:0:0:c to
2001:d88:800:200c:0:0:0:f and does not cover host 2001:0D88:0800:200c::1c.

QUESTION 11
Drag and drop the SNMP attributes in Cisco IOS devices from the left onto the correct SNMPv2c or SNMPV3 categories on the right.

Select and Place:



community string

username and password

authentication

no encryption

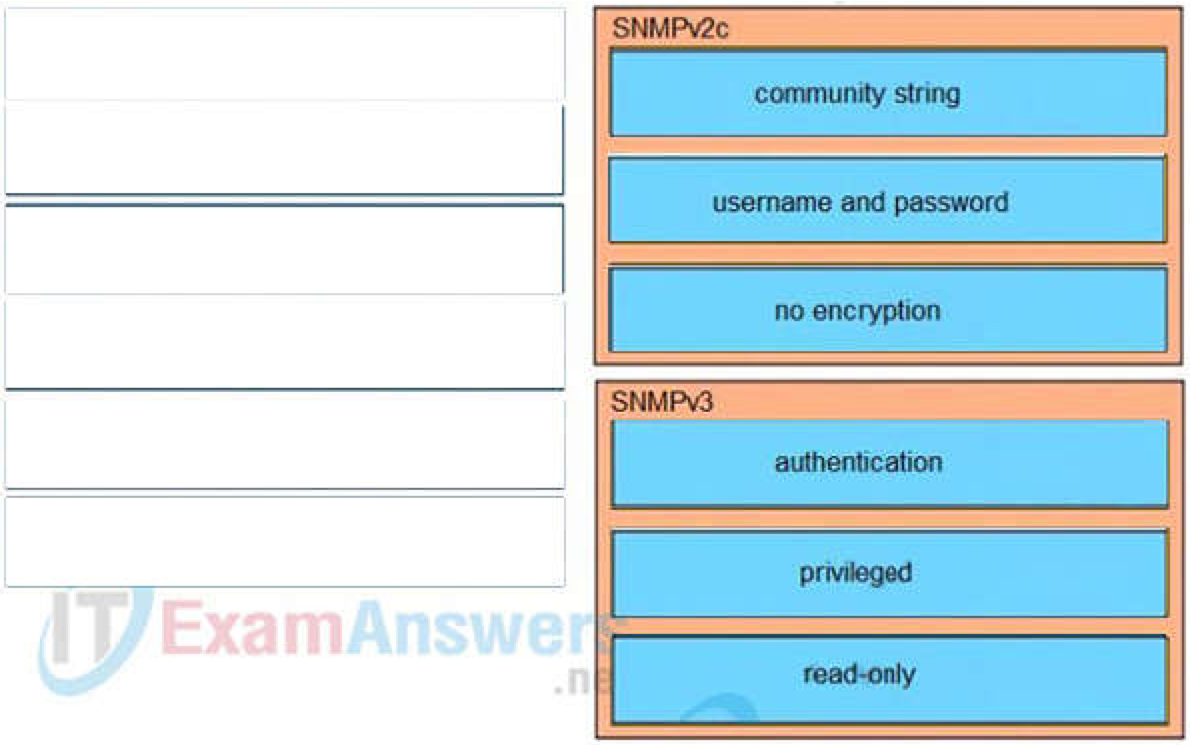
privileged

read-only

SNMPv2c

SNMPv3

Correct Answer:



