

Cisco.300-410 .vMar-2023.by.Any,189q

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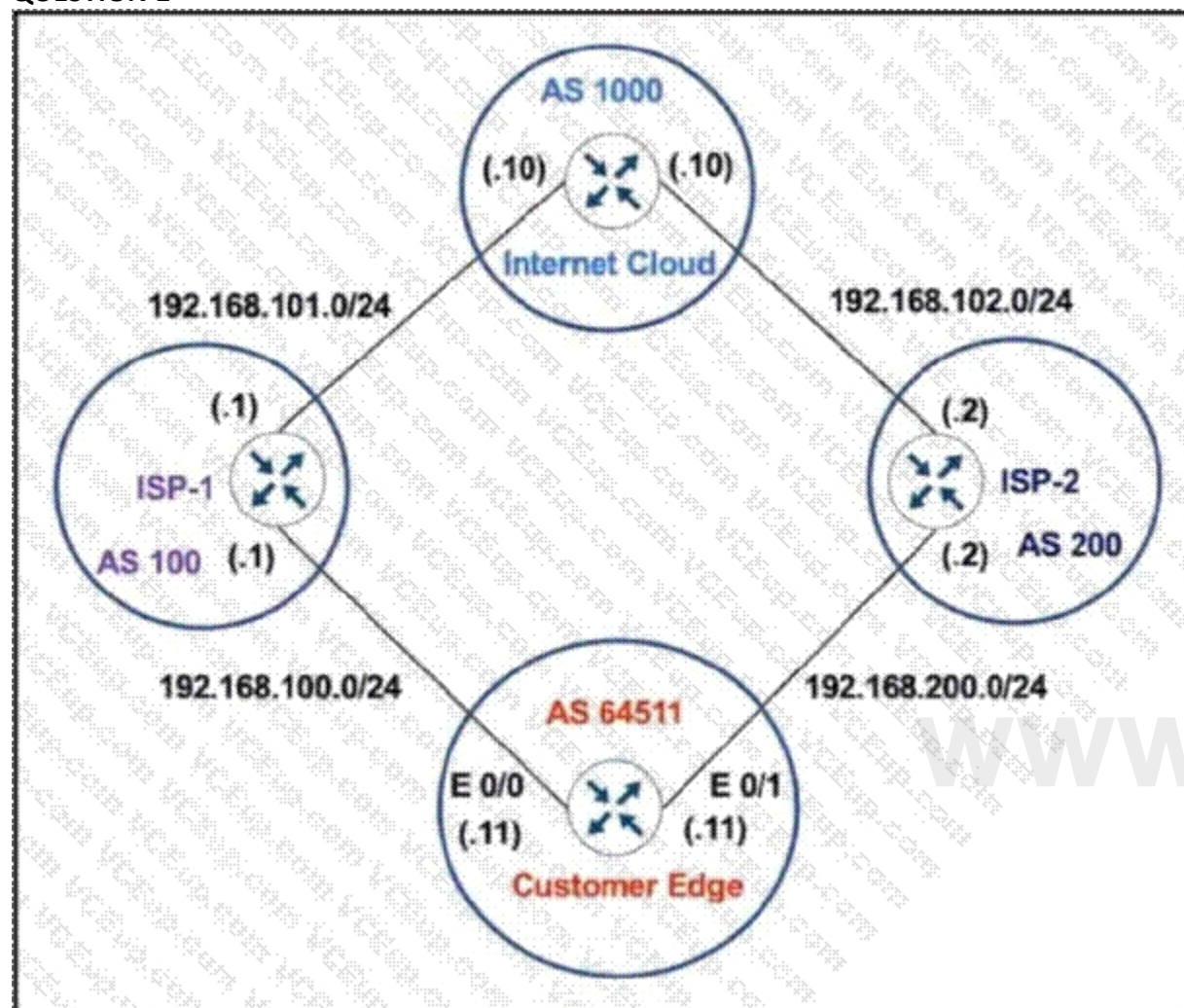
Exam Code: 300-410

Exam Name: Implementing Cisco Enterprise Advanced Routing and Services (ENARSI)



Exam A

QUESTION 1



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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:

Explanation:

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 2

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: C, D

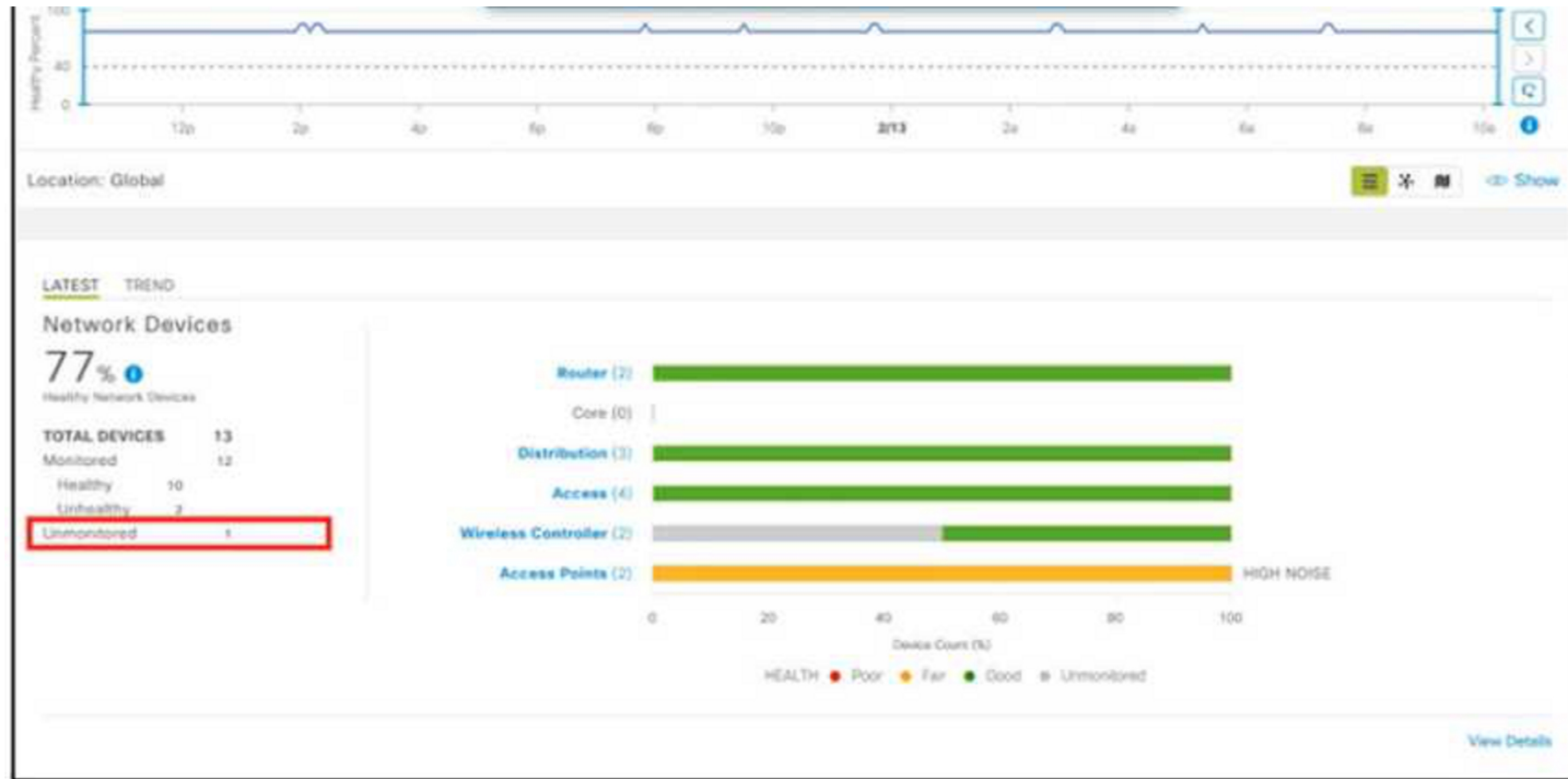
Section:

Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/multiprotocol-label-switchingmpls/mps/4649-mpls-faq-4649.html>

QUESTION 3

Refer to 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 administrator observed 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

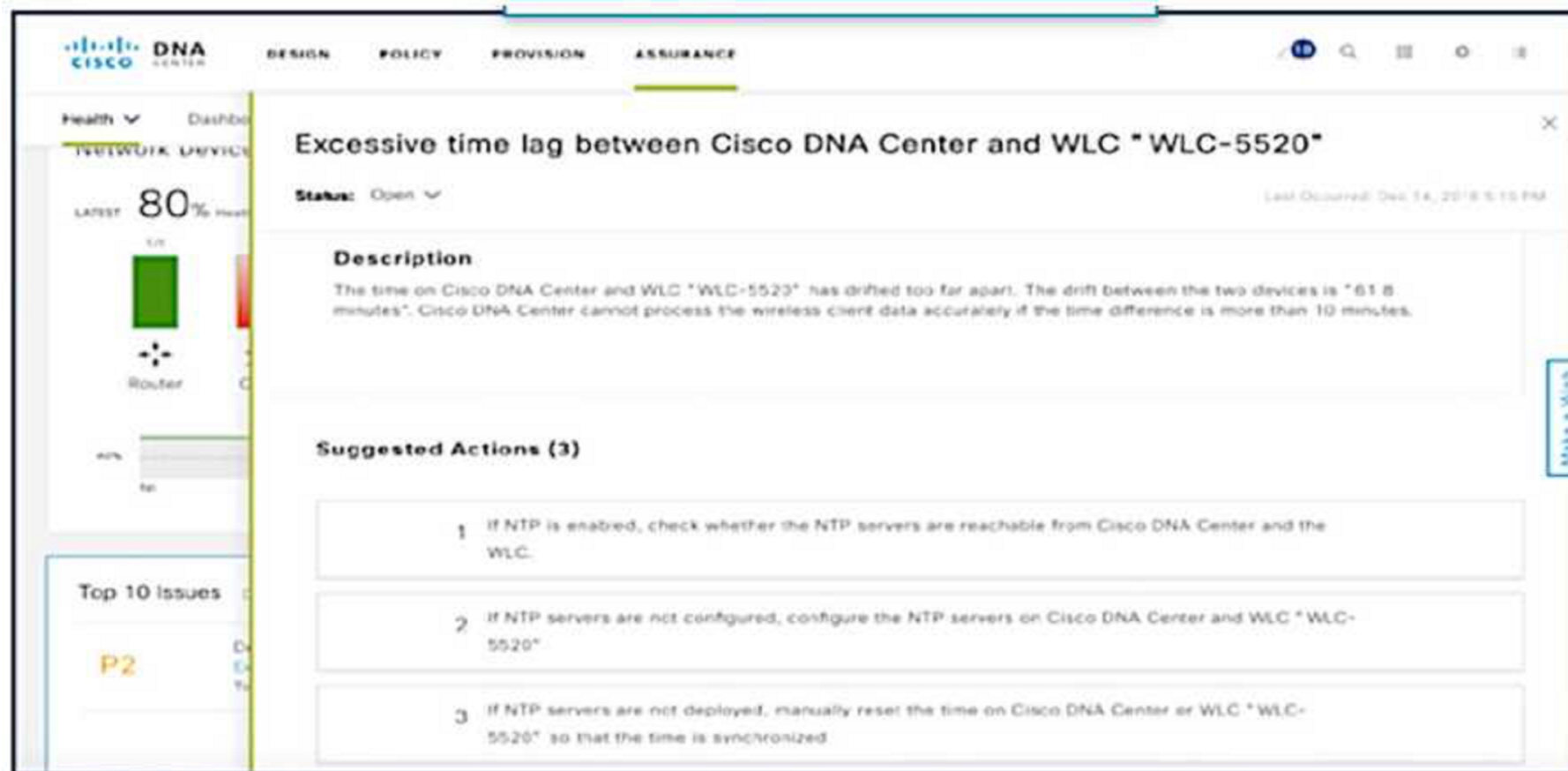
Section:

Explanation:

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

QUESTION 4

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?

- A. Check and resolve reachability between the WLC and the NTP server
- B. Reset the NTP server to resolve any synchronization issues for 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:

Explanation:

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.

Reference: https://www.cisco.com/c/en/us/td/docs/cloud-systems-management/networkautomation-and-management/dna-center-assurance/1-2-10/b_cisco_dna_assurance_1_2_10_ug/b_cisco_dna_assurance_1_2_10_ug_chapter_01101.html

QUESTION 5

Refer to Exhibit.

```
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: DHCP_SNOOP(hlrm_set_if_input): Setting if_input to Po2 for pak. Was V11
Jan 9 15:29:31.509: DHCP_SNOOP(hlrm_set_if_input): Setting if_input to V11 for pak. Was Po2
Jan 9 15:29:31.509: DHCP_SNOOP(hlrm_set_if_input): Setting if_input to Po2 for pak. Was V11Jan 9
15:29:31.517: DHCP_SNOOPING: received new DHCP packet from input interface (Port-channel2)
```

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?

- 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:

QUESTION 6

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 ASBR.
- B. Configure the summary-address command on the ABR.
- C. Configure the area range command on the ABR.
- D. Configure the area range command on the ASBR.

Correct Answer: D

Section:

QUESTION 7

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 cir for BGP, conform-action transmit, and exceed action transmit.
- B. Shape the pir for BGP, conform-action set-prec-transmit, and exceed action set-frde-transmit.
- C. Shape the cir for BGP, conform-action transmit, and exceed action transmit.
- D. Police the pir for BGP, conform-action set-prec-transmit, and exceed action set-clp-transmit.

Correct Answer: A

Section:

QUESTION 8

Refer to the exhibit.

```
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
```

AS111 is receiving its own routes from AS200 causing a loop in the network. Which configuration provides loop prevention?

- A.

```
router bgp 111
 neighbor 195.1.1.1 as-override
 neighbor 195.1.2.2 as-override
```

B.

```
router bgp 111
 neighbor 195.1.1.1 as-override
 no neighbor 195.1.2.2 allowas-in
```

C.

```
router bgp 111
 no neighbor 195.1.1.1 allowas-in
 no neighbor 195.1.2.2 allowas-in
```

D.

```
router bgp 111
 neighbor 195.1.2.2 as-override
 no neighbor 195.1.1.1 allowas-in
```

Correct Answer: C

Section:

QUESTION 9

Refer to the exhibit.

```
ip address 4.4.4.4 255.255.255.0
!
interface FastEthernet1/0
 Description **** WAN link ****
 ip address 10.0.0.1 255.255.255.0
!
interface FastEthernet1/1
 Description **** LAN Network ****
 ip address 192.168.1.1 255.255.255.0
!
!
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
!
```

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Which set of commands restore reachability to loopback0?

A.

```
interface loopback0
 ip address 4.4.4.4 255.255.255.0
 ip ospf network broadcast
```

B.


```
interface loopback0
 ip address 4.4.4.4 255.255.255.0
 ip ospf interface type network
```

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: A

Section:

QUESTION 10

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

- A. by IPv6 routing protocols to securely build neighborships without the need of authentication
- B. by the recovery mechanism to recover the binding table in the event of a device reboot
- 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: B, D

Section:

Explanation:

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 various IPv6 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.

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipv6_fhsec/configuration/15-s/ipv6-fhs-bind-table.html

QUESTION 11

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

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

- A. ipv6 access-list inbound permit tcp any any syn deny ipv6 any any log !i nterface gi0/0 ipv6 traffic-filter inbound out
- B. ipv6 access-list inbound permit tcp any any syn deny ipv6 any any log !i nterface gi0/0 ipv6 traffic-filter inbound in
- C. ipv6 access-list inbound permit tcp any any established deny ipv6 any any log !i nterface gi0/0 ipv6 traffic-filter inbound in
- D. ipv6 access-list inbound permit tcp any any established deny ipv6 any any log !i nterface gi0/0 ipv6 traffic-filter inbound out

Correct Answer: C

Section:

QUESTION 12

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```
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
```

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?

- 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: B

Section:

Explanation:

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 system clock 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. The times should now be synchronized between the system clock and the log message timestamps.

Reference: <https://community.cisco.com/t5/networking-documents/router-log-timestamp-entries-are-different-from-the-system-clock/ta-p/3132258>

QUESTION 13

Refer to the exhibit.

```

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

```

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?

- 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:

Explanation:

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

QUESTION 14

Refer to the exhibit.

```

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#

```


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?

- 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:

Explanation:

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 15

Refer to the exhibit.

```
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#
```

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?

- 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:

QUESTION 16

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:

Explanation:

Reference:

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

QUESTION 17

Refer to the exhibit.

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#									

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?

- 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:

QUESTION 18

Refer to the exhibit.

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

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

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

- 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:

Explanation:

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?

Reference: <https://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/5242-bgp-ospf-redis.html>

QUESTION 19

Refer to the exhibit.

```
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#
```

In which circumstance does the BGP neighbor remain in the idle condition?

- 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:

Explanation:

<https://www.cisco.com/c/en/us/support/docs/ip/border-gateway-protocol-bgp/25160-bgpmaximum-prefix.html#b>

QUESTION 20

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-disjoint
- B. linecard-disjoint
- C. lowest-repair-path-metric
- D. interface-disjoint

Correct Answer: A

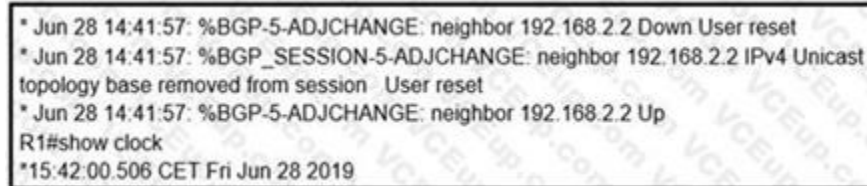
Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/iproute_eigrp/configuration/xeQuestions&AnswersPDF/P-183s/asr1000/ire-xe-3s-asr1000/ire-ipfrr.html

QUESTION 21

Refer to the exhibit.



```
* 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
```

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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?

- 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:

Explanation:

https://www.cisco.com/c/en/us/td/docs/routers/xr12000/software/xr12k_r3-9/system_management/command/reference/yr39xr12k_chapter4.html#wp1784026936 By default, syslog and debug messages are stamped by UTC, regardless of the time zone that device configured. You should append localtime key word to "service timestamp {log | debug} datetimemsec" global command to change that behavior.

<https://community.cisco.com/t5/networking-documents/router-log-timestamp-entries-are-different-from-the-system-clock/ta-p/3132258>

https://www.cisco.com/ELearning/bulk/public/tac/cim/cib/using_cisco_ios_software/cmdrefs/service_timestamps.htm

QUESTION 22

Refer to the exhibit.

```
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
```

What is the result of applying this configuration?

- 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:

Explanation:

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 23

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

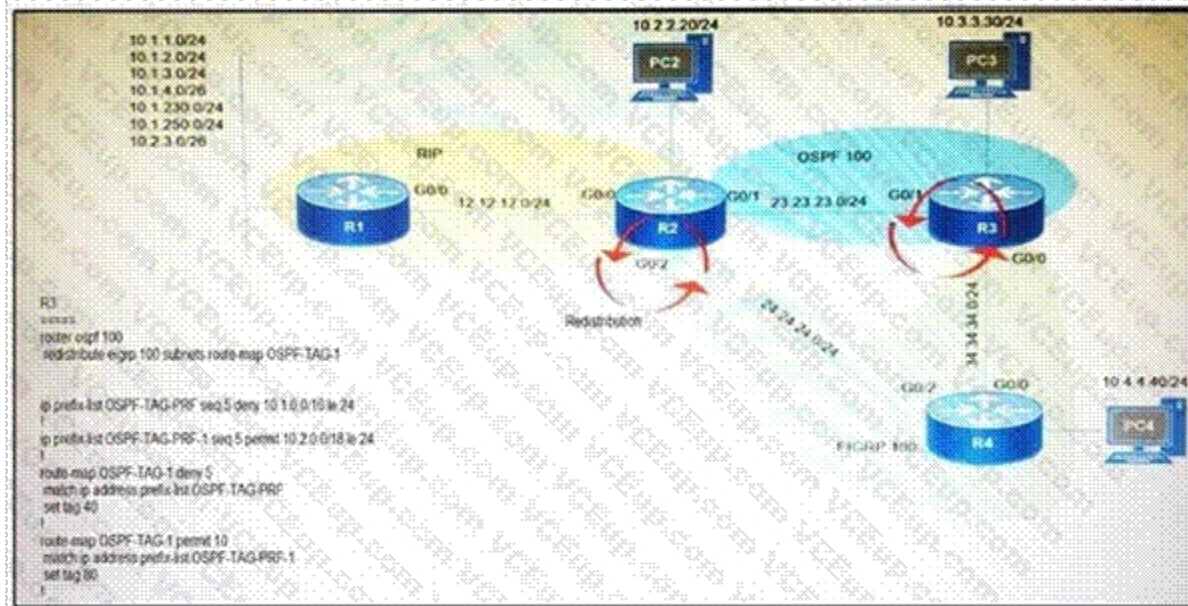
Section:

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 24

Refer to the exhibit.



Which subnet is redistributed from EIGRP to OSPF routing protocols?

- 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:

QUESTION 25

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:

Explanation:

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

QUESTION 26

Refer to the exhibit.

```

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
  
```

Which statement about R1 is true?

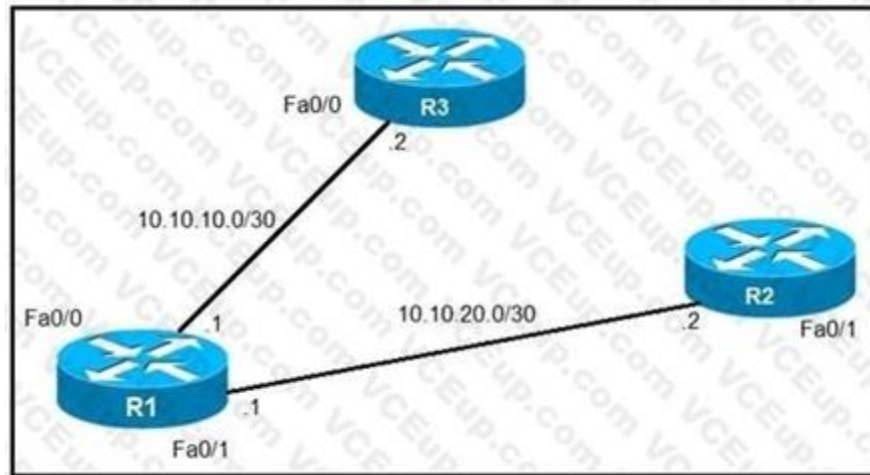
- A. OSPF redistributes RIP routes only if they have a tag of one.
- B. RIP learned routes are distributed to OSPF with a tag value of one.
- C. R1 adds one to the metric for RIP learned routes before redistributing to OSPF.
- D. RIP routes are redistributed to OSPF without any changes.

Correct Answer: B

Section:

QUESTION 27

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:

Explanation:

debug ip routing This command enables debugging messages related to the routing table.

QUESTION 28

Which configuration enabled the VRF that is labeled "Inet" on FastEthernet0/0?

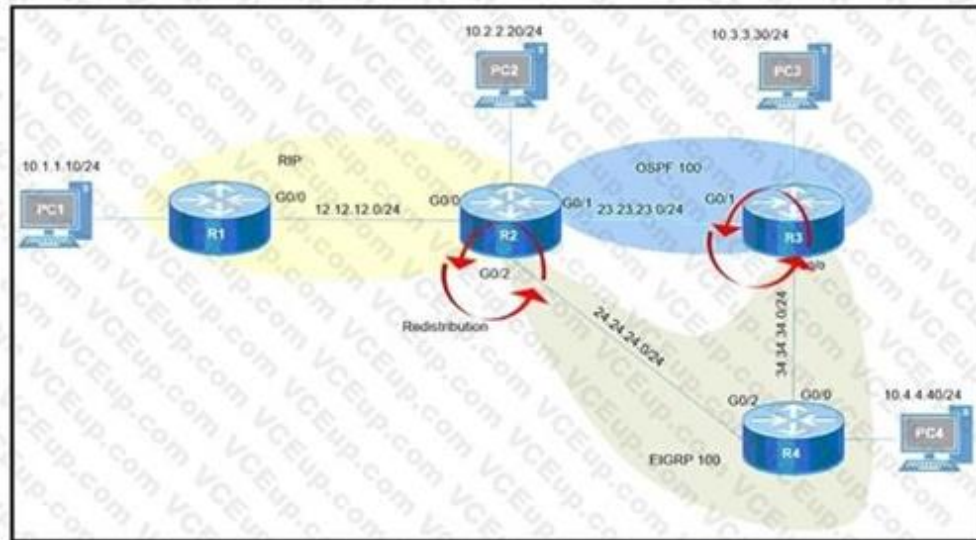
- A. R1(config)# ip vrf Inet
R1(config-vrf)#interface FastEthernet0/0
R1(config-if)#ip vrf forwarding Inet
- B. R1(config)#router ospf 1 vrf Inet
R1(config-router)#ip vrf forwarding FastEthernet0/0
- C. R1(config)#ip vrf Inet FastEthernet0/0
- D. R1(config)# ip vrf Inet
R1(config-vrf)#ip vrf FastEthernet0/0

Correct Answer: A

Section:

QUESTION 29

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:

QUESTION 30

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: C

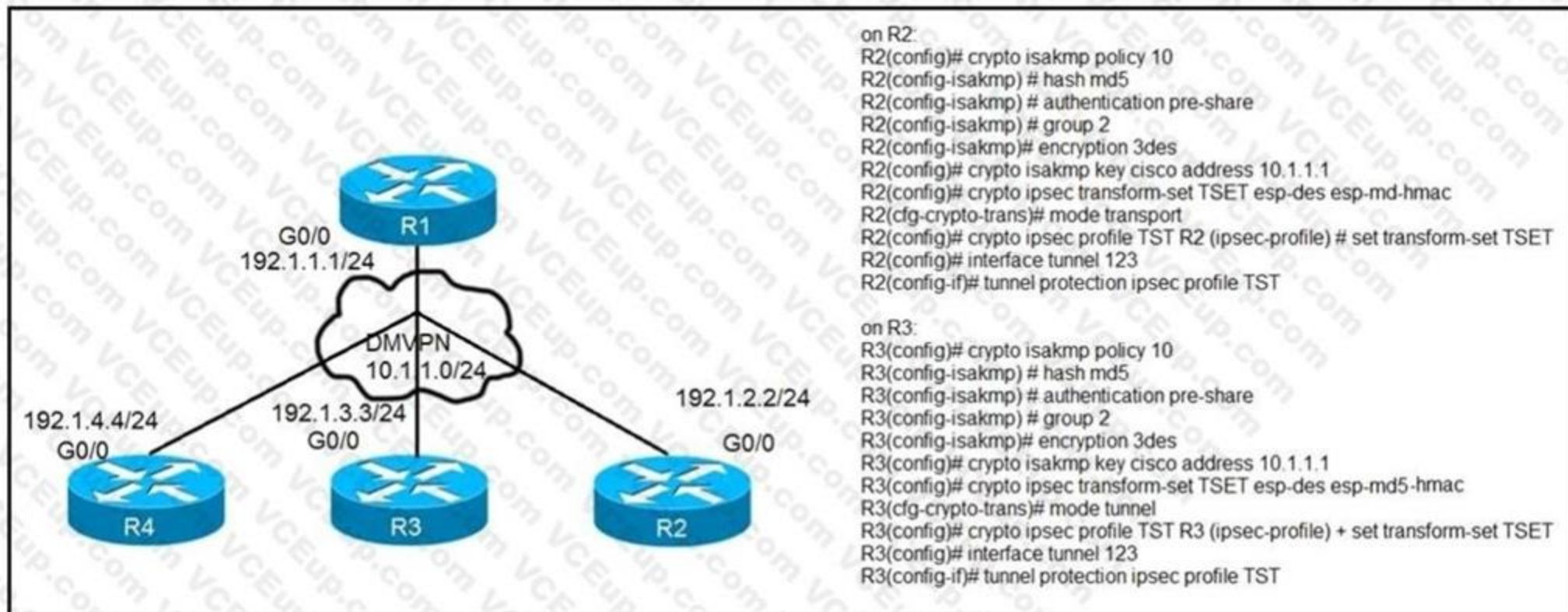
Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/switches/datacenter/sw/5_x/nxos/mpls/configuration/guide/mps_cg/mp_vpn_multipath.html

QUESTION 31

Refer to the exhibit.



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

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

Correct Answer: A, D

Section:

Explanation:

*When using DMVPN with IPsec, it is unnecessary to use tunnel mode. Because DMVPN uses GRE which means that a new IP header is already added by GRE. The GRE encapsulation happens on the tunnel interface before the encryption process takes place.

QUESTION 32

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:

QUESTION 33

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

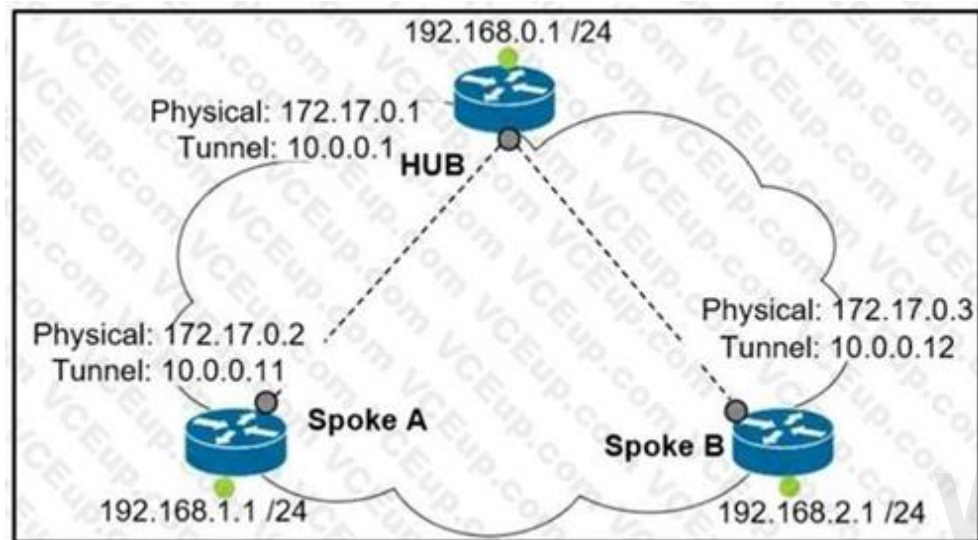
Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_ldp/configuration/12-4m/mpldp-12-4mbook.pdf

QUESTION 34

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`

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

Correct Answer: B

Section:

QUESTION 35

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:

Explanation:

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 field. 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

Reference: <https://tools.ietf.org/html/rfc5462>

QUESTION 36

Refer to the exhibit.

```
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
```

What does the imp-null tag represent in the MPLS VPN cloud?

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

Correct Answer: A

Section:

Explanation:

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 37

Which transport layer protocol is used to form LDP sessions?

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

Correct Answer: C

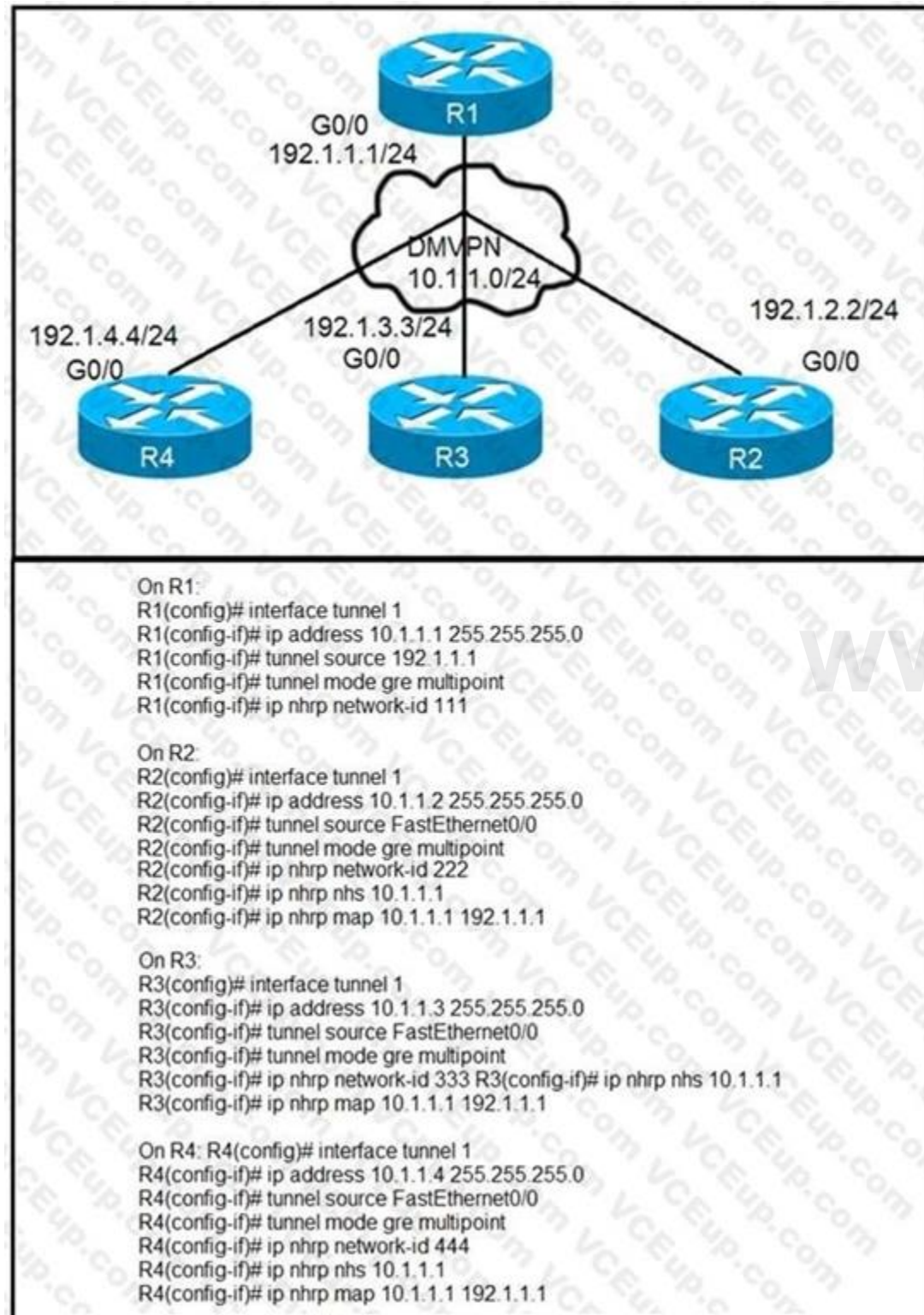
Section:

Explanation:

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 38

Refer to the exhibits.



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

- 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.

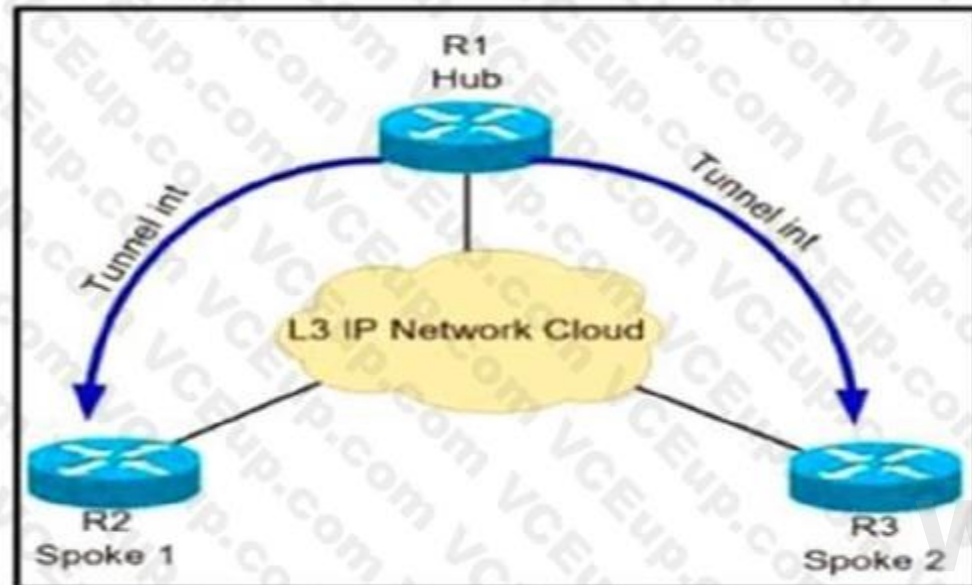
Correct Answer: B, C

Section:

QUESTION 39

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 ip nhrp redirect the command
- D. At the spoke routers, configure the ip nhrp shortcut command.
- E. At the hub router, configure tne Ip nhrp spoke-tunnel command

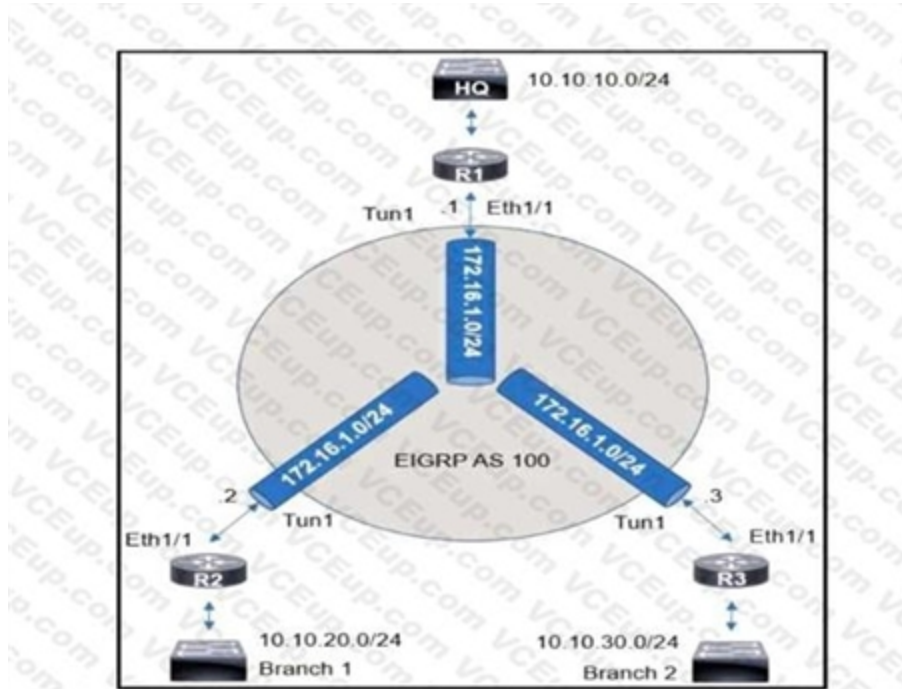
Correct Answer: C, D

Section:

Explanation:

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 to totally 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 the spokes 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 hub tunnel IP address to the NHRP resolved remote spoke tunnel IP address)

QUESTION 40



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
```

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

Correct Answer: D

Section:

Explanation:

R1(config)#int tunnel 1

R1(config-if) no ip split-horizon eigrp 100

QUESTION 41

```
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
```

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

- 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 instead of permit it.
- D. Add a second sequence in the route map permit 20

Correct Answer: B

Section:

QUESTION 42

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: C, E

Section:

Explanation:

MPLS Network Protocols

+ 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 -> .

Reference: <https://www.uio.no/studier/emner/matnat/ifi/IN3230/h19/kursmaterieell/mpslslecture.pdf>

QUESTION 43

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

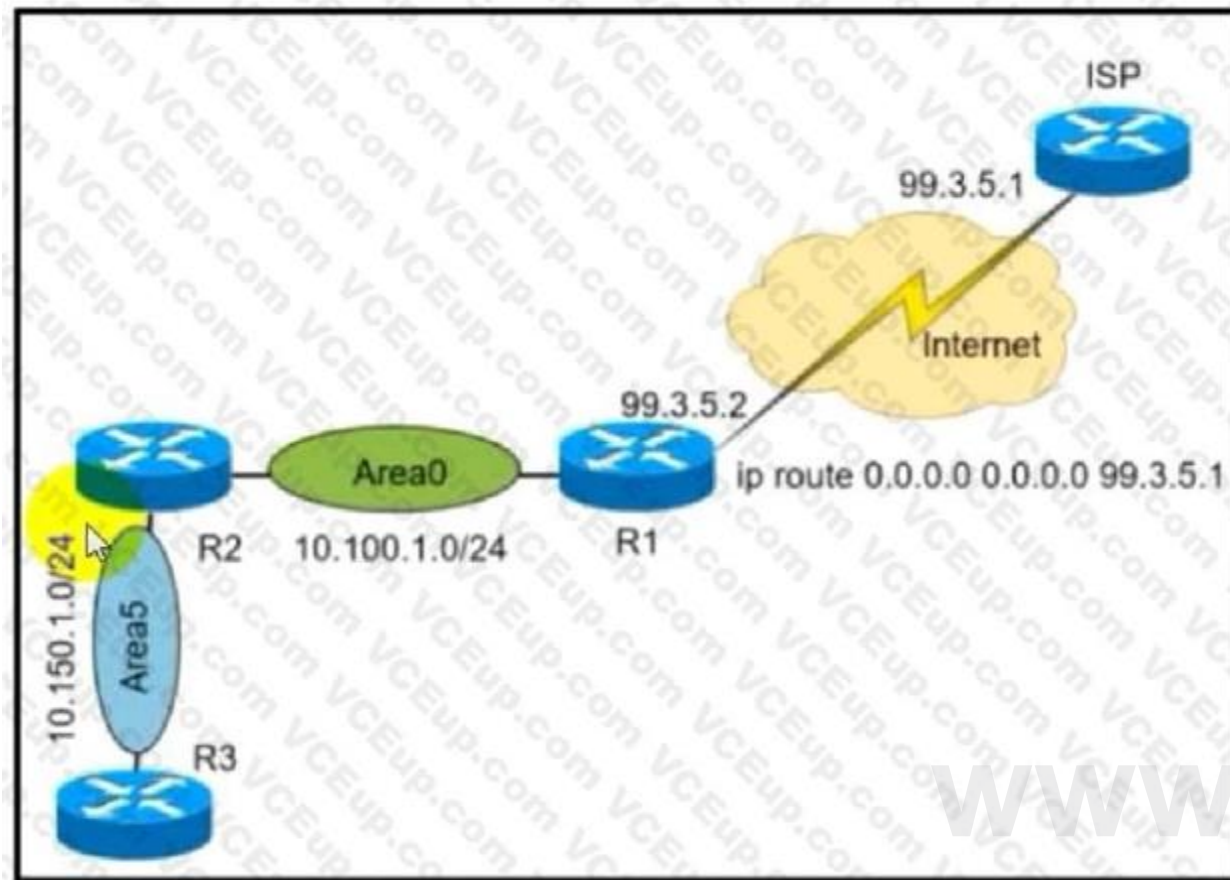
Correct Answer: B, C

Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipswitch_cef/configuration/xr-3s/isw-cef-xr-3s-book/isw-cef-basic-config.html
https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_13_vpns/configuration/15-s/mp-13-vpns-15-s-book/mp-bgp-mpls-vpn.pdf

QUESTION 44



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:

QUESTION 45


```
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
```

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

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

Correct Answer: D
Section:

QUESTION 46
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:
Explanation:

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

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.
Reference: http://www.cisco.com/c/en/us/td/docs/security/asa/asa84/configuration/guide/asa_84_cli_config/basic_dhcp.pdf

QUESTION 47

```
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
  Ospf3 4 area 0 ipv4
  No shut
!
Interface Loopback0
  Ipv6 enable
  Ipv4 172.16.1.1 255.255.255.0
  Ospf3 4 area 0 ipv4
```

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Refer to the exhibit. The network administrator configured the branch router for IPv6 on the E 0/0 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?

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

Correct Answer: C

Section:

Explanation:

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 48

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.

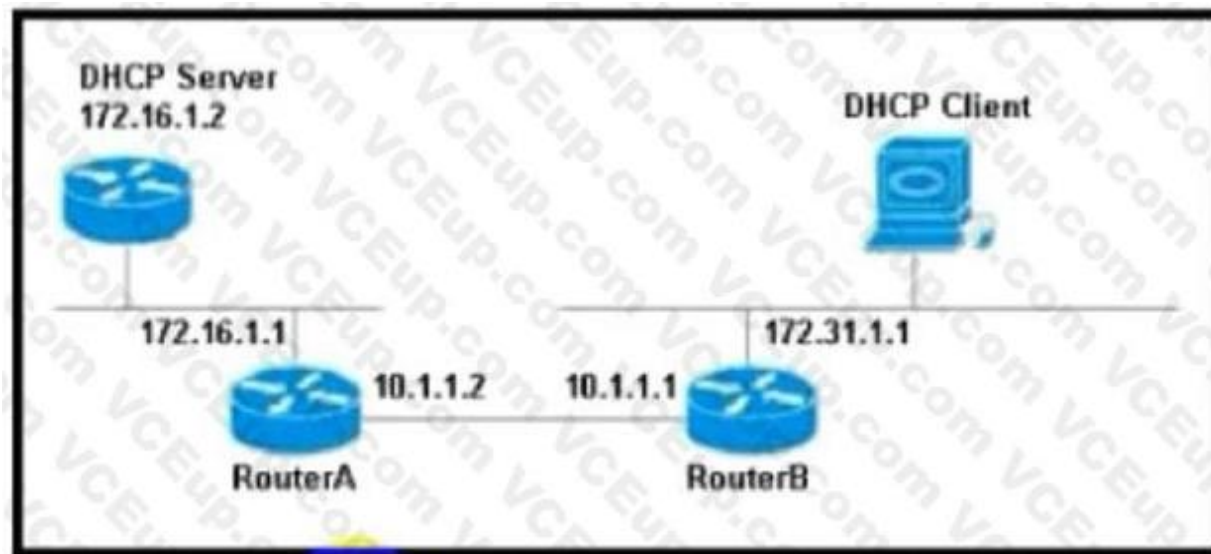
Which BGP attribute must the engineer configure to avoid using the high-delay ISP link if the second ISP link is up?

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

Correct Answer: A

Section:

QUESTION 49



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 172.31.1.1 255.255.255.0 ! 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:

QUESTION 50

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

- A. The VPNv4 address is used to advertise the MPLS VPN label.
- B. RD is prepended to the IPv4 route to make it unique.
- 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 consists of a 64-bit route distinguisher that is prepended to the IPv4 prefix.

Correct Answer: B, E

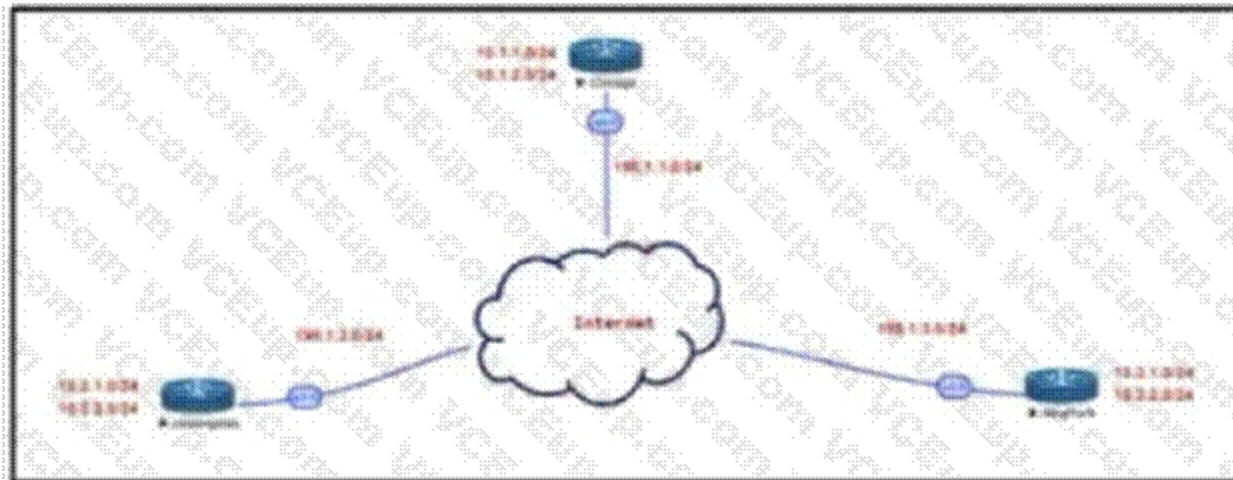
Section:

Explanation:

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 51

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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
  
```

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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?

- 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

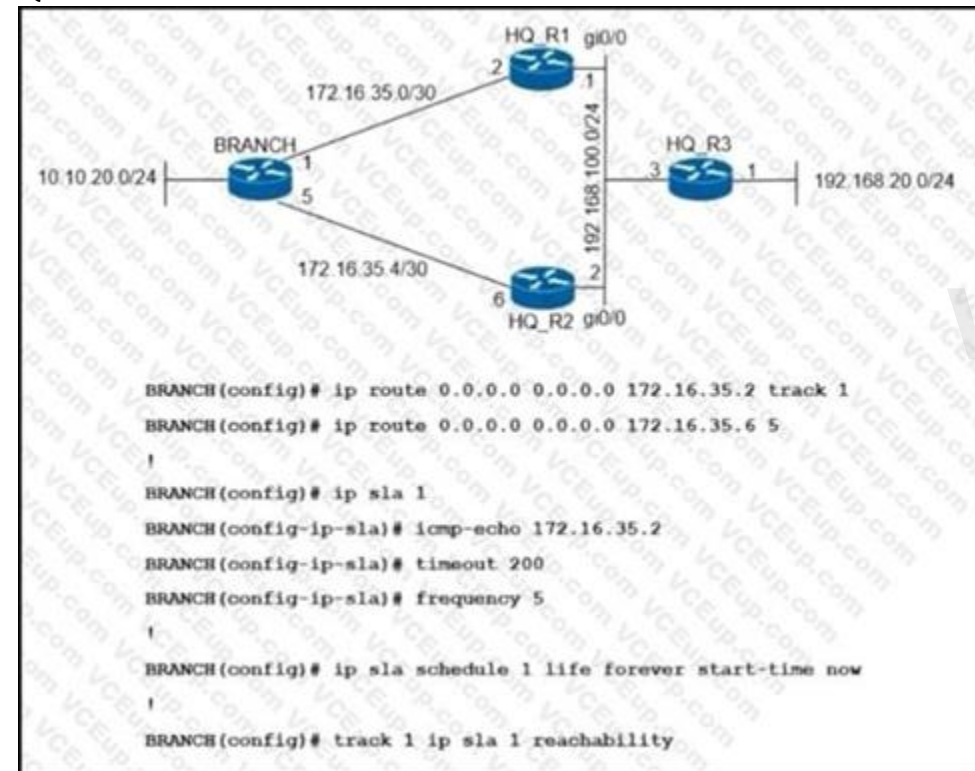
Section:

Explanation:

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 52



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?

- 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-sta)# Icmp-echo 192.168.100.1

Correct Answer: D

Section:

QUESTION 53

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: C, E

Section:

Explanation:

MPLS Layer-3 VPNs provide IP connectivity among CE sites

* MPLS VPNs enable full-mesh, hub-and-spoke, 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

Reference: <https://www.ciscolive.com/c/dam/r/ciscolive/us/docs/2018/pdf/BRKMPL-1100.pdf>

QUESTION 54

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 in 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 in the output direction

Correct Answer: B

Section:

QUESTION 55

```
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
```

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

- 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:

QUESTION 56

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```
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
!
```

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

- 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:

Explanation:

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 and interface E0/0.1 is using it. So the remote server does not receive any NetFlow data.