SNMPv2c

community string

username and password

no encryption

SNMPv3

authentication

privileged

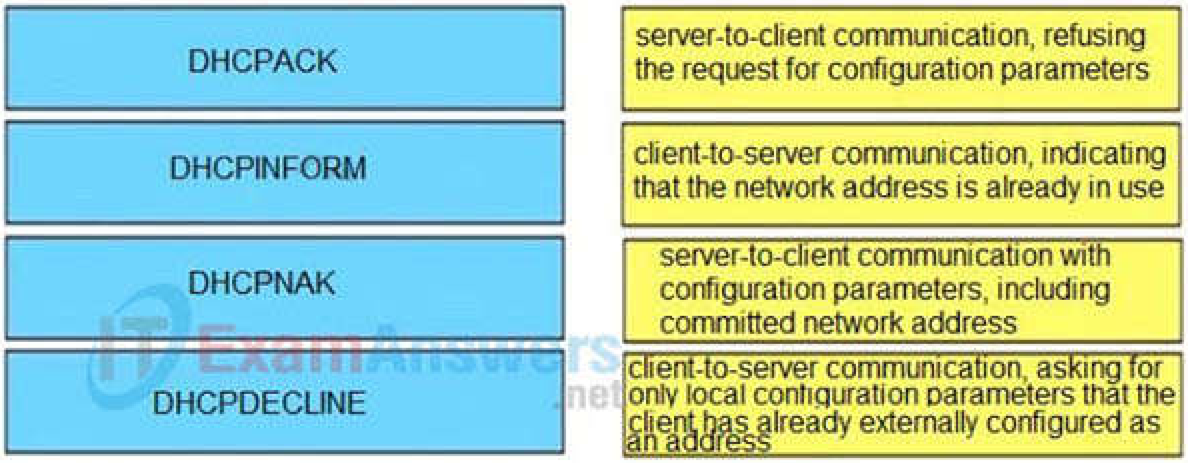
read-only

Section: (none)
Explanation

Explanation/Reference:

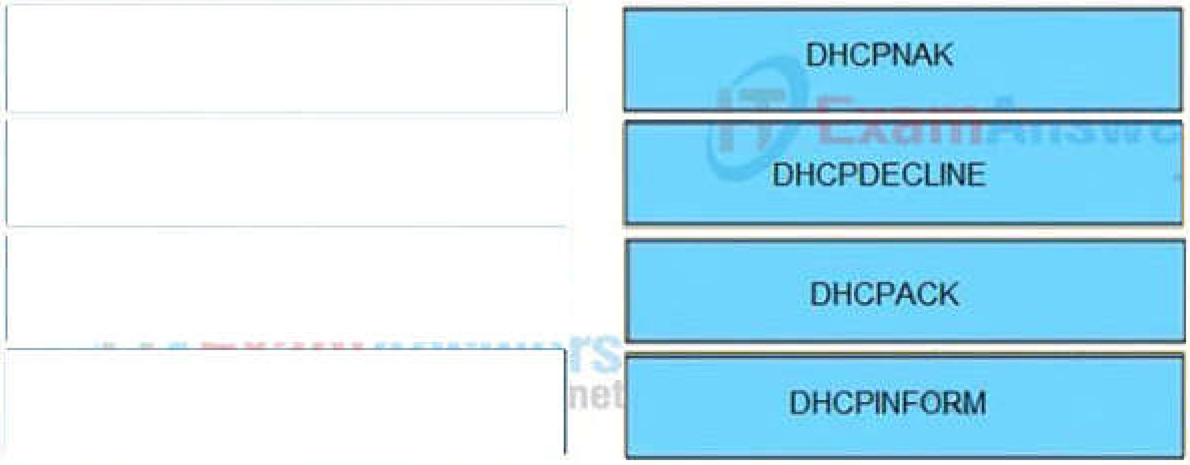
QUESTION 12
Drag and drop the DHCP messages from the left onto the correct uses on the right.

Select and Place:



DHCPACK	server-to-client communication, refusing the request for configuration parameters
DHCPINFORM	client-to-server communication, indicating that the network address is already in use
DHCPNAK	server-to-client communication with configuration parameters, including committed network address
DHCPDECLINE	client-to-server communication, asking for only local configuration parameters that the client has already externally configured as an address

Correct Answer:



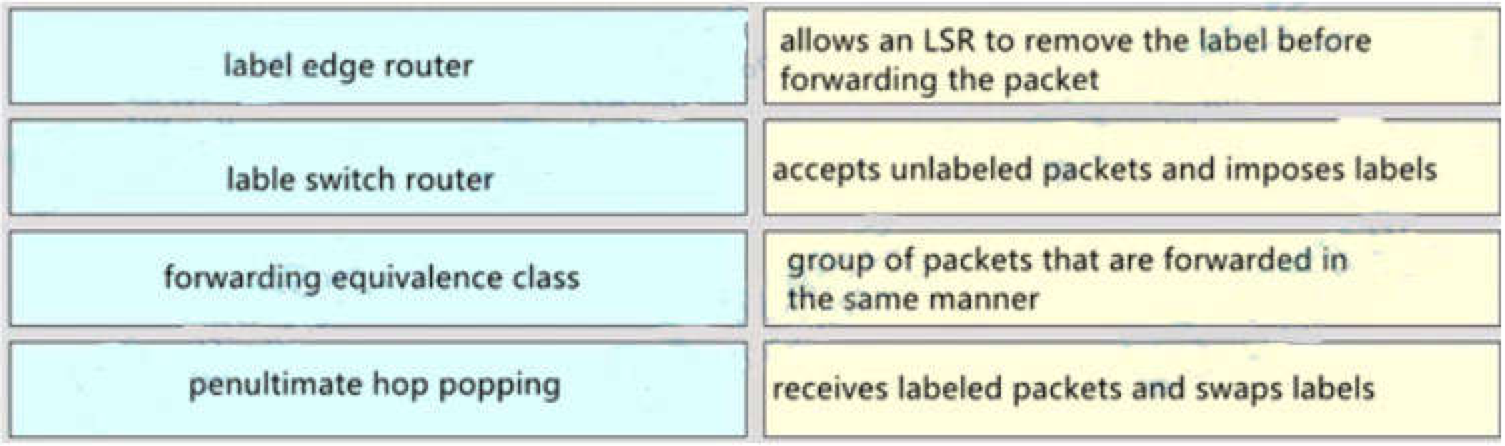
	DHCPNAK
	DHCPDECLINE
	DHCPACK
	DHCPINFORM

Section: (none)
Explanation

Explanation/Reference:
DHCPINFORM: If a client has obtained a network address through some other means or has a manually configured IP address, a client workstation may use a DHCPINFORM request message to obtain other local configuration parameters, such as the domain name and Domain Name Servers (DNSs). DHCP servers receiving a DHCPINFORM message construct a DHCPACK message with any local configuration parameters appropriate for the client without allocating a new IP address. This DHCPACK will be sent unicast to the client.
DHCPNAK: If the selected server is unable to satisfy the DHCPREQUEST message, the DHCP server will respond with a DHCPNAK message. When the client receives a DHCPNAK message, or does not receive a response to a DHCPREQUEST message, the client restarts the configuration process by going into the Requesting state. The client will retransmit the DHCPREQUEST at least four times within 60 seconds before restarting the Initializing state.
DHCPACK: After the DHCP server receives the DHCPREQUEST, it acknowledges the request with a DHCPACK message, thus completing the initialization process.
DHCPDECLINE: The client receives the DHCPACK and will optionally perform a final check on the parameters. The client performs this procedure by sending Address Resolution Protocol (ARP) requests for the IP address provided in the DHCPACK. If the client detects that the address is already in use by receiving a reply to the ARP request, the client will send a DHCPDECLINE message to the server and restart the configuration process by going into the Requesting state.
https://www.cisco.com/c/en/us/support/docs/ip/dynamic-address-allocation-resolution/27470-100.html