QUESTION 57

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

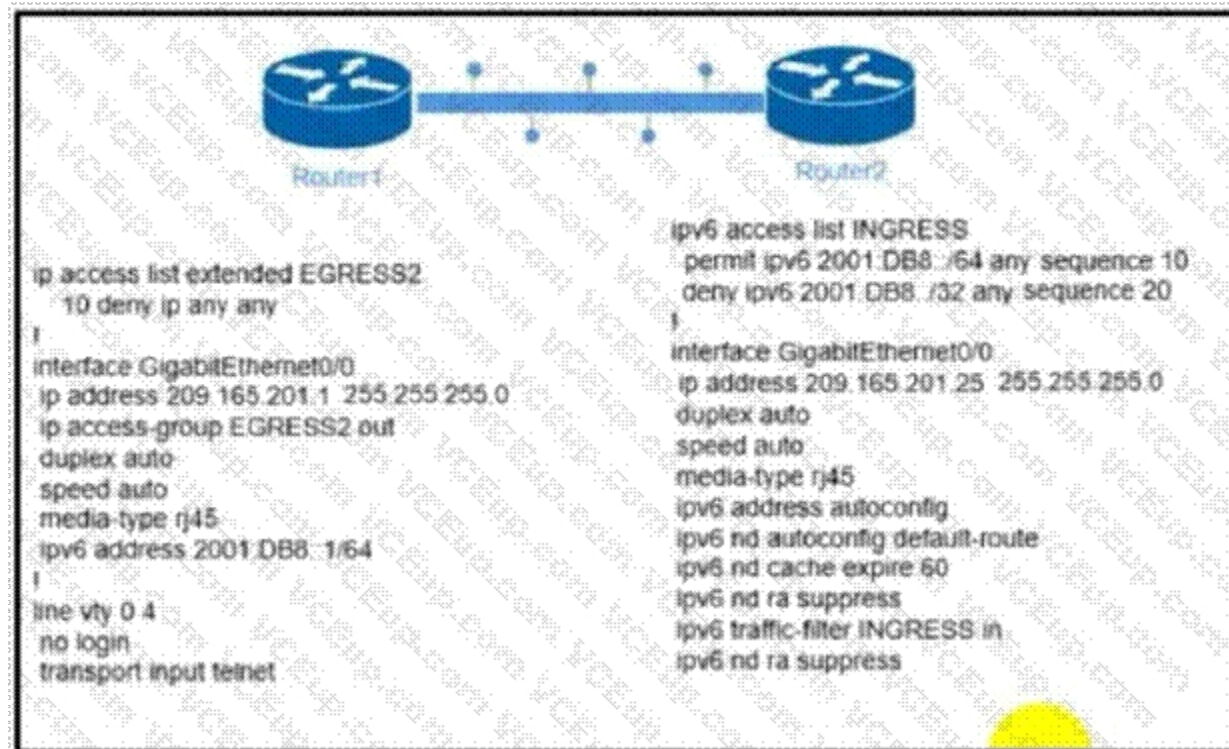
Correct Answer: D

Section:

Explanation:

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 58



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?

- A. ipv6 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:
Explanation:

```

-----R1----- interface Ethernet0/0 ip address 209.165.201.1 255.255.255.0 ip access-group EGRESS2 out ipv6 address 2001:DB8::1/64 end ----- R2-----
----- interface Ethernet0/0 ip address 209.165.201.25 255.255.255.0 ipv6 address 2001:DB8::2/64 ipv6 address autoconfig ipv6 nd autoconfig default-route ipv6 nd cache expire 60 ipv6 nd ra suppress
ipv6 traffic-filter INGRESS in end IOU_Router2#telnet 2001:DB8::1 Trying 2001:DB8::1 ... Open IOU_Router1> -----
  
```

QUESTION 59

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

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?

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

Correct Answer: D
Section:

QUESTION 60

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 next-hop 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.

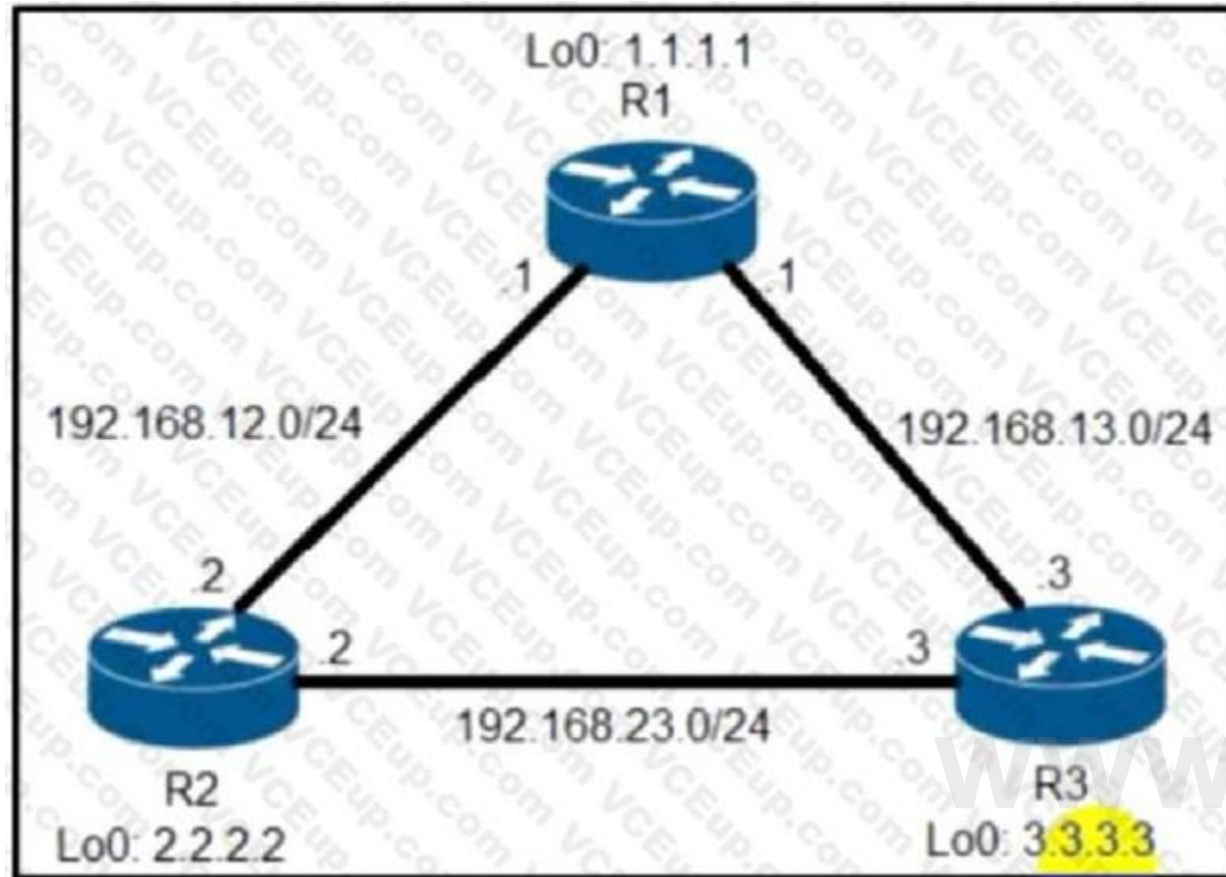
Correct Answer: D
Section:

Explanation:

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.

Reference: <https://www.cisco.com/c/en/us/support/docs/ip/ip-routed-protocols/47121-pbr-cmdsce.html>

QUESTION 61




```
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
```

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Refer to the exhibit. R2 has two paths to reach 192.168.13.0/24. but traffic is sent only through R3.

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Which action allows traffic to use both paths?

- 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:

Explanation:

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).

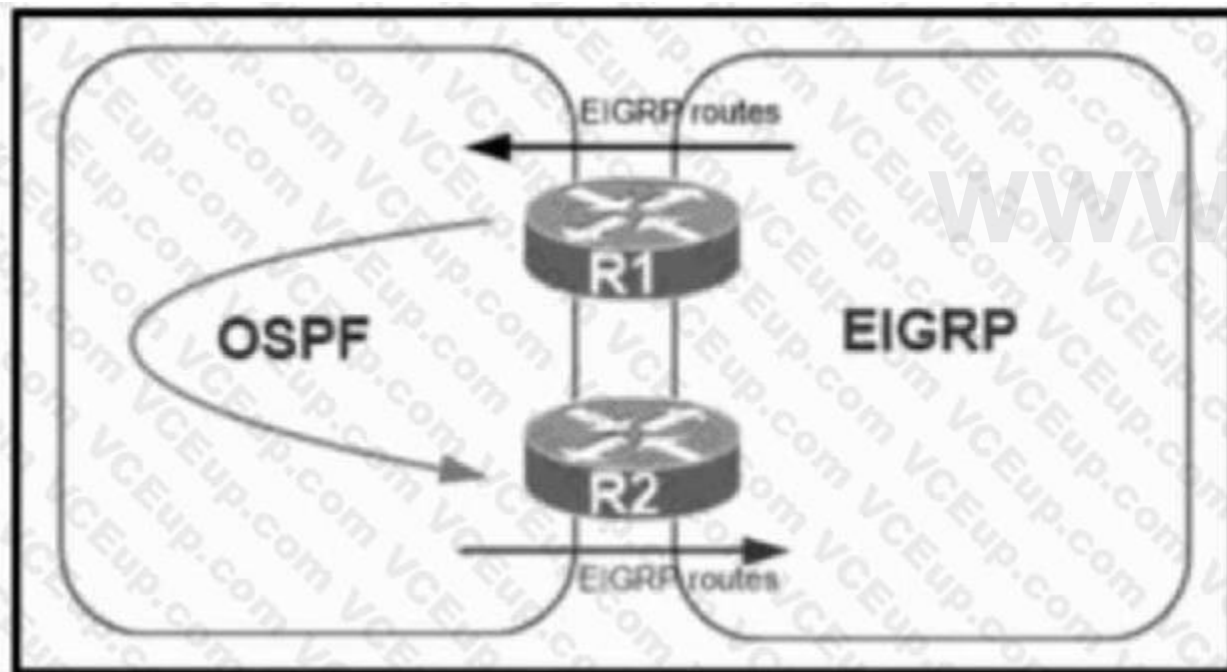
To use both paths (called unequal cost load balancing) with EIGRP, the second path via R1 must satisfy the feasibility condition. The feasibility condition states that, the Advertised Distance (AD) of a route must be lower than the feasible distance of the current successor route.

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 prevent routing 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 62



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 deny when redistributing OSPF into EIGRP.
- B. 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.
- C. Advertise summary routes of EIGRP to OSPF and deny specific EIGRP routes when redistributing into OSPF.
- D. Apply a prefix list of EIGRP network routes in OSPF domain on R1 to propagate back into the EIGRP routing domain.

Correct Answer: A

Section:

QUESTION 63

```
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
```

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

- 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:

QUESTION 64

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 in 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 in the output direction

Correct Answer: B

Section:

QUESTION 65

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 unicast network 2001:DB8::/64
- D. router bgp 64900 no bgp default ipv4-unicast address-family ipv6 multicast neighbor 2001:DB8:7000::2 translate-update ipv6 multicast

Correct Answer: B

Section:

QUESTION 66

An engineer failed to run diagnostic commands on devices using Cisco DNA Center. Which action in Cisco DNA Center resolves the issue?

- A. Enable Command Runner
- B. Enable APIs
- C. Enable CDP
- D. Enable Secure Shell

Correct Answer: A

Section:

QUESTION 67

Which two components are required for MPLS Layer 3 VPN configuration? (Choose two)

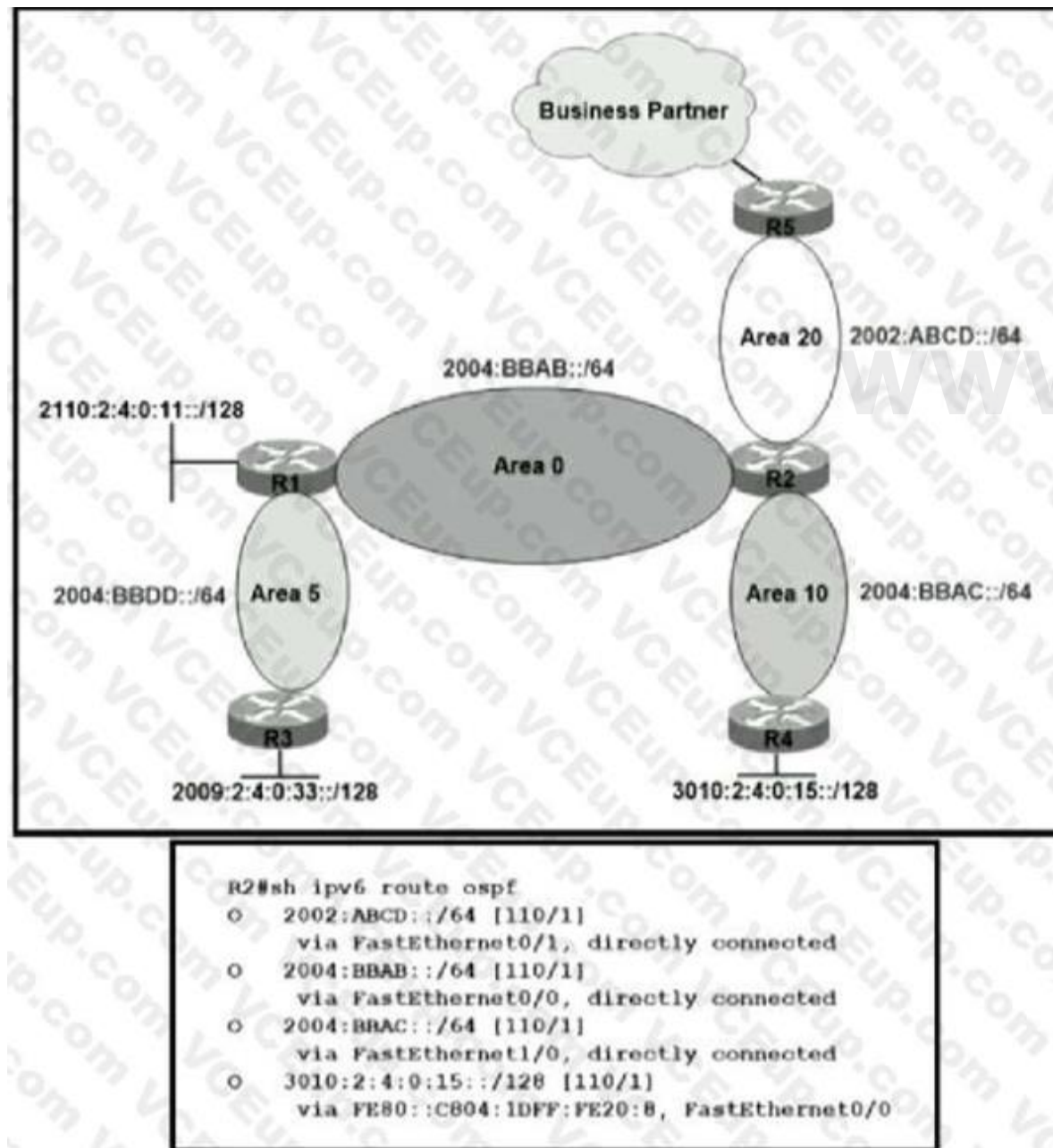
- A. Use pseudowire for Layer 2 routes
- B. Use MP-BGP for customer routes
- C. Use OSPF between PE and CE
- D. Use a unique RD per customer VRF
- E. Use LDP for customer routes

Correct Answer: C, D

Section:

QUESTION 68

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?

- A. in the "in" direction for area 5 on router R1
- B. in the "out" direction for area 5 on router R1
- C. in the "in" direction for area 20 on router R2
- D. in the "out" direction for area 20 on router R2

Correct Answer: D

Section:

QUESTION 69

Refer to the exhibit.

```
ipv6 dhcp pool DHCPPOOL
address prefix 2001:0:1:4::/64 lifetime infinite infinite
```

```
interface FastEthernet0/0
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
```

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Reachability between servers in a network deployed with DHCPv6 is unstable. Which command must be removed from the configuration to make DHCPv6 function?

- A. ipv6 dhcp server DHCPPOOL
- B. ipv6 address 2001:0:1:4::/64
- C. ipv6 nd ra suppress
- D. address prefix 2001:0:1:4::/64 lifetime infinite infinite

Correct Answer: C

Section:

QUESTION 70

Refer to the exhibit.

```
ip prefix-list DMZ-STATIC seq 5 permit 10.1.1.0/24
!
route-map DMZ permit 10
    match ip address 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
```

The static route is not present in the routing table of an adjacent OSPF neighbor router. Which action resolves the issue?

- 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:

QUESTION 71

Refer to the exhibit.

```
!-- ACL for CoPP Routing class-map
!
access-list 120 permit tcp any gt 1024 eq bgp log
access-list 120 permit tcp any 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
```

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?

- A. access-list 120 permit udp any any eq pim-auto-rp
- B. access-list 120 permit eigrp any host 224.0.0.10
- C. access-list 120 permit ospf any

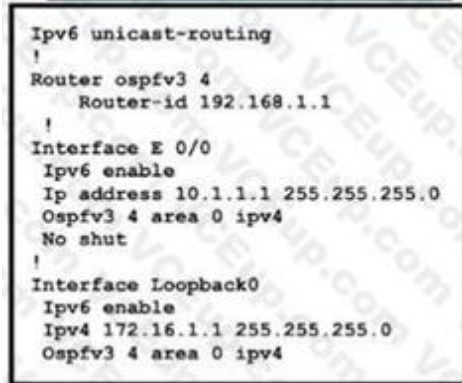
D. access-list 120 permit tcp any gt 1024 eq bgp log

Correct Answer: A

Section:

QUESTION 72

Refer to Exhibit.



```
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
  Ospf3 4 area 0 ipv4
  No shut
!
Interface Loopback0
  Ipv6 enable
  Ipv4 172.16.1.1 255.255.255.0
  Ospf3 4 area 0 ipv4
```

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?

- 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:

Explanation:

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 73

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:

Explanation:

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 (10.0.1.11)
```

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 74

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: D, E

Section:

Explanation:

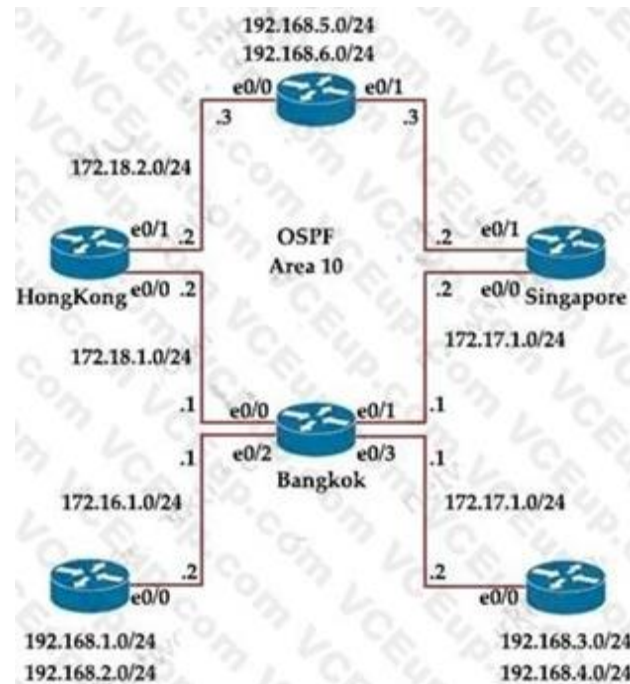
Follow these guidelines when configuring the switch as an SSH server or SSH client:

+ 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 the hostname 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 global configuration 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 domainname global configuration command.+ When configuring the local authentication and authorization authentication method, make sure that AAA is disabled on the console.

Reference: https://www.cisco.com/en/US/docs/switches/lan/catalyst3850/software/release/3.2_0_se/multibook/configuration_guide/b_consolidated_config_guide_3850_chapter_01100

QUESTION 75

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 tcp 192.168.3.0 0.0.0.255 192.168.5.0 0.0.0.255 access-list 101 permit tcp 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 tcp 192.168.3.0 0.0.0.255 192.168.5.0 0.0.0.255 access-list 101 permit tcp 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:

Explanation:

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 76

Exhibit:

```

11:27:07.532: AAA/BIND (00000055): Bind I/
11:27:07.532: AAA/AUTHEN/LOGIN (00000055): Pick method list 'default'
11:27:07.532: TPLUS: Queuing AAA Authentication request 85 for processing
11:27:07.537: TPLUS (00000055) login timer started 1020 sec timeout
11:27:07.532: TPLUS: processing authentication start request id 85
11:27:07.537: TPLUS: Authentication start packet created for 85()
11:27:07.532: TPLUS: Using server 10.106.60.182
11:27:07.532: TPLUS (00000055)/0/NB_WAIT/225FE2DC: Started 5 sec timeout
11:27:07.532: TPLUS (00000055)/0/NB_WAIT: socket event 2
11:27:07.532: TPLUS (00000055)/0/NB_WAIT: wrote entire 38 bytes request
11:27:07.532: TPLUS (00000055)/0/READ: socket event 1
11:27:07.532: TPLUS (00000055)/0/READ: Would block while reading
11:27:07.532: TPLUS (00000055)/0/READ: socket event 1
11:27:07.532: TPLUS (00000055)/0/READ: react entire 12 header bytes (expect 6 bytes data)
13:27:07.532: TPLUS (00000055)/0/READ: socket event 1
11:27:07.532: TPLUS (00000055)/0/READ: read entire 18 bytes response
11:27:07.532: TPLUS (00000055)/0/225FE2DC: Processing the reply packet
11:27:07.532: TPLUS: received bad AUTHEN packet: length = 6, expected 43974
11:27:07.532: TPLUS: Invalid AUTHEN packet (check keys).

```

Which action resolves the authentication problem?

- A. Configure the user name on the TACACS+ server
- B. Configure the UDP port 1812 to be allowed on the TACACS+ server
- C. Configure 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:

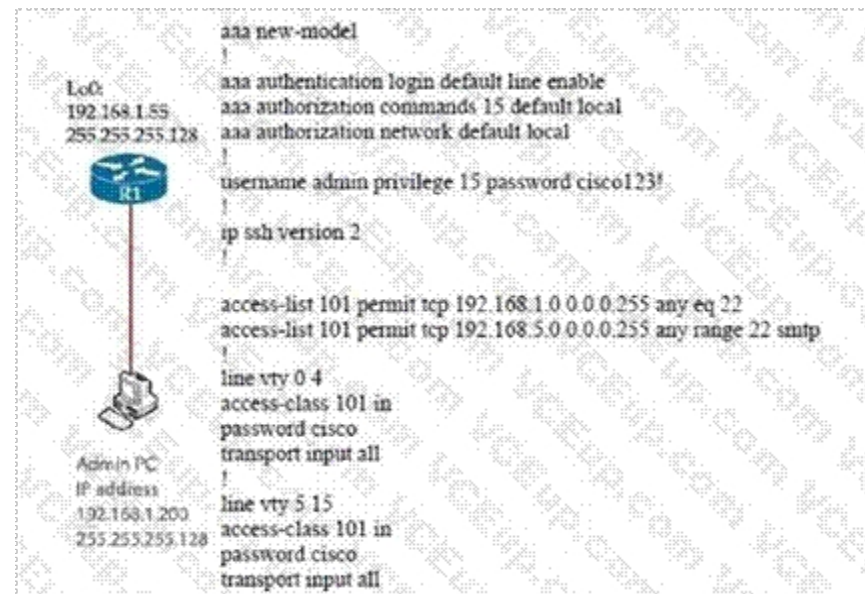
Explanation:

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.

Reference: <https://www.cisco.com/c/en/us/support/docs/security-vpn/terminal-access-controlleraccess-control-system-tacacs-/200467-Troubleshoot-TACACS-Authentication-Issue.html>

QUESTION 77

Refer to the exhibit.



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

- A. aaa authorization reverse-access
- B. secret cisco123! 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:

QUESTION 78

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

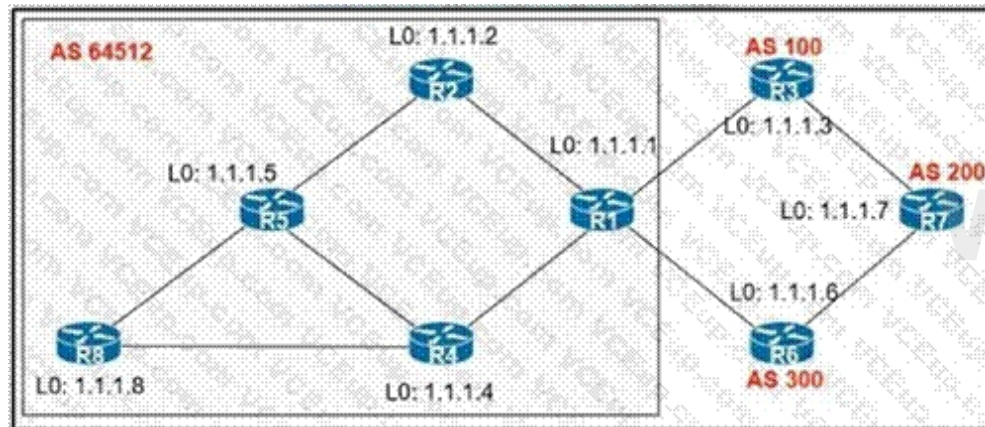
- A. LSP
- B. RSVP
- C. ECMP
- D. LDP
- E. MPLS OAM

Correct Answer: B, D

Section:

QUESTION 79

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:

Explanation:

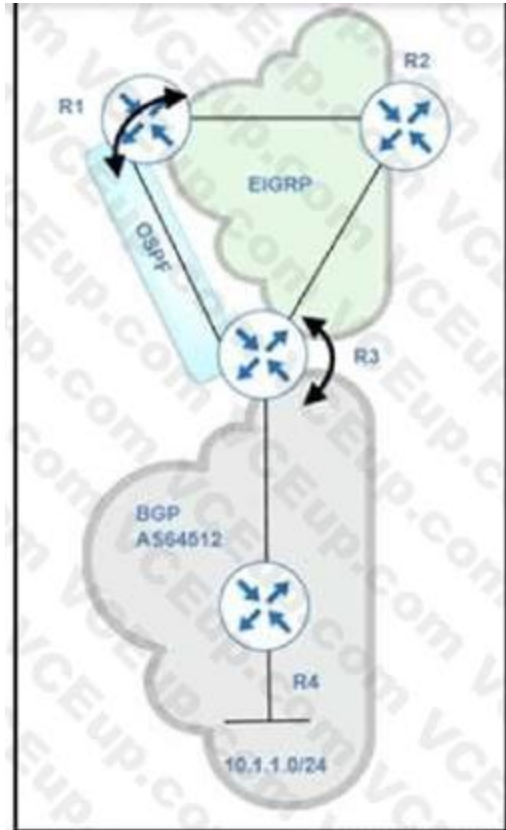
When R2 & R5 are route reflectors (RRs), routes from R4 & R8 are advertised to R5 and R5 advertises to R2. But R2 would drop them as R2 is also a RR. Therefore some routes are missing on R1 to advertise to eBGP peers. Good reference:

<https://www.ciscoplive.com/c/dam/r/ciscoplive/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 80

Refer to 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:

Explanation:

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 will reinstall 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 81

Refer to the exhibit.

```
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
```

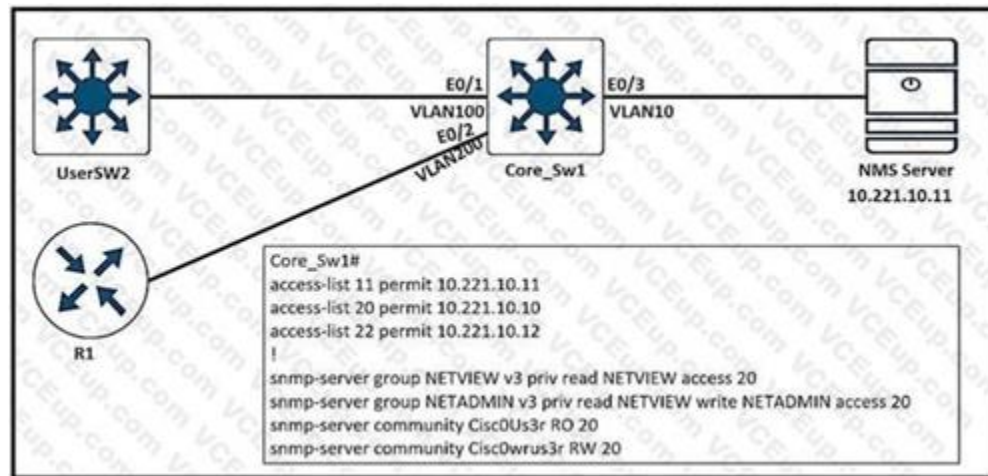
When the FastEthernet0/1 goes down, the route to 172.29.0.0/16 via 192.168.253.2 is not installed in the RIB. Which action resolves the issue?

- A. Configure reported distance greater than the feasible distance
- B. Configure feasible distance greater than the successor's feasible distance.
- C. Configure reported distance greater than the successor's feasible distance.
- D. Configure feasible distance greater than the reported distance

Correct Answer: D

Section:

QUESTION 82



An engineer configured SNMP communities on the Core Sw1, but the SNMP server cannot obtain information from Core_Sw1. Which configuration resolves this issue?

- A. access-list 20 permit 10.221.10.12
- B. snmp-server group NETVIEW v2c priv read NETVIEW access 20
- C. snmp-server group NETADMIN v3 priv read NETVIEW write NETADMIN access 22
- D. access-list 20 permit 10.221.10.11

Correct Answer: D

Section:

QUESTION 83

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?

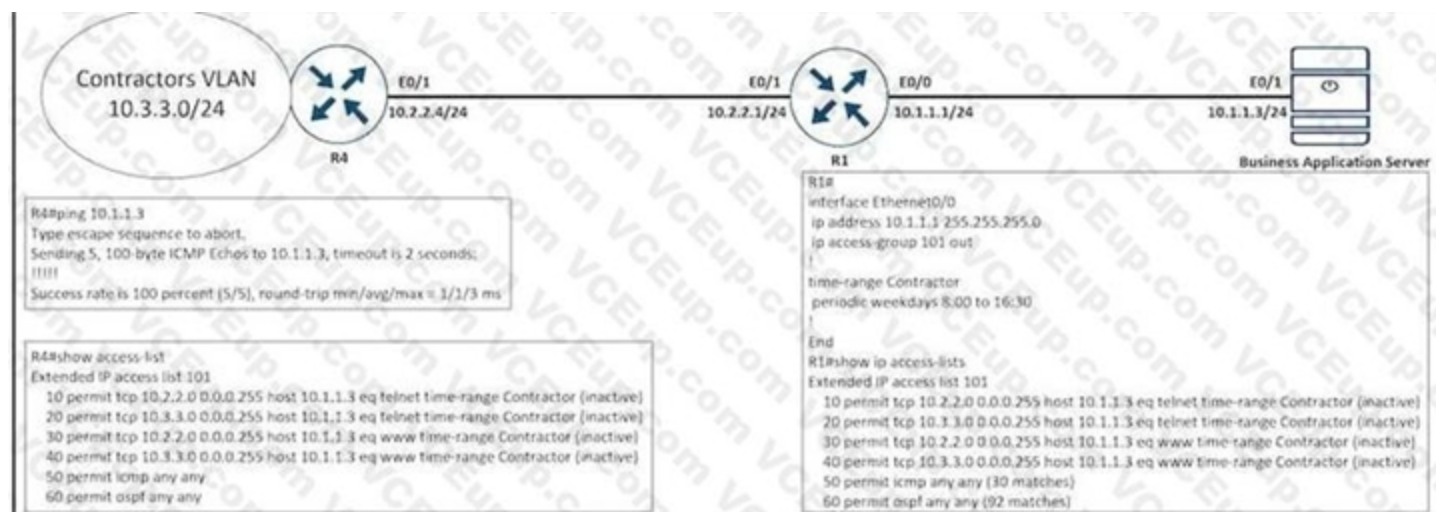
- A. tunnel protection mode ipv6
- B. ipv6 unicast-routing
- C. ipv6 nhrp holdtime 30
- D. tunnel mode gre multipoint ipv6

Correct Answer: D

Section:

QUESTION 84

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?

A.

R1
time-range Contractor
no periodic weekdays 8:00 to 16:30
periodic daily 8:00 to 16:30

B.

R4
time-range Contractor
no periodic weekdays 17:00 to 23:59
periodic daily 8:00 to 16:30

C.

R4
no access-list 101 permit tcp 10.3.3.0 0.0.0.255 host 10.1.1.3 eq telnet time-range Contractor

D.

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

Correct Answer: B

Section:

QUESTION 85

Refer to the exhibit.

```
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
```

An engineer has configured policy-based routing and applied the configured to the correct interface. How is the configuration applied to the traffic that matches the access list?

- A. It is sent to 209.165.202.131.
- B. It is sent to 209.165.202.129.
- C. It is dropped.
- D. It is forwarded using the routing table lookup.

Correct Answer: A

Section:

QUESTION 86

How is VPN routing information distributed in an MPLS network?

- A. The top level of the customer data packet directs it to the correct CE device
- B. It is established using VPN IPsec peers.
- C. It is controlled using of VPN target communities.
- D. It is controlled through the use of RD.

Correct Answer: C

Section:

QUESTION 87

Which mechanism must be chosen to optimize the reconvergence time for OSPF at company location 407173257 that is less CPU-intensive than reducing the hello and dead timers?

- A. BFD
- B. Dead Peer Detection keepalives
- C. SSO
- D. OSPF demand circuit

Correct Answer: A

Section:

QUESTION 88

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:

Explanation:

Reference:

https://www.cisco.com/c/en/us/td/docs/routers/7600/ios/15S/configuration/guide/7600_15_0s_book/ifindx.pdf

QUESTION 89

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Refer to the exhibit.

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*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

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Which two commands provide the administrator with the information needed to resolve the issue?

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(Choose two.)

- A. Show snmp user
- B. debug snmp engine-id
- C. debug snmpv3 engine-id
- D. debug snmp packet
- E. showsnmpv3 user

Correct Answer: A, D

Section:

QUESTION 90

Refer to the exhibit.

```
*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
```

Which two commands provide the administrator with the information needed to resolve the issue?

(Choose two.)

- A. snmp user
- B. debug snmp engine-id
- C. debug snmpv3 engine-id
- D. debug snmp packet
- E. showsnmpv3 user

Correct Answer: A, E

Section:

QUESTION 91

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 nhs 192.168.1.6
ip nhrp map 192.168.1.6 192.1.10.6
```

B.

```
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
```

C.

```
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
```

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:

QUESTION 92

Refer to the exhibit.

```
interface loopback0
ip address 4.4.4.4 255.255.255.0
!
interface FastEthernet1/0
Description **** WAN link ****
ip address 10.0.0.1 255.255.255.0
!
interface FastEthernet1/1
Description **** LAN Network ****
ip address 192.168.1.1 255.255.255.0
!
!
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
!
```

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Which set of commands restore reachability to loopback0?

A.

```
interface loopback0
ip address 4.4.4.4 255.255.255.0
ip ospf network point-to-point
```

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 interface area 10
```

D.

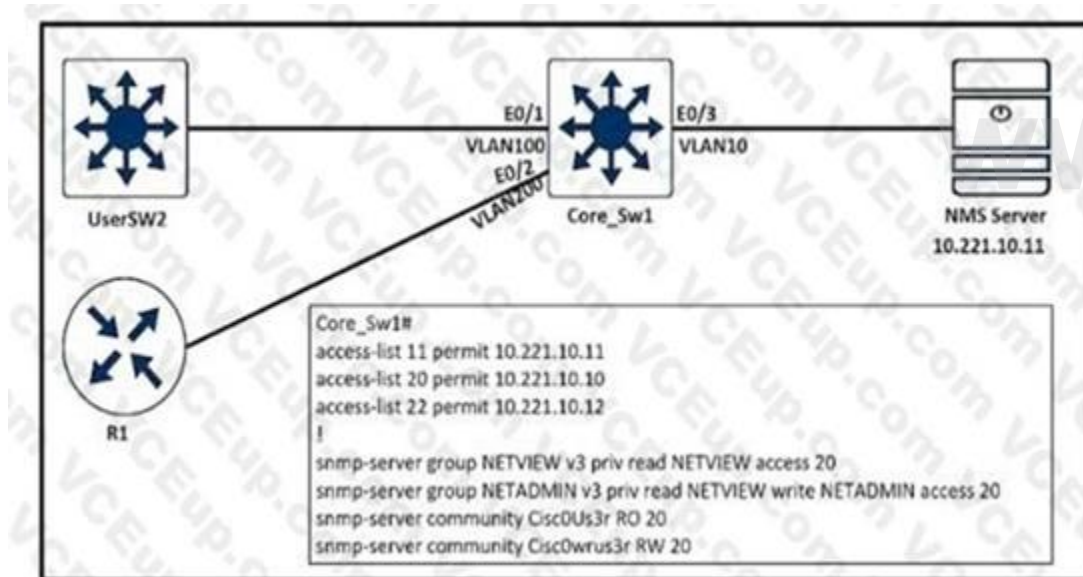
```
interface loopback0
ip address 4.4.4.4 255.255.255.0
ip ospf interface type network
```

Correct Answer: A

Section:

QUESTION 93

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?

- 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:

QUESTION 94

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

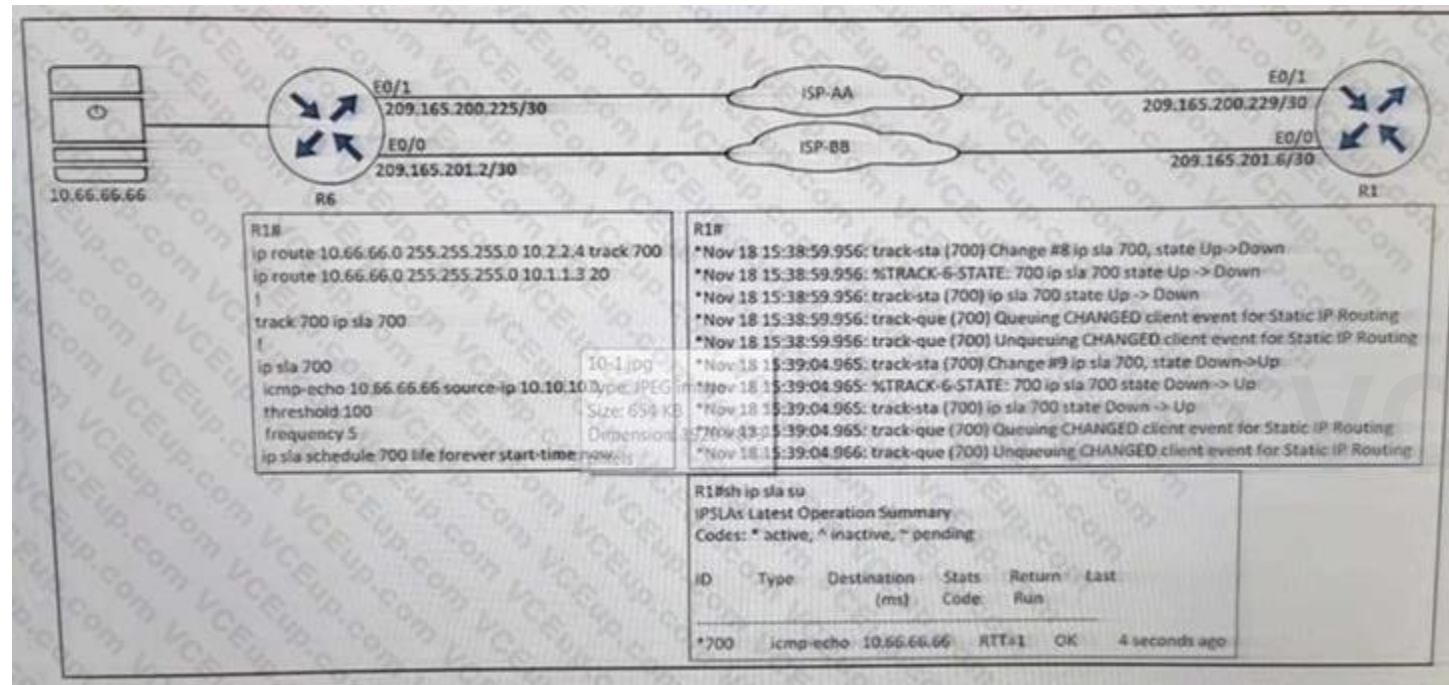
Section:

Explanation:

Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_te_diffserv/configuration/15-mt/mp-te-diffserv-15-mt-book/mp-te-diffserv-aw.html

QUESTION 95

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?

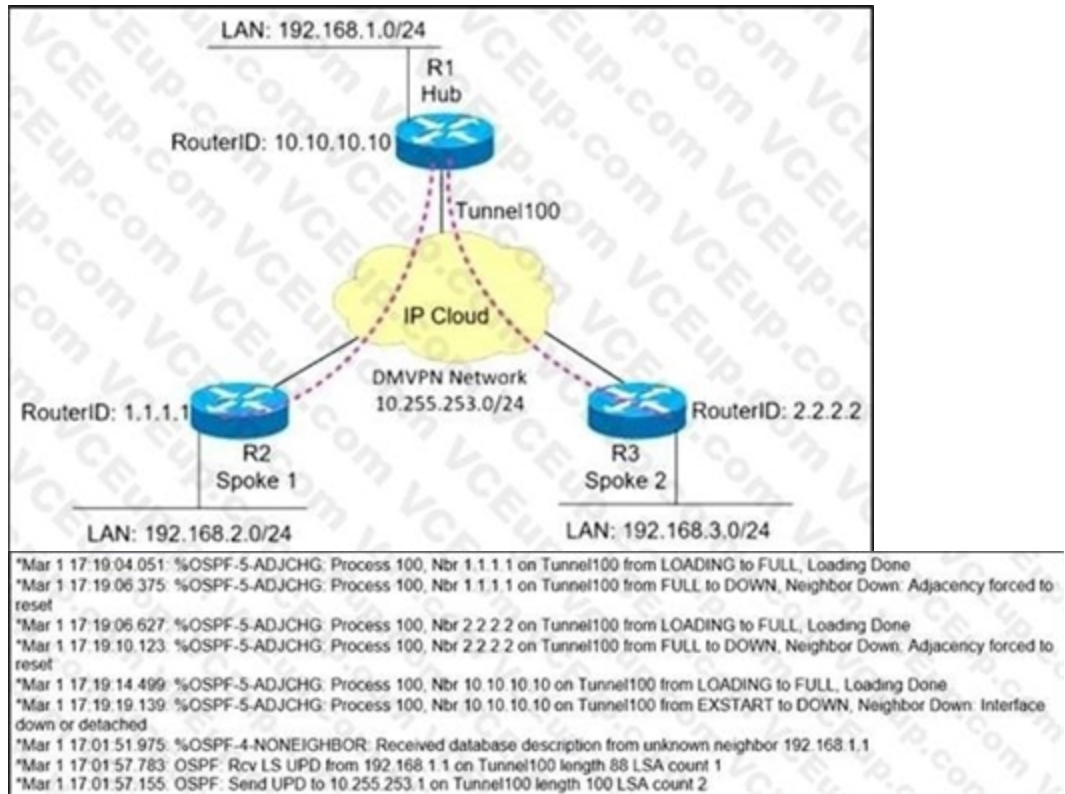
- A. R1(config)#ip sla 700
R1(config-ip-sla)#delay down 30 up 20
- B. R1(config)#ip sla 700
R1(config-ip-sla)#delay down 20 up 30
- C. R1(config)#track 700 ip sla 700
R1(config-track)#delay down 30 up 20
- D. R1(config)#track 700 ip sla 700
R1(config-track)#delay down 20 up 30

Correct Answer: C

Section:

QUESTION 96

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?

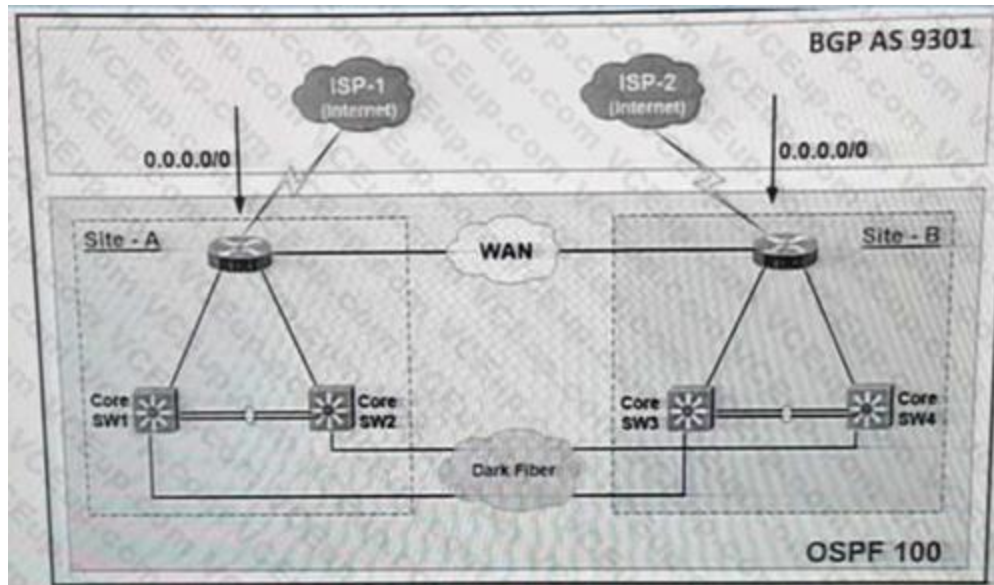
- A. ip ospf network point-to-multipoint on both spoke routers
- B. ip ospf network point-to-point on the hub router
- C. ip ospf network point-to-multipoint on One spoke router
- D. ip ospf network point-to-point on both spoke routers

Correct Answer: A

Section:

QUESTION 97

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:

QUESTION 98

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?

- 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:

QUESTION 99

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:

QUESTION 100

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 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
- B. ip prefix-list PL-1 deny 172.16.0.0/16 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
- C. access-list 1 deny 172.16.0.0 0.0.254.255
access-list 1 permit any
!
router bgp 100
neighbor 192.168.100.2 remote-as 200
neighbor 192.168.100.2 distribute-list 1 in
- D. 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

Correct Answer: A

Section:

QUESTION 101

Refer to the exhibit.

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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 still can connect through the console port. Which configuration on the console port resolves the issue?

- A. transport input telnet
- B. login and password
- C. no exec
- D. exec 0.0

Correct Answer: C

Section:

QUESTION 102

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 ISE1
!
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

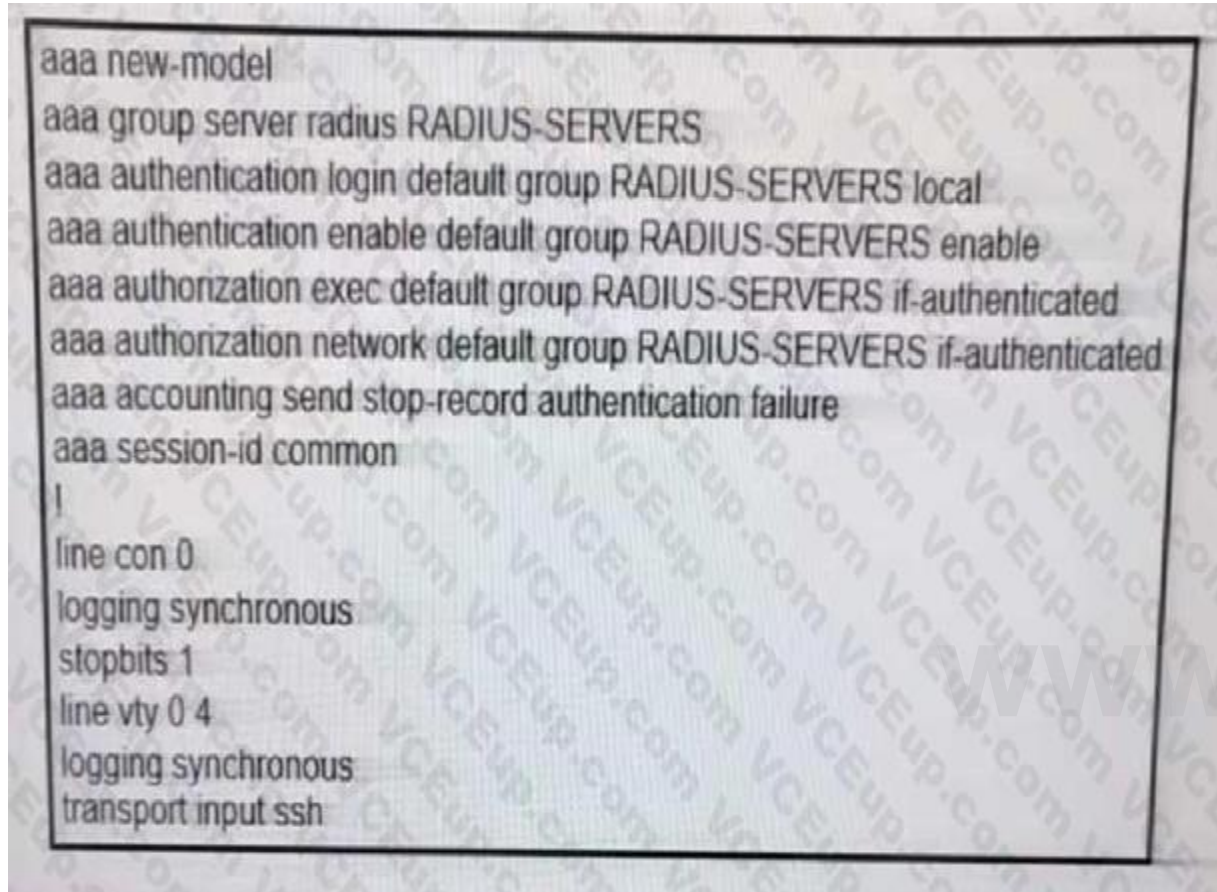
- C. line vty 0 4 login authentication telnet
- D. tacacs-server host 192.168.1.5 key Cisco123

Correct Answer: C

Section:

QUESTION 103

Refer to the exhibit.



```
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 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.

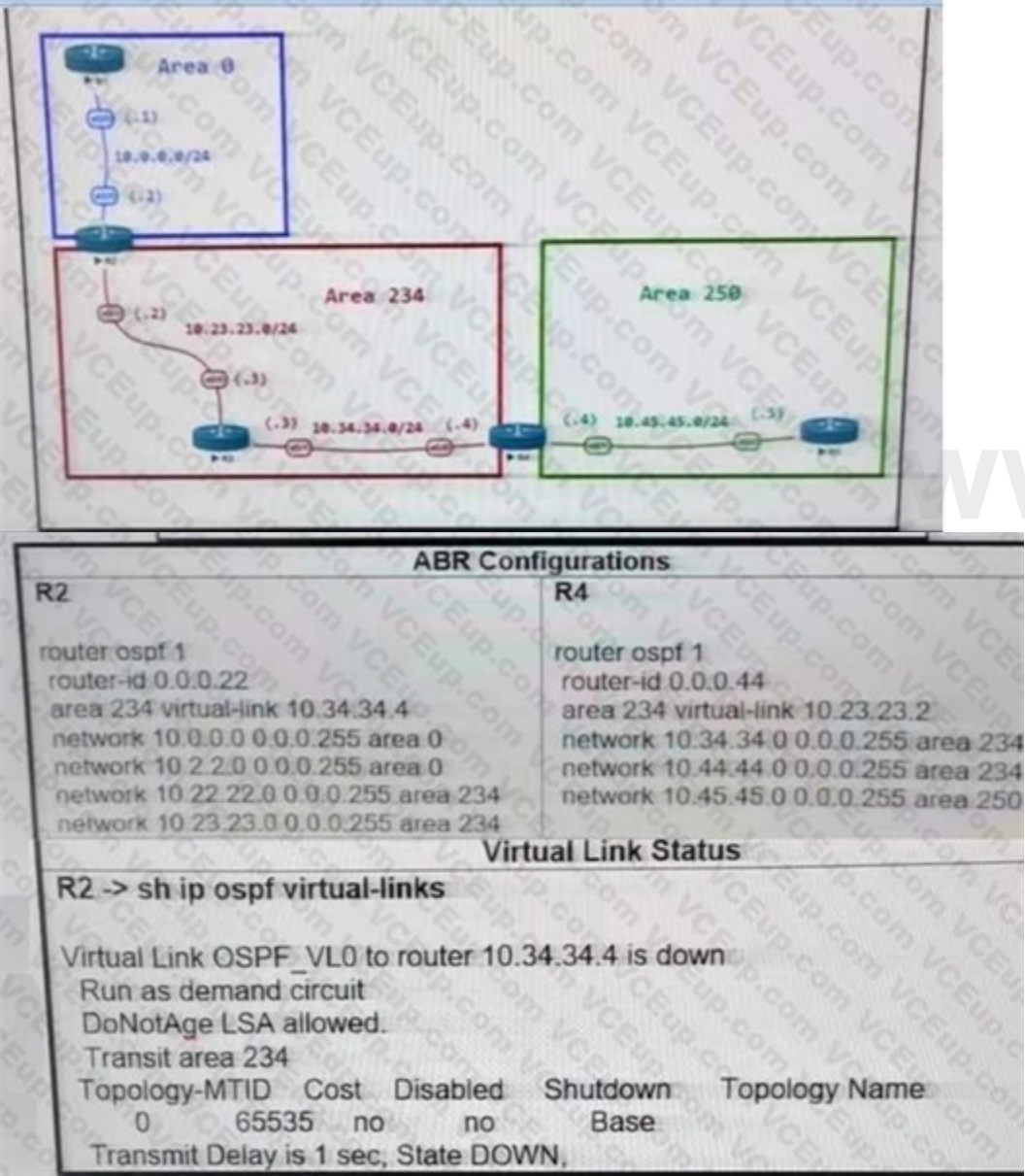
Which command set is used to troubleshoot and resolve this issue?

- 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
!
ine vty 0 4
transport input ssh

Correct Answer: A
Section:

QUESTION 104
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.)

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: A, E

Section:

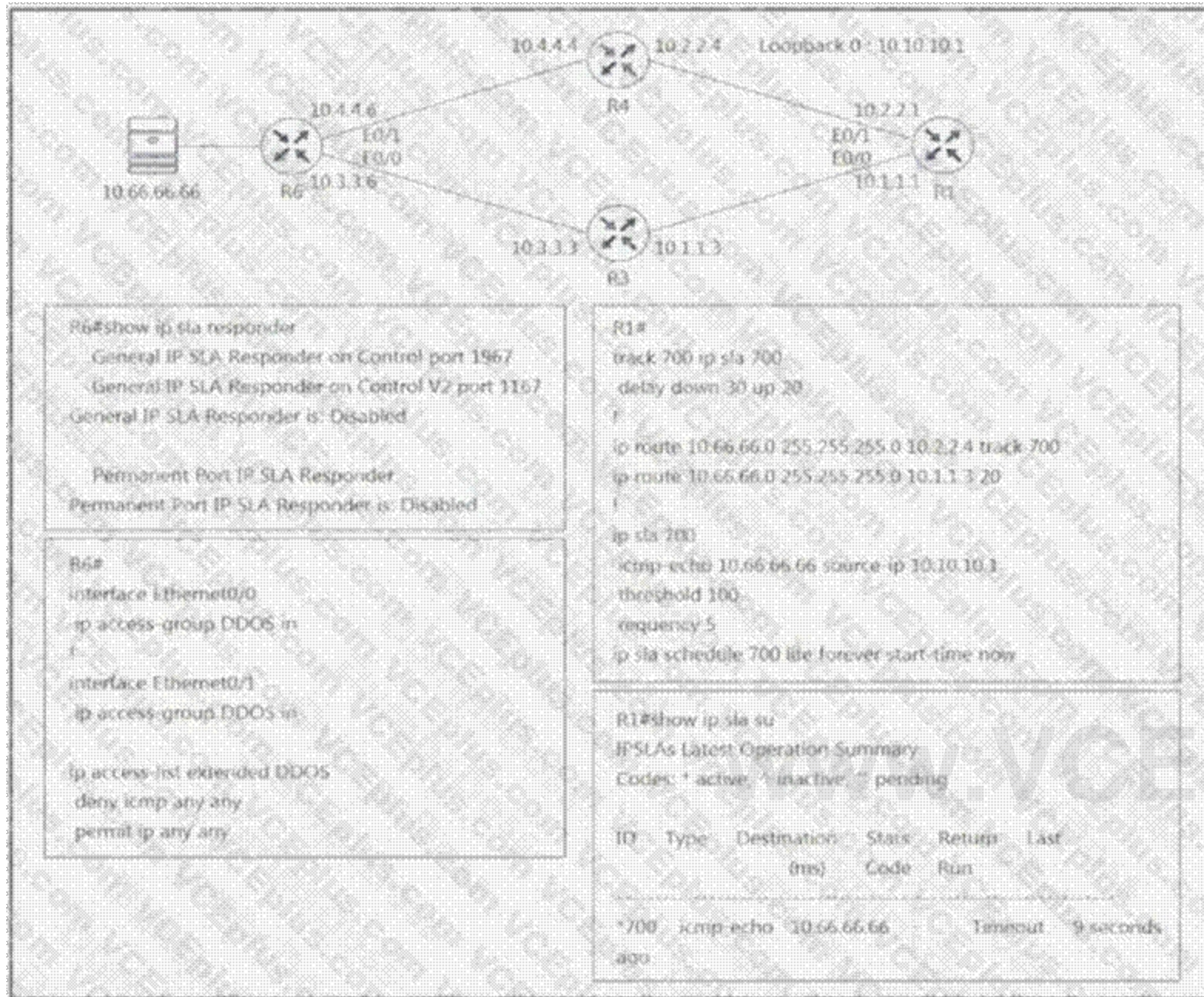
Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/ip/open-shortest-path-first-ospf/13703-8.html>

QUESTION 105

Refer to the exhibit.

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R1 is configured with IP SLA to check the availability of the server behind R6 but it kept failing. Which configuration resolves the issue?

- 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(config ext-nac)# 5 permit icmp host 10.10.10.1 host 10.66.66.66

Correct Answer: D

Section:

Explanation:

In this IP SLA tracking, we don't need a IP SLA Responder so the command `ip sla responder` on R6 is not necessary. We also notice that the ACL is blocking ICMP packets on both interfaces E0/0 & E0/1 of R6 so we need to allow ICMP from source 10.10.10.1 to destination 10.66.66.66.

QUESTION 106

Which mechanism provides traffic segmentation within a DMVPN network?

- A. RSVP
- B. BGP
- C. MPLS
- D. iPsec

Correct Answer: D

Section:

QUESTION 107

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: D, E

Section:

Explanation:

IPv6 Source Guard uses the IPv6 First-Hop Security Binding Table to drop traffic from unknown sources or bogus IPv6 addresses not in the binding table. The switch also tries to recover from lost address information, querying DHCPv6 server or using IPv6 neighbor discovery to verify the source IPv6 address after dropping the offending packet(s).Reference: <https://blog.ipspace.net/2013/07/first-hop-ipv6-security-features-in.html>

QUESTION 108

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:

QUESTION 109

Refer to the exhibit.

```
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
```

R1 is configured with uRPF, and ping to R1 is failing from a source present in the R1 routing table via the GigabitEthernet 0/0 interface. Which action resolves the issue?

- A. Remove the access list from the interface GigabitEthernet 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:

QUESTION 110

Which OSI 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:

QUESTION 111

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:

Explanation:

LDP provides a standard methodology for hop-by-hop, or dynamic label, distribution in an MPLS network by assigning labels to routes that have been chosen by the underlying Interior Gateway Protocol (IGP) routing protocols. The resulting labeled paths, called label switch paths (LSPs), forward label traffic across an MPLS backbone to particular destinations. Reference: https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/mp_ldp/configuration/12-4t/mp-ldp-12-4t-book.pdf

QUESTION 112

An engineer is implementing a coordinated change with a server team. As part of the change, the engineer must configure interface 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 GigabitEthernet2 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?

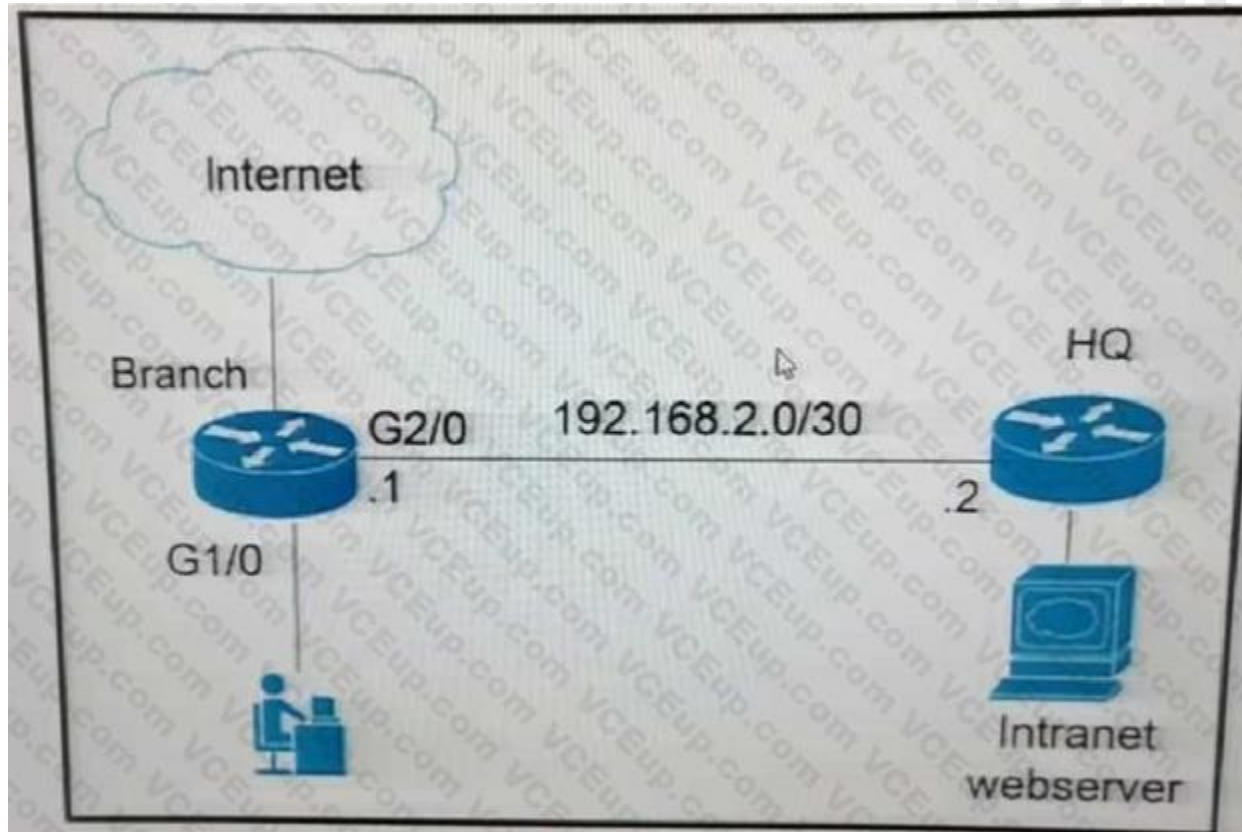
- A. interface GigabitEthernet2 no ip address vrf forwarding BLUE
- B. interface GigabitEthernet2 no vrf forwarding RED vrf forwarding BLUE ip address 10.0.0.0 255.255.255.254
- C. interface GigabitEthernet2 no vrf forwarding RED vrf forwarding BLUE
- D. interface GigabitEthernet2 no ip address ip address 10.0.0.0 255.255.255.254 vrf forwarding BLUE

Correct Answer: B

Section:

QUESTION 113

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 eq 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

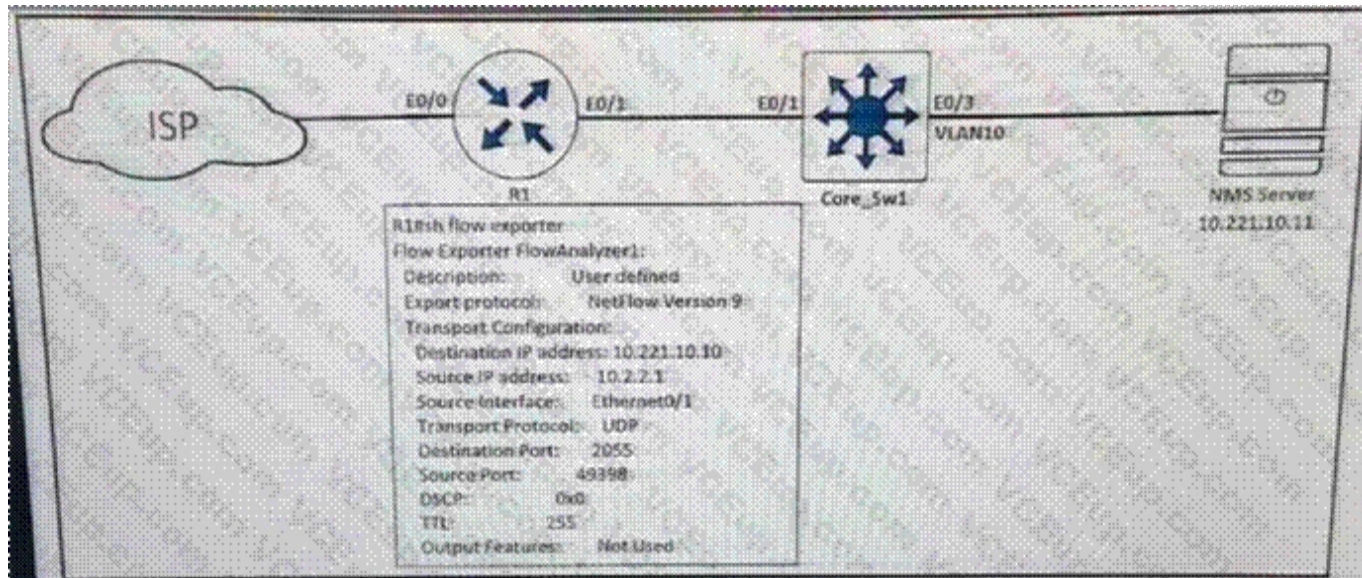
Section:

Explanation:

the ACL 101 matches all HTTP packets while the ACL 102 matches TCP packets destined to Intranet webserver. These packets will be sent to HQ router. If a match command refers to several objects in one command, either of them should match (the logical OR algorithm is applied). For example, in the match ip address 101 102 command, a route is permitted if it is permitted by access list 101 or access list 102.

QUESTION 114

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?

- 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

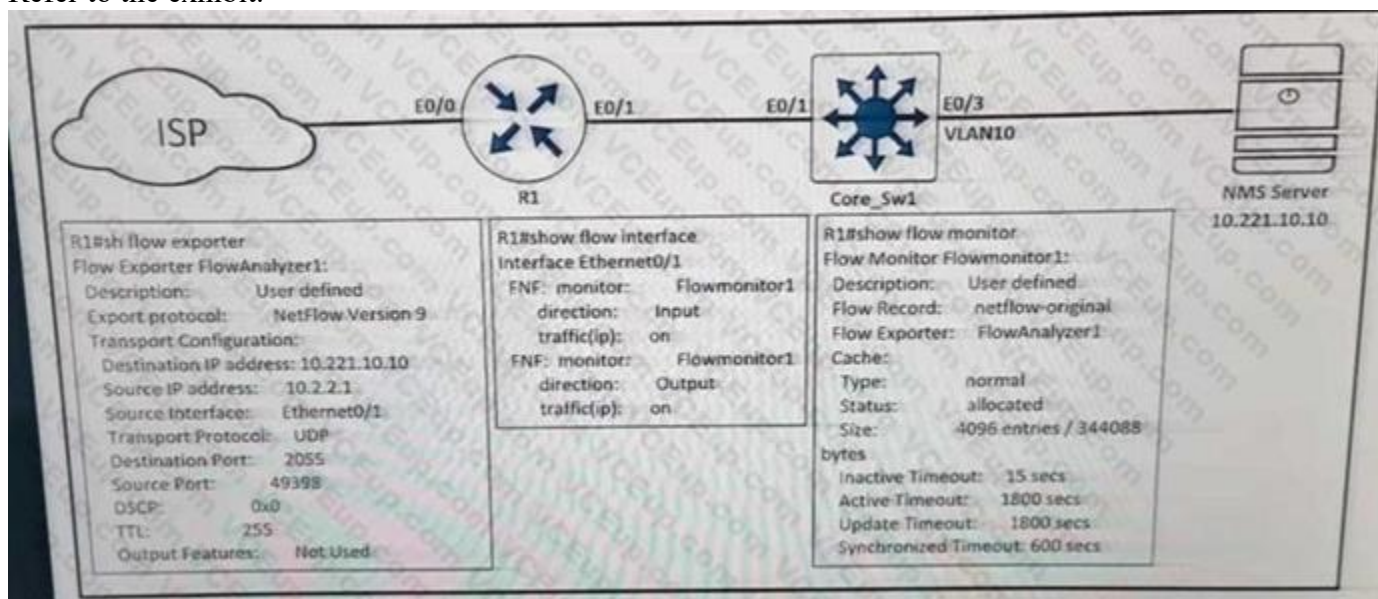
Section:

Explanation:

From the output we notice that the destination IP address is not correct. The NMS server IP address should be 10.221.10.11, not 10.221.10.10. Therefore we have to change this information under iflow exporter configuration. NetFlow configuration reference: <https://www.cisco.com/c/en/us/td/docs/iosxml/ios/fnetflow/configuration/15-mt/fnf-15-mt-book/cfg-de-fnflow-exprts.html>

QUESTION 115

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?

- 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:

QUESTION 116

Refer to the exhibit.

```
interface GigabitEthernet2
no ip address
ip helper-address 192.168.255.3
no shutdown
!
interface GigabitEthernet2.10
encapsulation dot1Q 210
ip address 192.168.210.1 255.255.255.0
ip ospf 1 area 0
no shutdown
```

With the partial configuration of a router-on-a-stick. Clients in VLAN 10 on Gi2 cannot obtain IP configuration from the central DHCP server is reachable by a successful ping from the route. Which action resolves the issue?

- A. Configure the ip/ip/dhcp pool f and network 192.168..210.0.255.255/0 commands.
- B. Configure the ip header-address 192-168.265.3 command on the Gi2 10 subinterface.
- C. Configure a valid IP address on the Gi2 interface so that DHCP requests can be forwarded.
- D. Configure the Ip dhcp excluded-address 192.168.255.3 command on the Gi1.10 subinterface.

Correct Answer: B

Section:

QUESTION 117

Exhibit.

```
Reliability is 255/255
Load is 1/255
Minimum MTU is 1500
Hop count is 1
10.1 (Ethernet0), from 10.1.2.4, send flag is 0x0
Composite metric is (312320/19720). Route is Internal
Vector metric:
Minimum bandwidth is 10000 Kbit
Total delay is 2200 microseconds
Reliability is 255/255
Load is 1/255
Minimum MTU is 1500
Hop count is 1
```

A network is configured for EIGR equal-cost balancing, but the traffic destined to the servers is not load balance.resolve the issue?

- A. 208 on R3 E0/0
- B. 120 on R4 E0/1

- C. 120/0 on R3 E0/1
- D. 2200 on R4 E0/1

Correct Answer: C

Section:

QUESTION 118

A network administrator successfully established a DMVPN tunnel with one hub and two spokes using EIGRP. One of the requirements was to enable spoke-to-spoke tunnels through the hub router using EIGRP. Which configuration command must the engineer configure to meet the requirement?

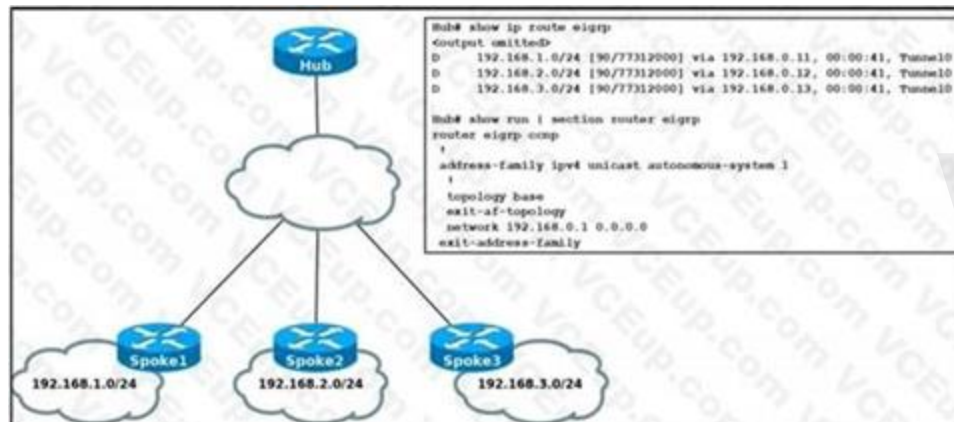
- A. no ip eigrp 1 mode multipoint
- B. no ip eigrp 1 split-horizon
- C. no ip eigrp 1 tunnel-redirect
- D. no ip eigrp 1 mode mgre

Correct Answer: B

Section:

QUESTION 119

Refer to the exhibit.



Spoke routers do not learn about each other's routes in the DMVPN Phase2 network. Which action resolves the issue?

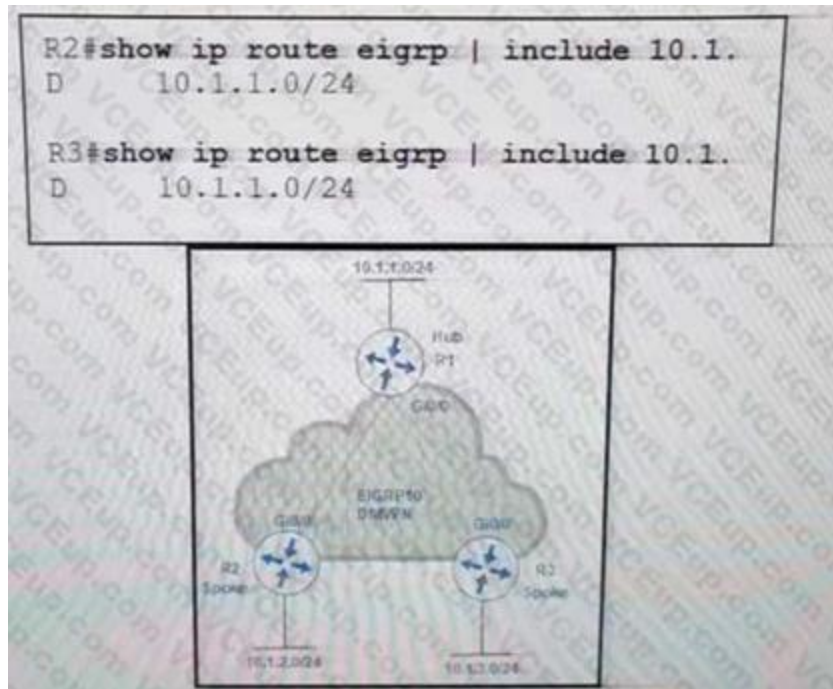
- A. Remove default route from spoke routers to establish a spoke-to-spoke tunnel.
- B. Configure a static route in each spoke to establish a spoke-to-spoke tunnel.
- C. Rectify incorrect wildcard mask configured on the hub router network command.
- D. Disable EIGRP split horizon on the Tunnel0 interface of the hub router.

Correct Answer: D

Section:

QUESTION 120

Refer to the exhibit.



An engineer configures DMVPN and receives the hub location prefix of 10.1.1.0/24 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 resolves the issue?

- 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 the 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 by use of the `show ip eigrp neighbor` command.

Correct Answer: A

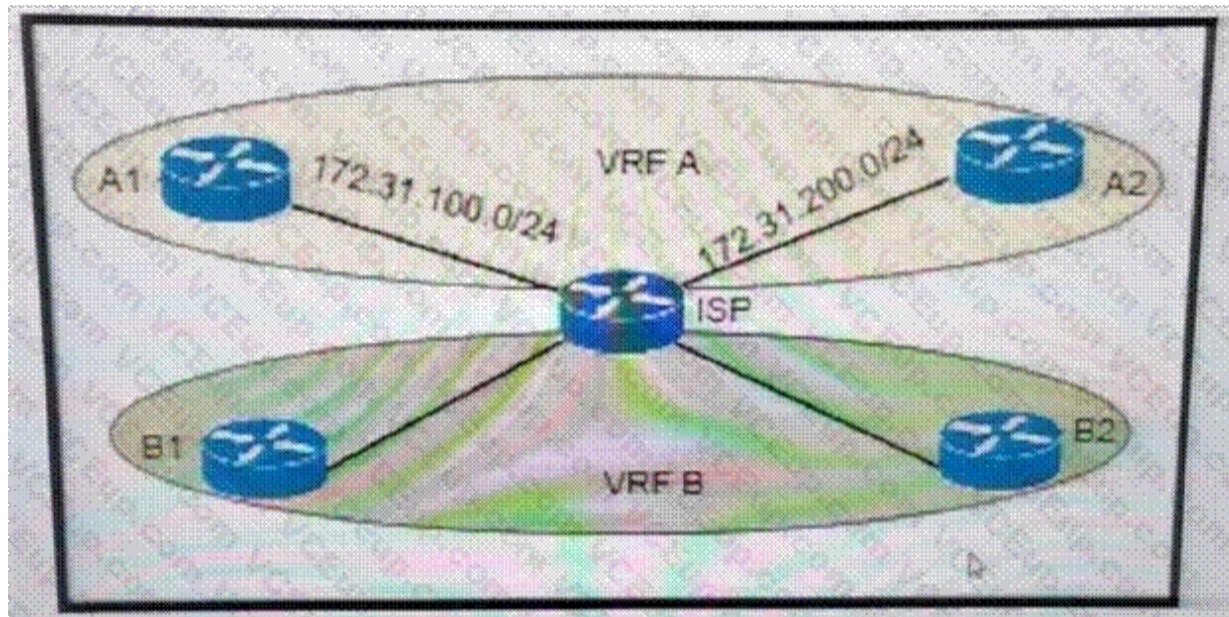
Section:

Explanation:

In this topology, the Hub router will receive advertisements from R2 Spoke router on its tunnel interface. The problem here is that it also has a connection with R3 Spoke on that same tunnel interface. If we don't disable split-horizon, then the Hub will not relay routes from R2 to R3 and the other way around. That is because it received those routes on the same interface (tunnel) and therefore it cannot advertise back out that same interface (split-horizon rule). Therefore, we must disable split-horizon on the Hub router to make sure the Spokes know about each other.

QUESTION 121

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

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```
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
```

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Correct Answer: C

Section:

Explanation:

A1 and A2 routers do not know they belong to VRF A. The two interfaces of ISP (which are connected to A1 & A2) should be configured like this (we only show the configure of one interface): ISP router: interface g0/0
description ISP- >To_CustomerA ip vrf forwarding A ip address 172.31.100.2 255.255.255.0 router ospf 100 vrf A network 172.31.200.2 0.0.0.255 area 0

QUESTION 122

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:

```
access-list 101 permit tcp host 10.1.1.1 any eq 23
access-list 101 permit tcp host 172.16.1.1 any eq 23
!
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. control-plane
no service-policy input PM-CoPP
!
interface Ethernet 0/0
service-policy input PM-CoPP
- B. control-plane
no service-policy input PM-CoPP
service-policy input PM-CoPP
- C. 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
- D. 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

Correct Answer: C

Section:

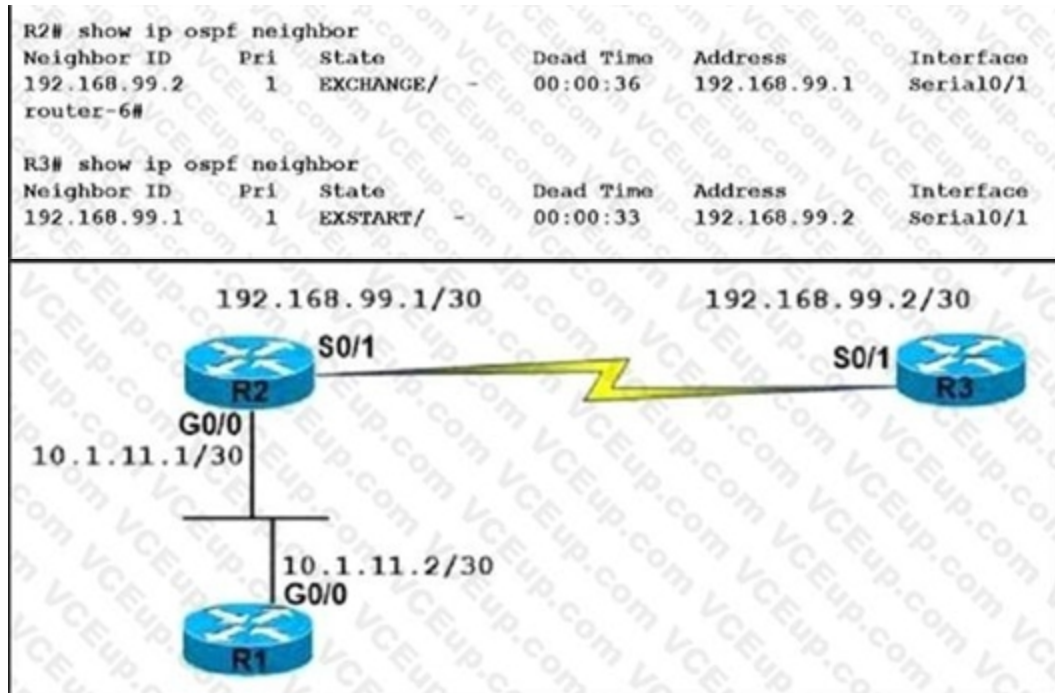
Explanation:

ackets that match a deny rule are excluded from that class and cascade to the next class (if one exists) for classification. Therefore if we don't want to CoPP traffic from 10.1.1.1/32 and 172.16.1.1/32, we must deny them in the ACL.

QUESTION 123

Refer to the exhibit.

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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?

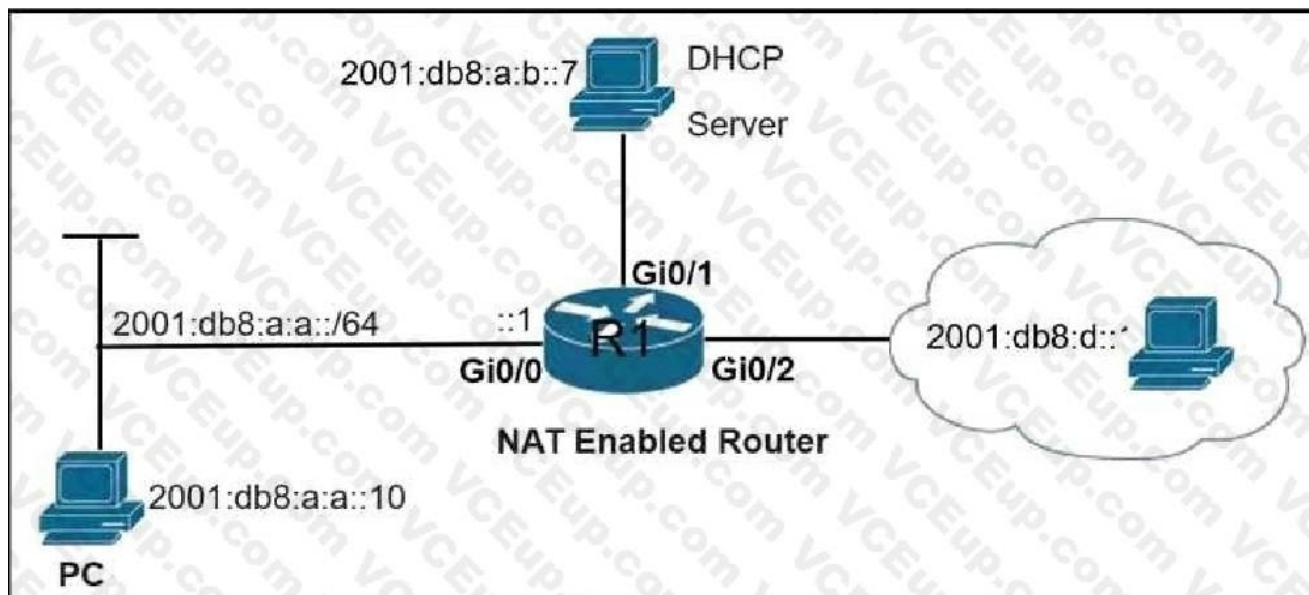
- A. Restore the Layer 2/Layer 3 connectivity issue in the ISP network.
- B. Match MTU on both router interfaces or ignore MTU.
- C. Administrative "shut then no shut" both router interfaces.
- D. Enable OSPF on the interface, which is required.

Correct Answer: B

Section:

QUESTION 124

Refer to the exhibit.




```
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
```

An engineer is troubleshooting a failed Telnet session from PC to the DHCP server. Which action resolves the issue?

- 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: C

Section:

QUESTION 125

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 interface.
- D. Modify the threshold to match the administrative distance of the ISP2 route.

Correct Answer: D

Section:

QUESTION 126

Refer to the exhibit.

```
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
```

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.)

- 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.

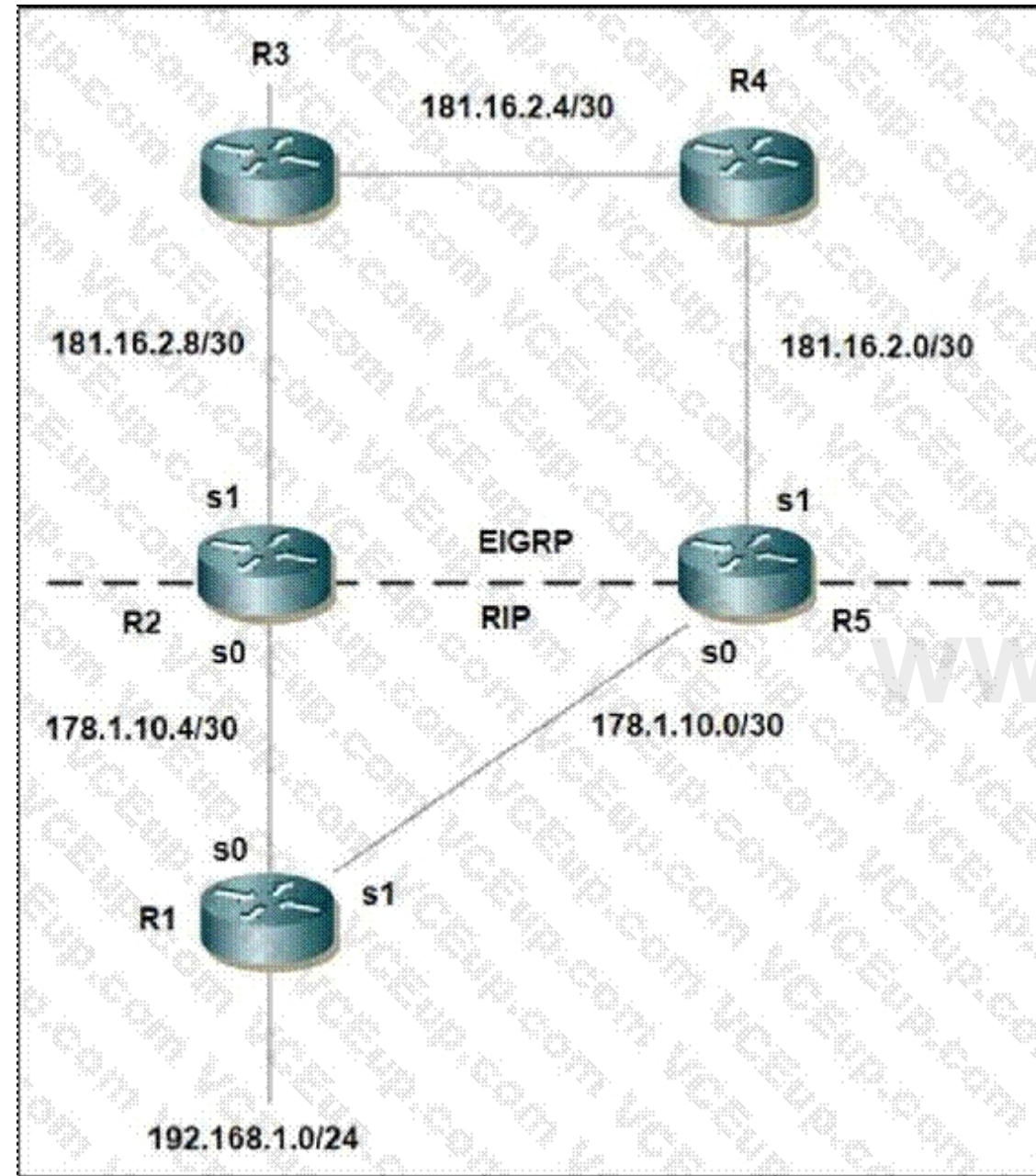
E. Change the next hop of the default route to the link-local address of the default gateway.

Correct Answer: C, D

Section:

QUESTION 127

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:
```

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```
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
```

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**Correct Answer: D**

**Section:**

#### QUESTION 128

Refer to the exhibit.

```
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 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?

- A. Configure IOS control plane protection using ACL 90 on interface E1/0
- B. Configure IOS management plane protection using ACL 90 on interface E1/0
- C. Create an inbound ACL on interface E1/0 to deny SNMP from host 10.11.110.12
- D. Add a permit statement including the host 10.11.110.12 into ACL 90

**Correct Answer: C**

**Section:**

#### QUESTION 129

Refer to the exhibit.

```
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)
```

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?

- 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:**

#### QUESTION 130

Refer to the exhibit.

```
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)/10(10.100.20.2)

Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
r - reply Status, s - via 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
```

Router R2 should be learning the route for 10.123.187.0/24 via EIGRP. Which action resolves the issue without introducing more issues?

- A. Use distribute-list to modify the route as an internal EIGRP route
- B. Redistribute the route in EIGRP with metric, delay, and reliability
- C. Use distribute-list to filter the external router in OSPF
- D. Remove route redistribution in R2 for this route in OSPF

**Correct Answer: C**  
**Section:**

### QUESTION 131

Refer to the exhibit.

```
R1#show ip eigrp neighbors
IP-EIGRP neighbors for process 100
H Address Interface Hold Uptime RTT RTO Q Seq
0 192.168.10.1 Ser1/0 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
```

R1 and R2 are configured for EIGRP peering using authentication and the neighbors failed to come up. Which action resolves the issue?

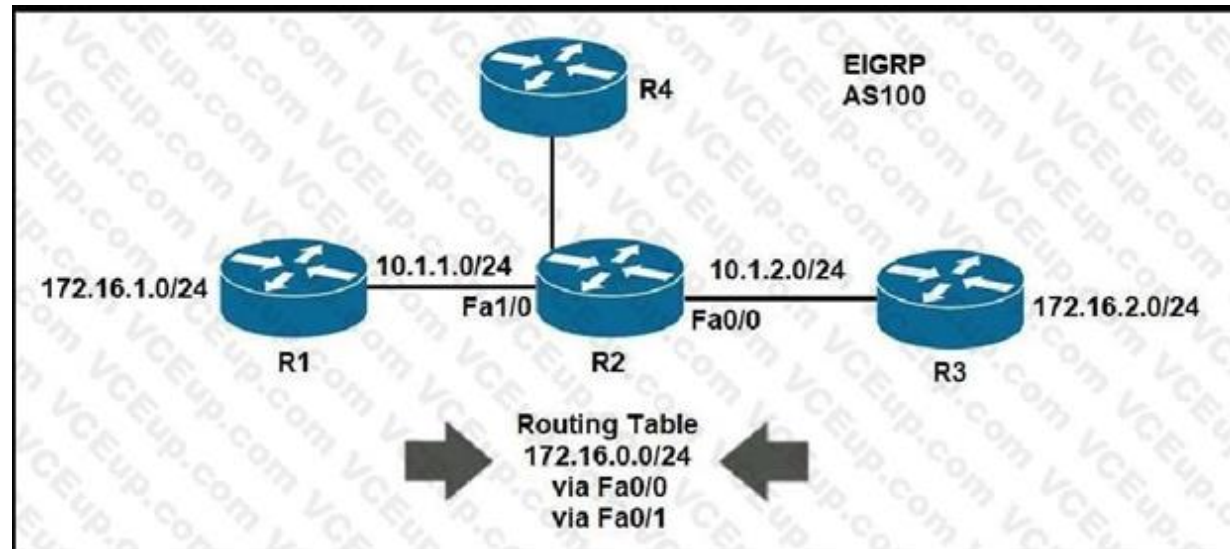
- A. Configure a matching key-id number on both routers
- B. Configure a matching lowest key-id on both routers
- C. Configure a matching key-chain name on both routers
- D. Configure a matching authentication type on both router

**Correct Answer: A**

**Section:**

#### QUESTION 132

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 /16 floating static route on R2 toward R3 with metric 254
- B. Insert a /24 floating static route on R2 toward R3 with metric 254
- C. Enable auto summarization on all three routers R1, R2, and R3
- D. Disable auto summarization on R2

**Correct Answer: D**

**Section:**

#### QUESTION 133

Refer to the exhibit.



```
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
```

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?

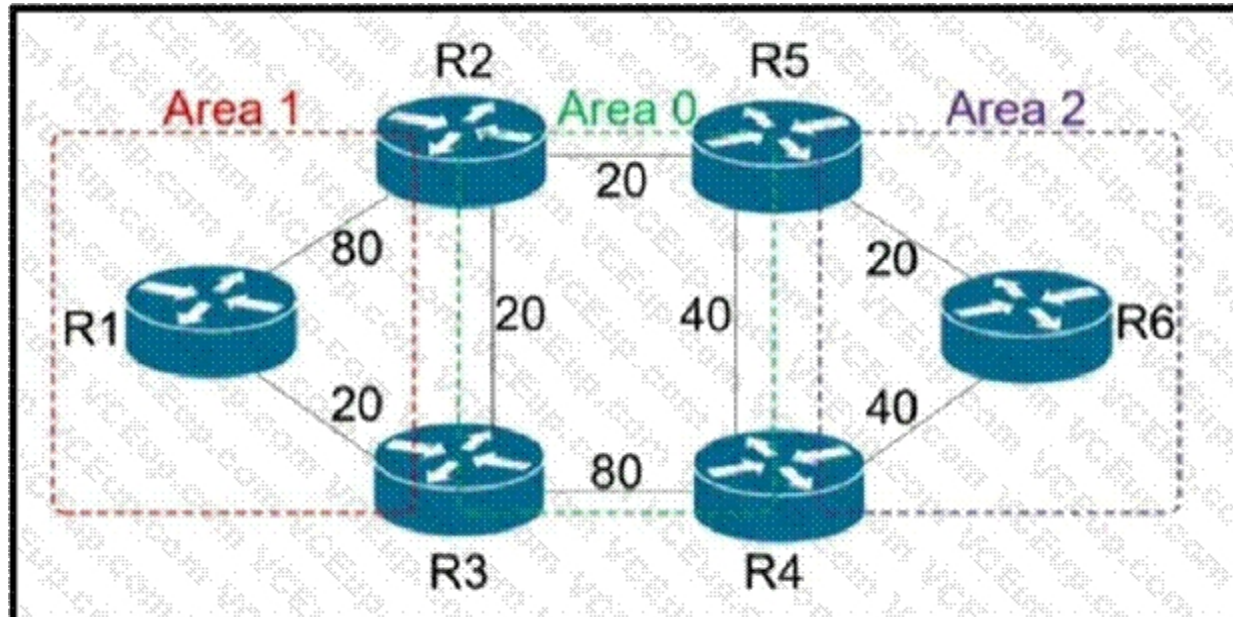
- A. set ip precedence critical in route-map Texas permit 10
- B. set ip precedence critical in route-map Texas permit 20
- C. set ip precedence immediate in route-map Texas permit 10
- D. set ip precedence priority in route-map Texas permit 20

**Correct Answer: B**

**Section:**

#### QUESTION 134

Refer to the exhibit.



R6 should reach R1 via R5>R2>R1. Which action resolves the issue?

- A. Increase the cost to 61 between R2-R3-R1
- B. Increase the cost to 61 between R2 and R3
- C. Decrease the cost to 2 between R6-R5-R2
- D. Decrease the cost to 41 between R2 and R1

**Correct Answer: B**

**Section:**

#### QUESTION 135

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

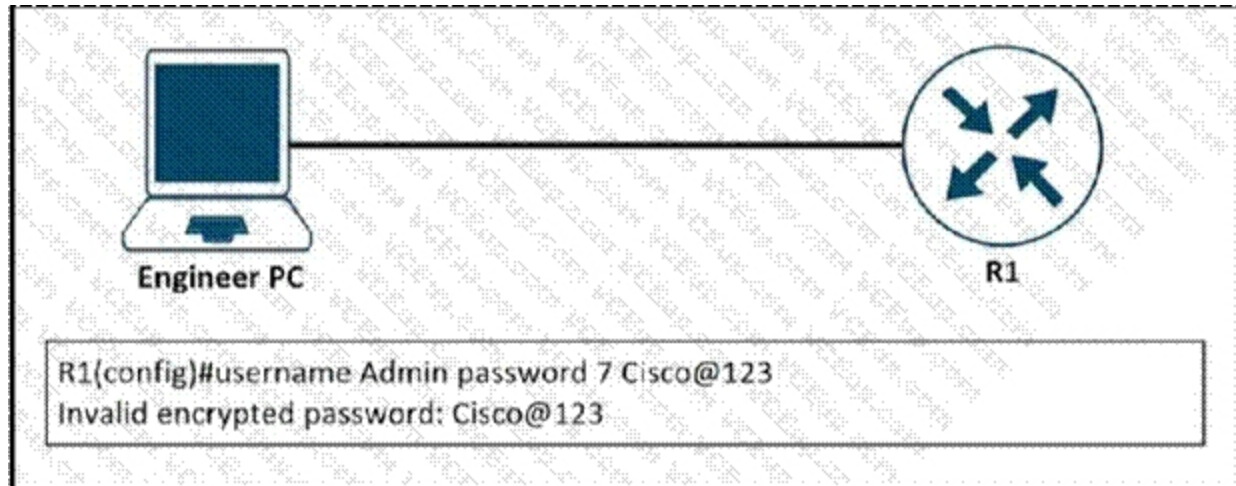
**Correct Answer: B**

**Section:**

#### QUESTION 136

Refer to the exhibit.

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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)

- A. password encryption aes
- B. username Admin password Cisco@maedeh motamedi
- C. username Admin password 5 Cisco@maedeh motamedi
- D. username Admin secret Cisco@maedeh motamedi
- E. no service password-encryption
- F. service password-encryption

**Correct Answer: D, F**

**Section:**

#### QUESTION 137

Refer to the exhibit.

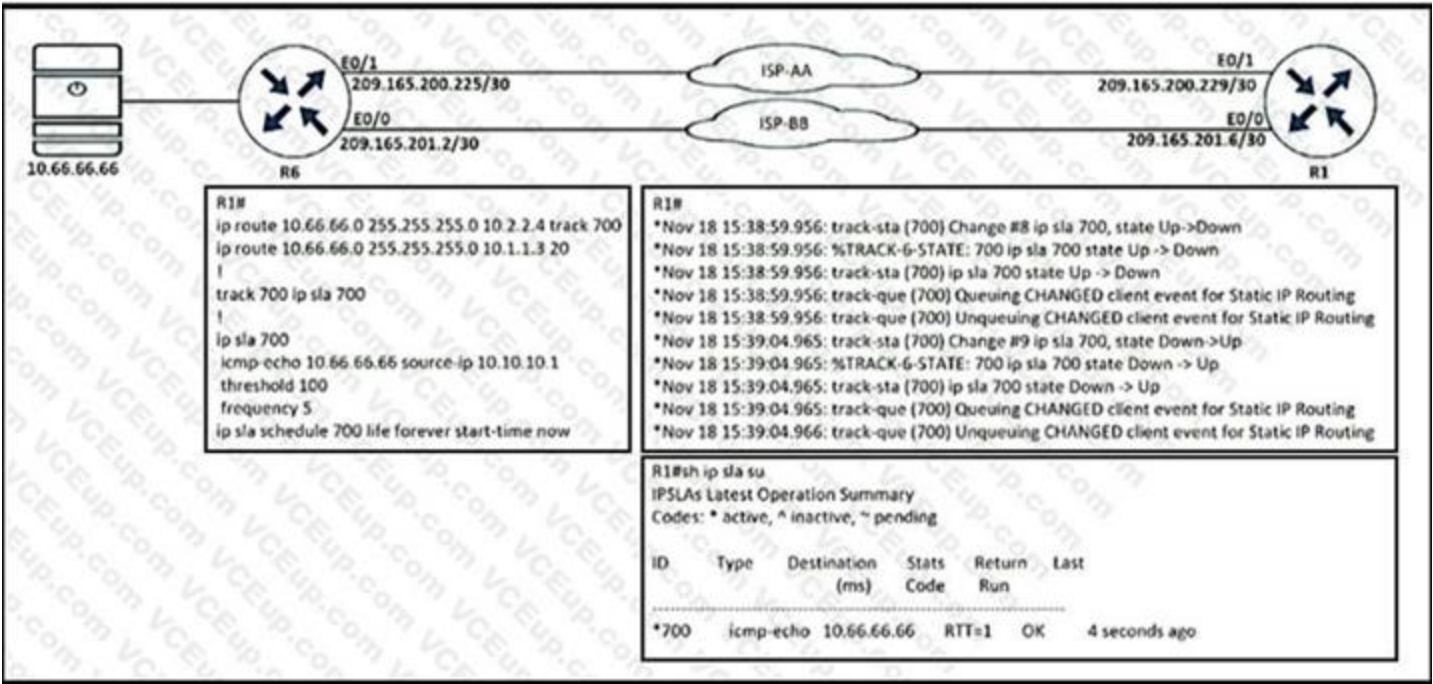
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <pre> R2#show running-config   section ospf ip ospf 1 area 1 ip ospf 1 area 1 router ospf 1  log-adjacency-changes  area 1 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           </pre> | <pre> R1#show running-config   section ospf ip ospf 1 area 0 ip ospf 1 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    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           </pre> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Which action restores OSPF adjacency between R1 and R2?

- 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:

QUESTION 138  
Refer to the exhibit.



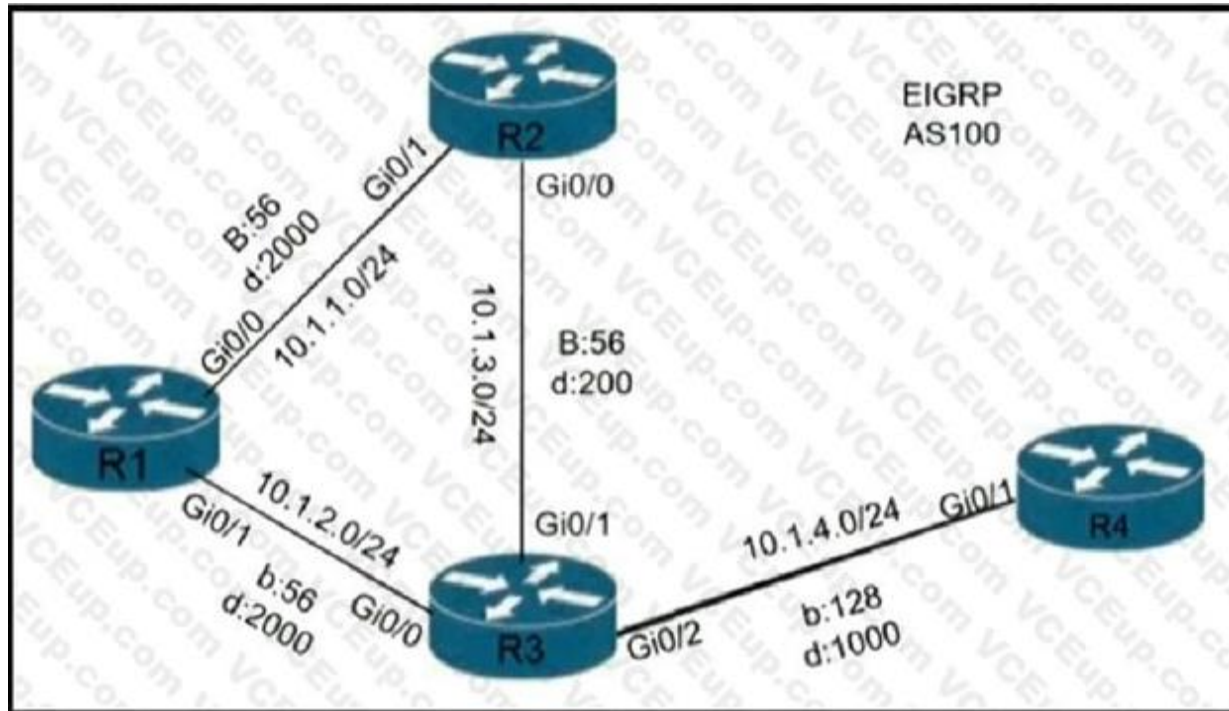
R1 is configured with IP SLA to check the availability of the server behind R6 but it kept failing. Which configuration resolves the issue?

- 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:

QUESTION 139  
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 R2 as stub receive-only
- D. Configure route filtering

**Correct Answer: C**

**Section:**

#### QUESTION 140

A customer reports that traffic is not passing on an EIGRP enabled multipoint interface on a router configured as below: interface Serial0/0 no ip address interface Server0/0/0.9 multipoint ip address 10.1.1.1 255.255.255.248 ip split-horizon eigrp 1 Which action resolves the issue?

- A. Enable poison reverse
- B. Enable split horizon
- C. Disable poison reverse
- D. Disable split horizon

**Correct Answer: D**

**Section:**

#### QUESTION 141

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-mtu 1360 crypto ipsec fragmentation after-encryption
- C. ip tcp adjust-mss 1360 crypto ipsec fragmentation mtu-discovery
- D. ip tcp adjust-mtu 1360 crypto ipsec fragmentation mtu-discovery

**Correct Answer: A**

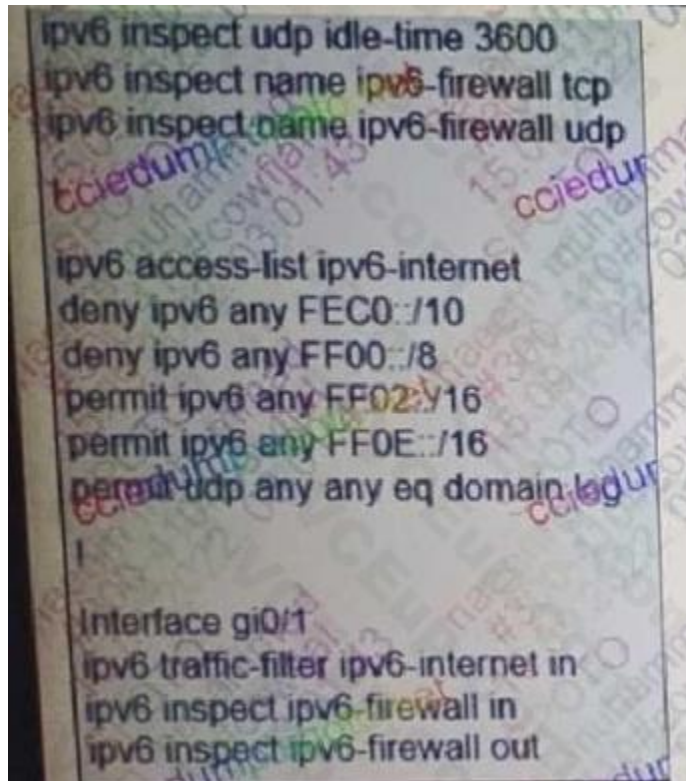
**Section:**

**Explanation:**

<https://www.cisco.com/c/en/us/support/docs/security/dynamic-multipoint-vpn-dmvpn/111976-dmvpn-troubleshoot-00.html>

**QUESTION 142**

Refer to the exhibit.



```
ipv6 inspect udp idle-time 3600
ipv6 inspect name ipv6-firewall tcp
ipv6 inspect name ipv6-firewall udp

ipv6 access-list ipv6-internet
deny ipv6 any FEC0::/10
deny ipv6 any FF00::/8
permit ipv6 any FF02::/16
permit ipv6 any FF0E::/16
permit udp any any eq domain log

Interface gi0/1
ipv6 traffic-filter ipv6-internet in
ipv6 inspect ipv6-firewall in
ipv6 inspect ipv6-firewall out
```

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A network administrator configured name resolution for IPv6 traffic to be allowed through an inbound access list. After the access list is applied to resolve the issue, name resolution still did not work. Which action does the network administrator take to resolve the name resolution problem?

- A. Remove `ipv6 inspect ipv6-firewall in` from interface `gi0/1`
- B. Add `permit udp any eq domain any log` in the access list.
- C. `inspect ipv6 inspect name ipv6-firewall udp 53` in global config.
- D. Add `permit any eq domain 53 any log` in the access list.

**Correct Answer: A**

**Section:**

**QUESTION 143**

Refer to the exhibit.

```

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

```

The administrator configured the network devices for end reachability, but the ASBRs are not propagating routes to each other. Which set of configuration resolved this issue?

A.

```

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

```

B.

```

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

```

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 10.1.2.2 ebgp-multihop
neighbor 10.1.3.3 ebgp-multihop

```

Correct Answer: B

Section:

#### QUESTION 144

Refer to the exhibit.

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```
R1#
router ospf 1
 redistribute rip subnets
 network 131.108.1.0 0.0.0.255 area 2
 network 131.108.2.0 0.0.0.255 area 2
 distribute-list 1 out
 !
 access-list 1 permit 132.108.4.0 0.0.0.255
```

The R1 OSPF neighbor is not receiving type 5 external LSAs for 132.108.2.0/24 and 132.108.3.0/24 networks. Which configuration command resolves the issue?

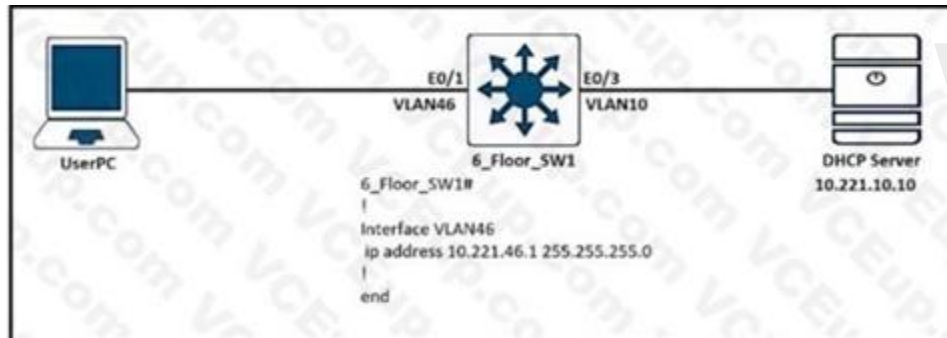
- A. access-list 1 permit 132.108.0.0 0.0.1.255
- B. access-list 1 permit 132.108.0.0 0.0.3.255
- C. access-list 1 permit 132.108.2.0 0.0.0.255
- D. access-list 1 permit 132.108.4.0 0.0.3.255

**Correct Answer: B**

**Section:**

#### QUESTION 145

Refer to the exhibit.



Users in VLAN46 cannot get the IP from the DHCP server. Assume that all the parameters are configured properly in VLAN 10 and on the DHCP server. Which command on interface VLAN46 allows users to receive IP from the DHCP server?

- A. ip dhcp-address 10.221.10.10
- B. ip dhcp server 10.221.10.10
- C. ip helper-address 10.221.10.10
- D. ip dhcp relay information trust-all

**Correct Answer: C**

**Section:**

#### QUESTION 146

Refer to the exhibit.

```
!
summary-address 10.1.0.0 255.255.0.0
!
```

The none area 0 routers in OSPF still receive more specific routes of 10.1.1.0/24, 10.1.2.0/24, 10.1.3.0/24 from area 0. Which action resolves the issue?



- A. Configure route summarization on OSPF-enabled interfaces.
- B. Summarize by using the summary-address 10.1.0.0 255.255.252.0 command.
- C. Summarize by using the area range command on ABRs
- D. Configure the summary-address 10.1.0.0 255.255.252.0 command under OSPF process.

**Correct Answer: C**

**Section:**

#### QUESTION 147

Refer to the exhibit.

```
flow exporter EXPORTER-1
destination 172.16.10.2
export-protocol netflow-v9
transport udp 90
exit
!
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 monitor FLOW-MONITOR-1
record v4_r1
!
ip cef
!
interface GigabitEthernet 0/0/0
ip address 172.16.6.2 255.255.255.0
ip flow monitor FLOW-MONITOR-1 input
!
```

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An engineer configured NetFlow to capture traffic information through the router, but it iOS not working as expected. Which action captures the flow information from this router to the collector?

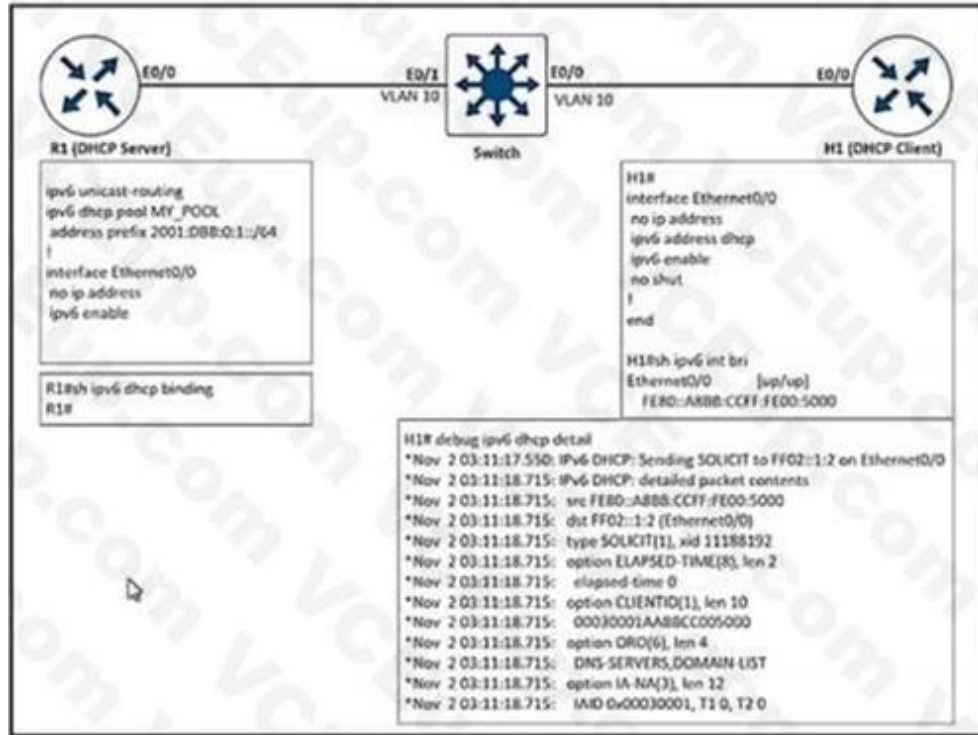
- A. Change the interface configuration FLOW-MONITOR-1 from input to output.
- B. Configure a flow exporter under flow FLOW-MONITOR-1.
- C. Configure more than one flow exporter destination addresses.
- D. Change the flow exporter transport protocol from UDP to TCP

**Correct Answer: B**

**Section:**

#### QUESTION 148

Refer to the exhibit.



After the network administrator rebuilds the IPv6 DHCP server, clients are not getting the IPv6 address lease. Which action resolves the issue?

- A. Remove FE80 A8BB CCFF FE00 5000 assigned by the IPV6 DHCP server.
- B. Add Ipv6 dhcp sarver MY\_POOL under the interface ethernet 0/0 on H1.
- C. Add Ipv6 dhcp server MY\_POOL under the interface ethernet 0/0 on R1.
- D. Configure FF02::1:2 to discover al IPv6 OHCP cfcents

**Correct Answer: C**

**Section:**

#### QUESTION 149

Refer to the exhibit.



A network administrator must configure DMVPN tunnels between the hub and spoke with dynamic spoke-to-spoke tunnel capabilities using EIGRP. Which tunnel interface command must the network

administrator configure to establish an EIGRP peer?

- A. no ip next-hop-self eigrp 1
- B. ip next-hop-self eigrp 1
- C. no Ip nhrp ntxt-hop-self
- D. ip nhrp next-hop-self

**Correct Answer: C**  
**Section:**

**QUESTION 150**  
Refer to the exhibit.



Refer to the exhibit. Not all connected and static routes of router B are received by router A even though EIGRP neighborship is established between the routers. Which configuration resolves the issue?

A.

```
router eigrp 100
 network 209.165.200.224 0.0.0.7
 redistribute static metric 1000 1 255 1 1500
 eigrp stub connected
```

B.

```
router eigrp 100
 network 209.165.200.224 0.0.0.7
```

C.

```
router eigrp 100
 network 209.165.200.224 0.0.0.31
 redistribute static metric 1000 1 255 1 1500
```

D.

```
router eigrp 100
 network 209.165.200.224 0.0.0.7
 redistribute static metric 1000 1 255 1 1500
 eigrp stub static
```

**Correct Answer: D**

**Section:**

#### QUESTION 151

Which router attaches the VPN label to incoming packets from CE routing?

- A. CE router
- B. core router
- C. P router
- D. PE router

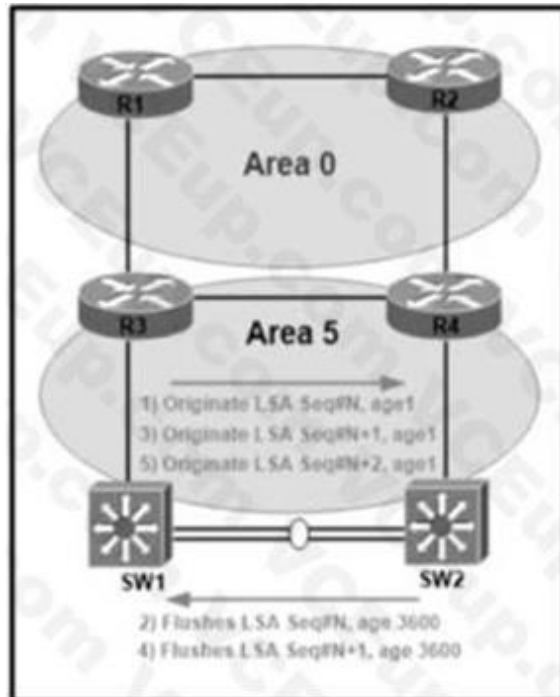


**Correct Answer: D**

**Section:**

**QUESTION 152**

Refer to the exhibit.



An error message "an OSPF-4-FLOOD\_WARNING is received on SW2 from SW1. SW2 is repeatedly receiving its own link-state advertisement and flushes it from the network. Which action resolves the issue?

- A. Change area 5 to a normal area from a nonstub area
- B. Resolve different subnet mask issue on the link
- C. Configure Layer 3 port channel on interfaces between switches
- D. Resolve duplicate IP address issue in the network

**Correct Answer: D**

**Section:**

**QUESTION 153**

Refer to the exhibit.

```
R2#sh ip route
Codes: 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

Gateway of last resort is not set

C 192.168.10.0/24 is directly connected, Serial1/0
C 172.16.0.0/16 is variably subnetted, 5 subnets, 2 masks
C 172.16.160.0/19 is directly connected, Loopback1
C 172.16.128.0/19 is directly connected, Loopback0
C 172.16.224.0/19 is directly connected, Loopback3
C 172.16.192.0/19 is directly connected, Loopback2
D 172.16.0.0/16 is a summary, 00:01:27, Null0
```

An engineer must configure EIGRP between R1 and R2 with no summary route. Which configuration resolves the issue?

- A.  
R1(config)#router eigrp 1  
R1(config-router)#no auto-summary
- B.  
R2 (config)#router eigrp 1  
R2 (config-router)#no auto-summary
- C.  
R2 (config)#router eigrp 1  
R2 (config-router)#auto-summary
- D.  
R1(config)#router eigrp 1  
R1(config-router)#auto-summary

Correct Answer: B

Section:

#### QUESTION 154

Refer to the exhibit.

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```
R2# show ip ospf neighbor
R2#
R2# debug ip ospf hello

*Feb 22 23:46:58.699: OSPF-1 HELLO Et1/1: Rcv hello from
10.255.255.1 area 0 10.0.23.1
*Feb 22 23:46:58.703: OSPF-1 HELLO Et1/1: Mismatched hello
parameters from 10.0.23.1
*Feb 22 23:46:58.703: OSPF-1 HELLO Et1/1: Dead R 30 C 20, Hello
R 10 C 10 Mask R 255.255.255.0 C 255.255.255.0
```

The connected routers do not show up as OSPF neighbors. Which action resolves the issue?

- A. Change the R1 dead timer to 20.
- B. Change the R2 dead timer to 20.
- C. Change the R2 hello timer to 20.
- D. Change the R1 hello timer to 20.

**Correct Answer: A**

**Section:**

#### QUESTION 155

Which router translates the customer routing information into VPNv4 routes to exchange VPNv4 routes with other devices through MP-BGP?

- A. PE
- B. CE
- C. P
- D. VPNv4 RR

**Correct Answer: A**

**Section:**

#### QUESTION 156

Which router takes an active role between two LDP neighbors when initiating LDP session negotiation and LDP TCP connection establishment?

- A. with the higher IP address
- B. with the larger number of LDP TCP neighbors
- C. with the lowest IP address
- D. with one interface in the MPLS backbone

**Correct Answer: A**

**Section:**

#### QUESTION 157

Which routing protocol is used by the PE router to advertise routes to a CE router without redistribution or static after removing the RD tag from the P router?

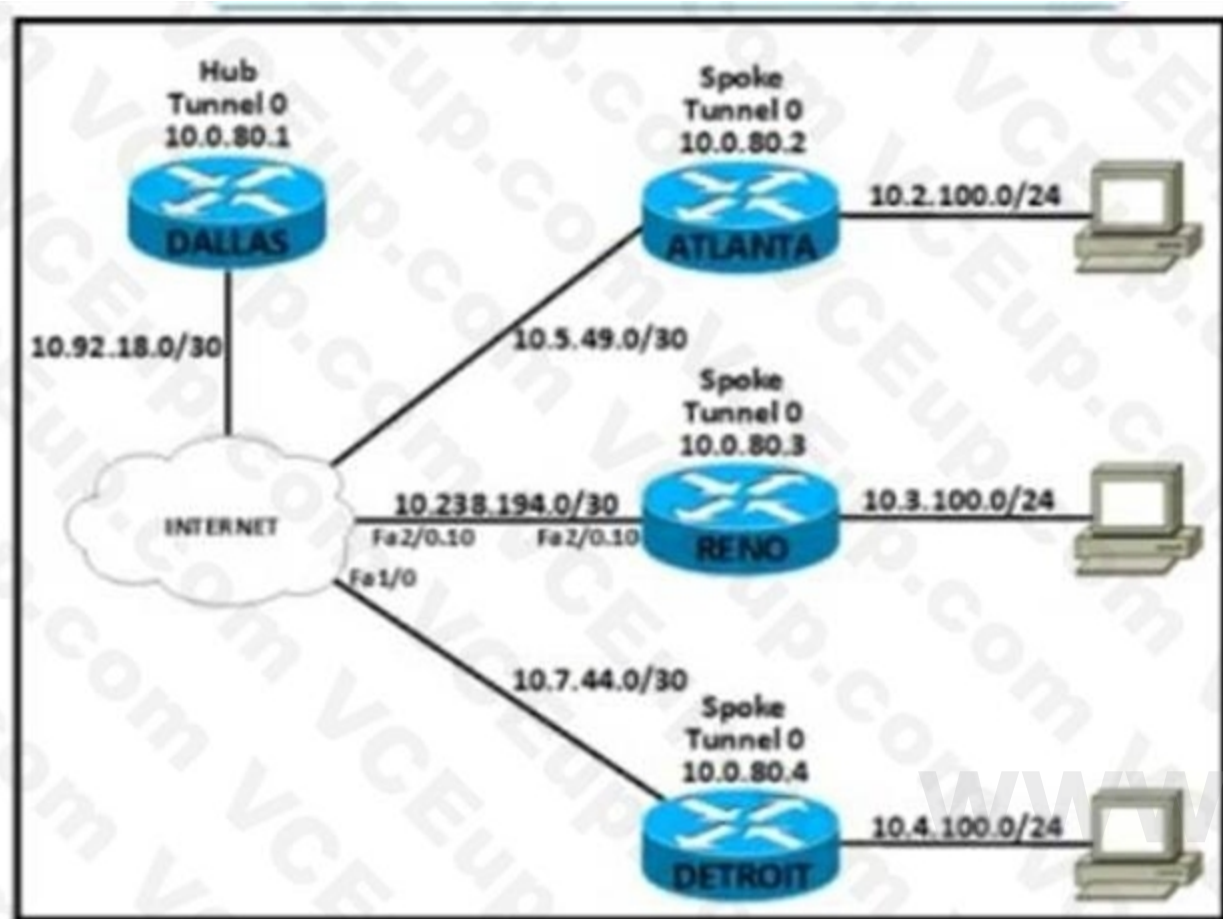
- A. IS-IS
- B. OSPF
- C. BGPv4
- D. MP-BGP

Correct Answer: C

Section:

#### QUESTION 158

Refer to the exhibit.



Refer to the exhibit An engineer must connect the Reno and Detroit spokes using DMVPN phase 2 Hub tunnel configuration is

```
Dallas
Interface Tunnel0
ip address 10.0.80.1 255.255.255.0
ip nhrp authentication cisco123
ip nhrp map multicast dynamic
ip nhrp network-id 5
tunnel source Serial0/0
tunnel mode gre multipoint
```

Which configuration accomplishes the task?



☐ Reno  
interface Tunnel0  
ip address 10.0.80.3 255.255.255.0  
ip nhrp authentication cisco321  
ip nhrp map multicast 10.92.18.2  
ip nhrp map 10.0.80.1 10.92.18.2  
ip nhrp network-id 5  
ip nhrp nhs 10.0.80.1  
tunnel source 10.238.194.2  
tunnel mode gre multipoint

Detroit  
interface Tunnel0  
ip address 10.0.80.4 255.255.255.0  
ip nhrp authentication cisco321  
ip nhrp map 10.0.80.1 10.92.18.2  
ip nhrp map multicast 10.92.18.2  
ip nhrp network-id 5  
ip nhrp nhs 10.0.80.1  
tunnel source 10.7.44.2  
tunnel mode gre multipoint

☐ Reno  
interface Tunnel0  
ip address 10.0.80.3 255.255.255.0  
ip nhrp authentication cisco123  
ip nhrp map multicast 10.92.18.2  
ip nhrp map 10.92.18.2 10.0.80.1  
ip nhrp network-id 5  
ip nhrp nhs 10.0.80.1  
tunnel source 10.238.194.2  
tunnel mode gre multipoint

Detroit  
interface Tunnel0  
ip address 10.0.80.4 255.255.255.0  
ip nhrp authentication cisco123  
ip nhrp map 10.92.18.2 10.0.80.1  
ip nhrp map multicast 10.92.18.2  
ip nhrp network-id 5  
ip nhrp nhs 10.0.80.1  
tunnel source 10.7.44.2  
tunnel mode gre multipoint

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```
○ Reno
interface Tunnel0
ip address 10.0.80.3 255.255.255.0
ip nhrp authentication cisco123
ip nhrp map broadcast 10.92.18.2
ip nhrp map 10.0.80.1 10.92.18.2
ip nhrp network-id 5
ip nhrp nhs 10.0.80.1
tunnel source 10.238.194.2
tunnel mode gre multipoint

Detroit
interface Tunnel0
ip address 10.0.80.4 255.255.255.0
ip nhrp authentication cisco123
ip nhrp map 10.0.80.1 10.92.18.2
ip nhrp map broadcast 10.92.18.2
ip nhrp network-id 5
ip nhrp nhs 10.0.80.1
tunnel source 10.7.44.2
tunnel mode gre multipoint
```

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

**Correct Answer: C**

**Section:**

#### QUESTION 159

Which control plane process allows the MPLS forwarding state to recover when a secondary RP takes over from a failed primary RP?

- A. MP-BGP uses control plane services for label prefix bindings in the MPLS forwarding table
- B. LSP uses NSF to recover from disruption \*i control plane service
- C. FEC uses a control plane service to distribute information between primary and secondary processors
- D. LDP uses SSO to recover from disruption in control plane service

**Correct Answer: C**

**Section:**

#### QUESTION 160

What must a network architect consider for RTs when planning for a single customer full-mesh VPN m an MPLS Layer 3 network?

- A. RT must be globally unique within the same VPN
- B. RT must be globally identical within the same VPN
- C. RT values must be Afferent from the RD values in the same VPN
- D. Each RT value must be identical to an RD value within the same VPN.

Correct Answer: D

Section:

# QUESTION 161

Refer to the exhibit.



Refer to the exhibit. The traffic from spoke to hub is dropping. The operations team observes:

R2-R3 link is down due to the fiber cut.

R2 and R5 receive traffic from R1 in AS 65101.

R3 and R5 receive traffic from R4 in AS 65201.

Which configuration resolves the issue?

A.

```

R6(config)#router bgp 65101
R6(config-router)#no neighbor 10.0.0.17 update-source Loopback0

```

B.

```

R5(config)#router bgp 65101
R5(config-router)#no neighbor 10.0.0.18 update-source Loopback0

```

C.

```

R6(config)#router bgp 65201
R6(config-router)#neighbor 10.10.10.5 remote-as 65101
R6(config-router)#neighbor 10.10.10.5 update-source Loopback0
R6(config-router)#neighbor 10.10.10.5 ebgp-multihop 3

```

D.



```
R5(config)#router bgp 65101
R5(config-router)#neighbor 10.10.10.6 remote-as 65201
R5(config-router)#neighbor 10.10.10.6 update-source Loopback0
R5(config-router)#neighbor 10.10.10.6 ebgp-multihop 3
```

Correct Answer: C

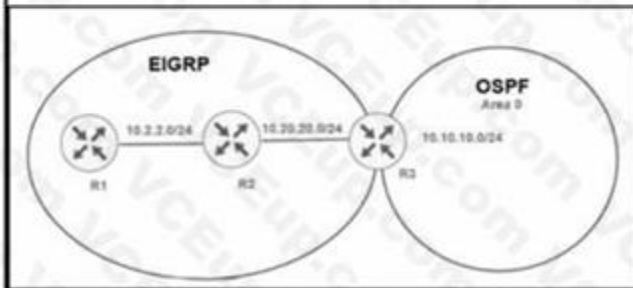
Section:

#### QUESTION 162

Refer to the exhibit.

```
R2#show ip eigrp topology 10.10.10.0 255.255.255.0
IP-EIGRP (AS 1): Topology entry for 10.10.10.0/24
 State is Passive, Query origin flag is 1, 1 Successor(s), FD
 is 256005120
 Routing Descriptor Blocks:
 10.20.20.3 (FastEthernet0/1), from 10.20.20.3, Send flag is
 0x0
 Composite metric is (256005120/256002560), Route is
 External
 Vector metric:
 Minimum bandwidth is 10 Kbit
 Total delay is 200 microseconds
 Reliability is 10/255
 Load is 10/255
 Minimum MTU is 10
 Hop count is 1
 External data:
 Originating router is 10.1.1.1
 AS number of route is 1
 External protocol is OSPF, external metric is 0
 Administrator tag is 0 (0x00000000)

R1#sh run | s eigrp
router eigrp 1
router-id 10.1.1.1
network 10.2.2.0 0.0.0.255
no auto-summary
```



Refer to the exhibit. An engineer configured router R3 to redistribute the prefix 10.10.10.0/24 from OSPF into EIGRP. R1 has no connectivity to the prefix. Which action enables receipt of prefixes on R1?

- A. R3 is advertising the 10.20.20.0/24 prefix with a TTL of 1, R3 must set the TTL to 2 for this prefix.
- B. R1 does not have a neighbor relationship with R2. The EIGRP process should be cleared on R1.
- C. Duplicate router IDs on R1 and R3, R1 should modify its router ID.
- D. R1 is not receiving the next-hop IP address of R3. R2 must enable the network 10.20.20.0/24 within EIGRP.

Correct Answer: B

Section:

#### QUESTION 163

Refer to the exhibit.



```

Configuration
flow exporter Flow-to-collector
 destination 192.168.100.17 vrf Mgmt-intf
 transport udp 2601
 export-protocol netflow-v5
!
flow monitor My-netflow
 exporter Flow-to-collector
 record netflow ipv4 original-input
!
! and the management-interface is configured as follows:
interface GigabitEthernet0
 description Management-Interface
 vrf forwarding Mgmt-intf
 ip address 192.168.100.50 255.255.255.0
 negotiation auto

router#sh flow exporter statis
Flow Exporter Flow-to-collector:
 Packet send statistics (last cleared 1w4d ago):
 Successfully sent: 0 (0 bytes)
 Reason not given: 8696868 (11473678976 bytes)
 Client send statistics:
 Client: Flow Monitor OeKB-netflow
 Records added: 256783312
 - failed to send: 256783312
 Bytes added: 2783766384
 - failed to send: 2783766384
router#

```

Refer to the exhibit. A network administrator configured NetFlow data, but the data is not visible at the NetFlow collector. Which configuration allows the router to send the records?

- A. Configure the management interface in the global routing table to send the records.
- B. Configure a different interface to send the records.
- C. Configure the NetFlow collector to listen at export-protocol netflow-v5.
- D. Rectify NetFlow collector reachability from the management interface.

**Correct Answer: B**

**Section:**

#### QUESTION 164

A network administrator opens a telnet connection to the router and gets the message:

R1#telnet 10.1.1.2

Trying 10.1.1.2 Open

(Connection to 10.1.1.2 closed by foreign host)

Router R2 is configured with enable secret and password commands. Which action resolves the issue?

- A. Configure the logging synchronous command on line vty.
- B. Configure the exec command on line vty.
- C. Configure the login local command on line vty
- D. Configure the enable password command on line vty.

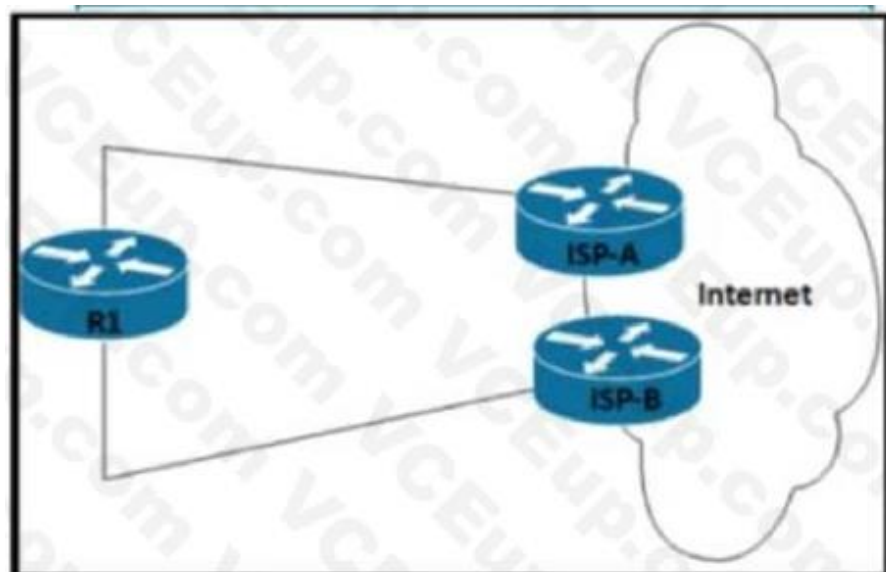
**Correct Answer: C**

**Section:**

#### QUESTION 165

Refer to the exhibit.

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Refer to the exhibit. Router R1 peers with two ISPs using static routes to get to the internet. The requirement is that R1 must prefer ISP-A under normal circumstances and failover to ISP-B if the connectivity to ISP-A is lost. The engineer observes that R1 is load balancing traffic across the two ISPs Which action resolves the issue by sending traffic to ISP-A only with failover to ISP-B?

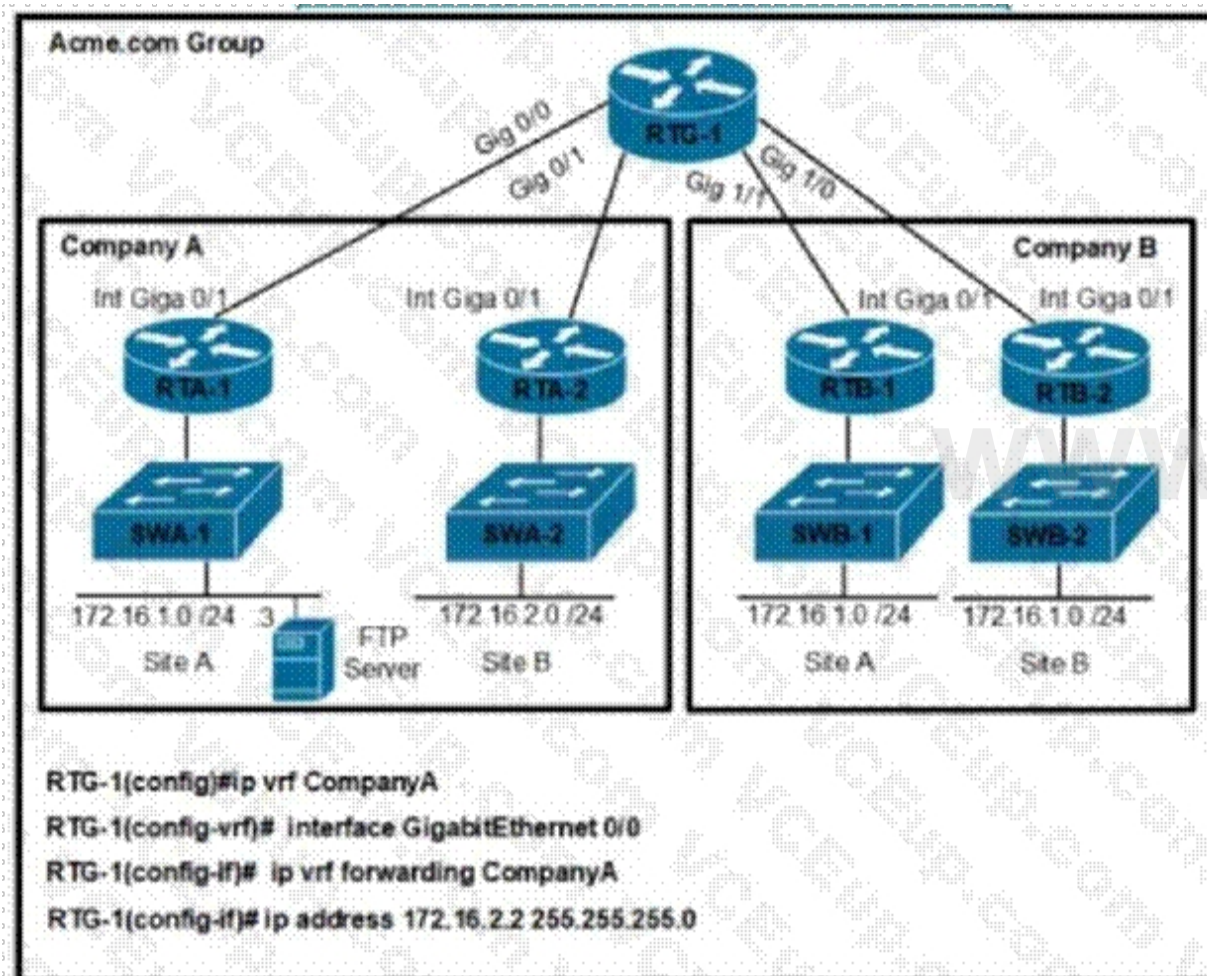
- A. Configure OSPF between R1, ISP-A, and ISP-B for dynamic failover if any ISP link to R1 fails
- B. Configure two static routes on R1, one pointing to ISP-A and another pointing to ISP-B with 222 admin distance
- C. Change the bandwidth of the interface on R1 so that interface to ISP-A has a higher value than the interface to ISP-B
- D. Configure two static routes on R1, one pointing to ISP-B with more specific routes and another pointing to ISP-A with summary routes

**Correct Answer: D**

**Section:**

#### QUESTION 166

Refer to the exhibit.



Refer to the exhibit. An engineer must configure a per VRF for TACACS+ for company A. Which configuration on RTG-1 accomplishes the task?



- ☐ aaa new-model  
aaa group server tacacs+ Tacacscluster  
server-private 172.16.1.1 port 49 key routing  
ip tacacs source-interface GigabitEthernet 0/0  
ip vrf forwarding CompanyA
- ☐ aaa new-model  
aaa group server tacacs+ Tacacscluster  
server-private 172.16.1.3 port 49 key routing  
ip tacacs source-interface GigabitEthernet 0/1  
ip vrf forwarding CompanyA
- ☐ aaa new-model  
aaa group server tacacs+ Tacacscluster  
server-private 172.16.1.1 port 49 key routing  
ip tacacs source-interface GigabitEthernet 0/1  
ip vrf CompanyA
- ☐ aaa new-model  
aaa group server tacacs+ Tacacscluster  
server-private 172.16.1.3 port 49 key routing  
ip tacacs source-interface GigabitEthernet 0/0  
ip vrf CompanyA

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

Correct Answer: D

Section:

**QUESTION 167**

A company is redesigning WAN infrastructure so that all branch sites must communicate via the head office and the head office can directly communicate with each site independently. The network engineer must configure the head office router by considering zero-touch technology when adding new sites in the same WAN infrastructure. Which configuration must be applied to the head office router to meet this requirement?

- ☐ Interface Tunnel0  
tunnel mode ip  
ip nhrp map multicast dynamic
- ☐ Interface Tunnel0  
tunnel mode dvmrp  
ip nhrp redirect
- ☐ Interface Tunnel0  
tunnel mode ip  
ip nhrp redirect
- ☐ Interface Tunnel0  
tunnel mode gre multipoint  
ip nhrp map multicast dynamic

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

**Correct Answer: D**

**Section:**

**QUESTION 168**

Which protocol must be secured with MD-5 authentication across the MPLS cloud to prevent hackers from introducing bogus routers?

- A. MP-BGP
- B. LSP
- C. RSVP
- D. LDP

**Correct Answer: A**

**Section:**

**QUESTION 169**

Which technique removes the outermost label of an MPLS-tagged packet before the packet is forwarded to an adjacent LER?

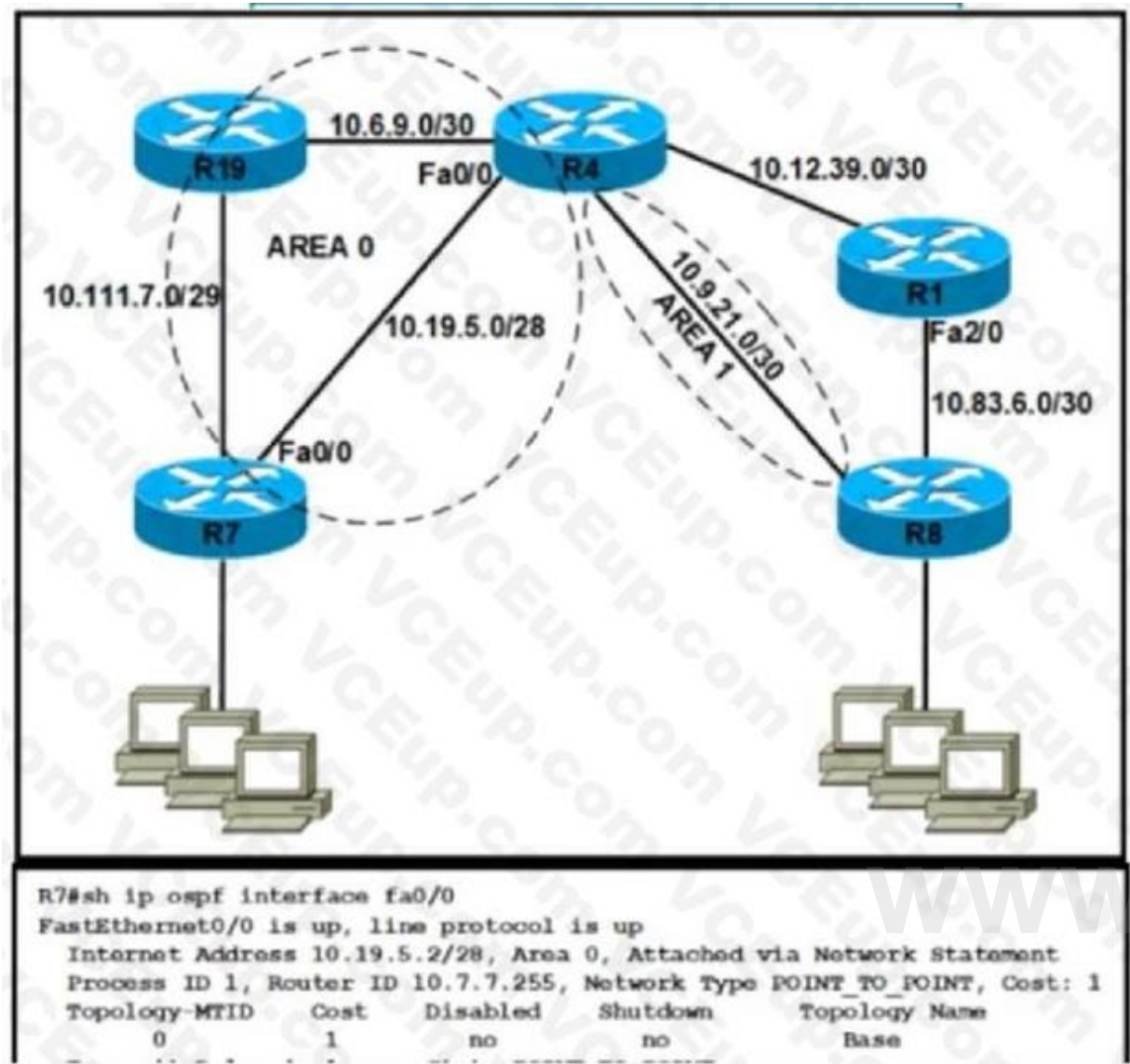
- A. label swap
- B. explicit-null
- C. label imposition
- D. PHP

**Correct Answer: D**

**Section:**

**QUESTION 170**

Refer to the exhibit.



Refer to the exhibit. Router R4 is configured correctly with default OSPF values. A network engineer configured R7 for OSPF. R7 must not be elected as a DR for the segment between R4-R7. The adjacency between R4 and R7 failed to form. Which configuration resolves the issue?



- ☐ R7(config)#interface fa0/0  
R7(config-if)#ip ospf priority 255  
R7(config-if)#ip ospf hello-interval 10  
R7(config-if)#ip ospf dead-interval 30  
R7(config-if)#ip ospf network broadcast
- ☐ R7(config)#interface fa0/0  
R7(config-if)#ip ospf priority 0  
R7(config-if)#ip ospf hello-interval 10  
R7(config-if)#ip ospf dead-interval 30  
R7(config-if)#ip ospf network non-broadcast
- ☐ R7(config)#interface fa0/0  
R7(config-if)#ip ospf priority 0  
R7(config-if)#ip ospf hello-interval 10  
R7(config-if)#ip ospf dead-interval 40  
R7(config-if)#ip ospf network broadcast
- ☐ R7(config)#interface fa0/0  
R7(config-if)#ip ospf priority 255  
R7(config-if)#ip ospf hello-interval 10  
R7(config-if)#ip ospf dead-interval 40  
R7(config-if)#ip ospf network non-broadcast

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

**Correct Answer: C**

**Section:**

#### QUESTION 171

Refer to the exhibit.

```
R1#show bgp ipv6 unicast 2001:db8::1/128
BGP routing table entry for 2001:db8::1/128, version 3
Paths: (1 available, best #1, table Global-IPv6-Table)
Not advertised to any peer
Local
 2001:db8:33:33::33 (metric 128) from 2001:db8:11:11::11 (1.1.1.1)
 Origin IGP, metric 0, localpref 100, valid, internal, best
 Originator: 3.3.3.3, Cluster list: 1.1.1.1
```

Refer to the exhibit. An engineer examines the BGP update for the IPv6 prefix 2001:db8::1/128. which should have been summarized into a /64 prefix. Which sequence of actions achieves the summarization?



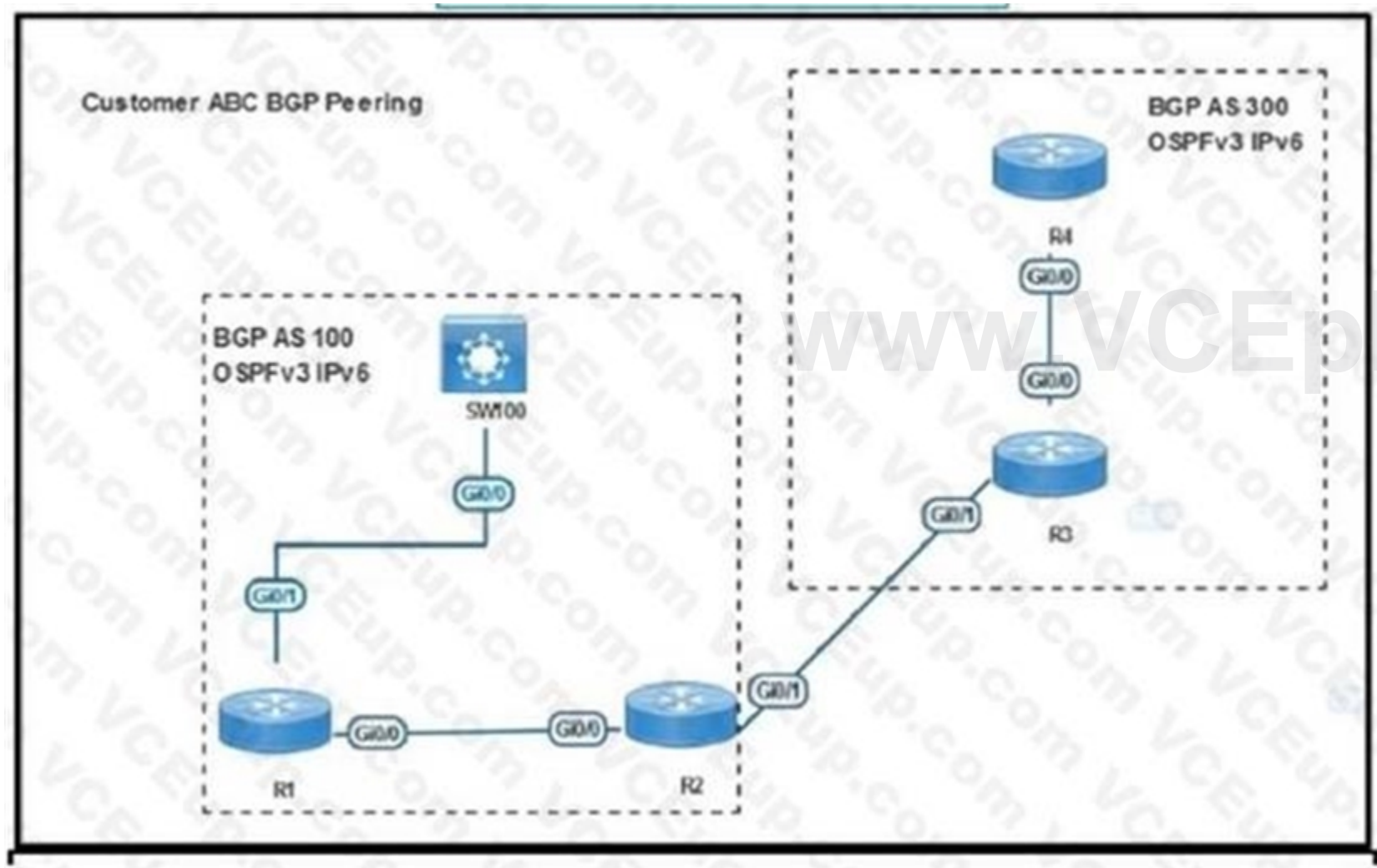
- A. R1 is a route reflector client of a RR with a router ID of 1.1.1.1. and the originator of the prefix has a router ID of 3.3.3.3. Both routers belong to different ASs. The prefix is not advertised to any peer and must be advertised using the network statement on R3.
- B. R1 is a route reflector with a router ID of 3.3.3.3. and the originator of the prefix is a route reflector client, which has a router ID of 3.3.3.3. Both routers belong to the same AS Configure an aggregate address on the router with ID 1.1.1.1 for the prefix
- C. R1 is a route reflector with a router ID of 1.1.1.1. and the originator of the prefix is a route reflector client, which has a router ID of 3.3.3.3. Both routers belong to the same AS Configure an aggregate address on the router with ID 1.1.1.1 for the prefix
- D. R1 is a route reflector client of a RR with a router ID of 1.1.1.1. and the originator of the prefix has a router ID of 3.3.3.3. Both routers belong to the same AS. Configure an aggregate address on the router with ID 3.3.3.3 for the prefix.

**Correct Answer: D**

**Section:**

#### QUESTION 172

Refer to the exhibit.



```
SW100#sh ip bgp ipv6 uni summ
BGP router identifier 100.0.0.1, local AS number 100
BGP table version is 1, main routing table version 1

Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd
2001:ABC:AABB:1100:1122:1111:2222:AAA1
 4 100 6 5 1 0 0 00:00:58 0

SW100#sh ip bgp ipv6 unicast
SW100#

R1#sh ip bgp ipv6 uni
BGP table version is 4, local router ID is 1.1.1.1
 Network Next Hop Metric LocPrf Weight Path
 * i 2001::4/128 2001::4 0 100 0 300 i
 *>i 2002::2/128 2001::2 0 100 0 i
R1#
R1#sh ipv6 route
O 2001::2/128 [110/1]
 via FE80::5200:C3FF:FE01:E600, GigabitEthernet0/