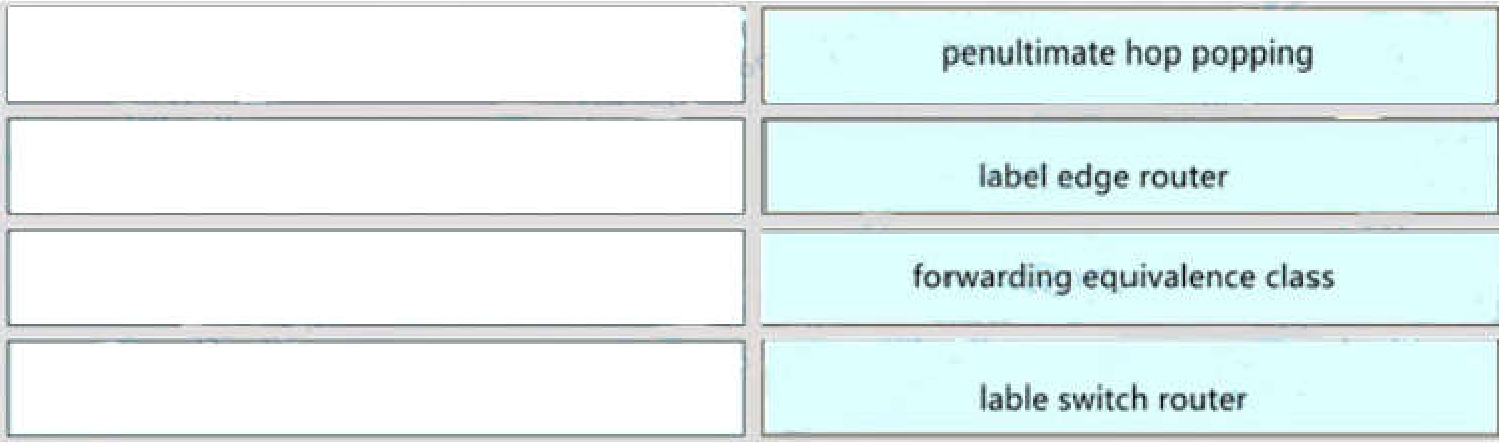
QUESTION 13
Drap and drop the MPLS concepts from the left onto the descriptions on the right

Select and Place:



label edge router	allows an LSR to remove the label before forwarding the packet
lable switch router	accepts unlabeled packets and imposes labels
forwarding equivalence class	group of packets that are forwarded in the same manner
penultimate hop popping	receives labeled packets and swaps labels

Correct Answer:



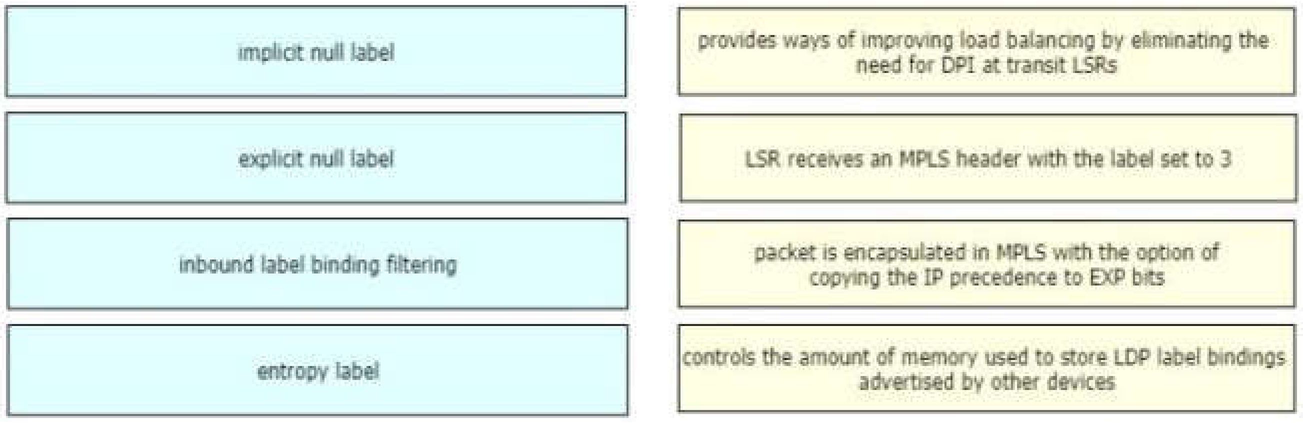
	penultimate hop popping
	label edge router
	forwarding equivalence class
	lable switch router

Section: (none)
Explanation

Explanation/Reference:

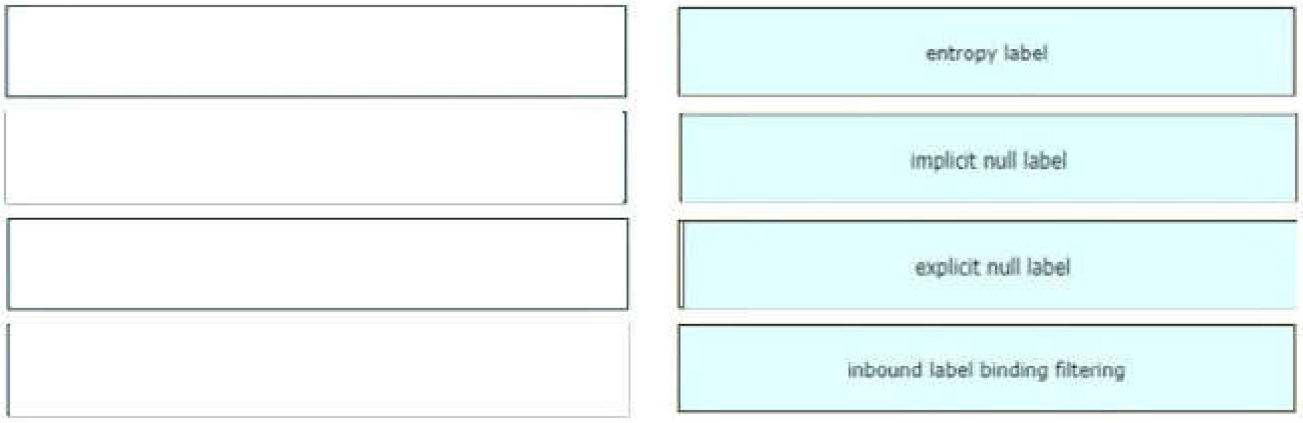
QUESTION 14
Drag and drop the LDP features from the left onto the descriptions on the right

Select and Place:



implicit null label	provides ways of improving load balancing by eliminating the need for DPI at transit LSRs
explicit null label	LSR receives an MPLS header with the label set to 3
inbound label binding filtering	packet is encapsulated in MPLS with the option of copying the IP precedence to EXP bits
entropy label	controls the amount of memory used to store LDP label bindings advertised by other devices

Correct Answer:



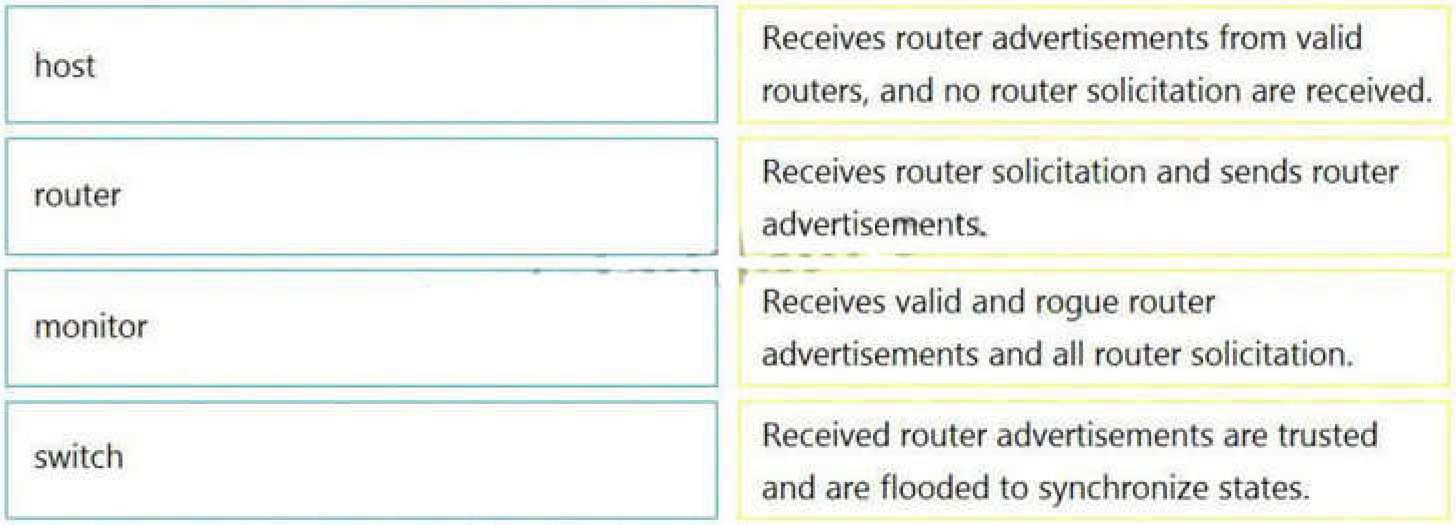
	entropy label
	implicit null label
	explicit null label
	inbound label binding filtering

Section: (none)
Explanation

Explanation/Reference:

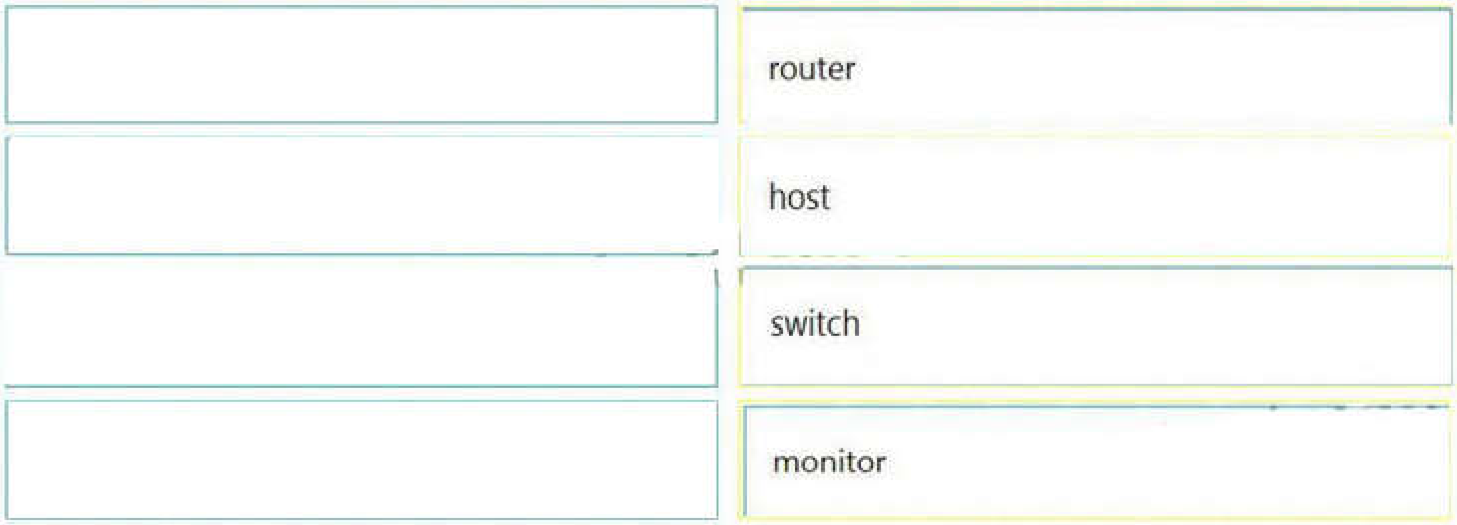
QUESTION 15
Drag and drop the IPv6 first hop security device roles from the left onto the corresponding descriptions on the right.

Select and Place:



host	Receives router advertisements from valid routers, and no router solicitation are received.
router	Receives router solicitation and sends router advertisements.
monitor	Receives valid and rogue router advertisements and all router solicitation.
switch	Received router advertisements are trusted and are flooded to synchronize states.

Correct Answer:



	router
	host
	switch
	monitor

Section: (none)
Explanation

Explanation/Reference: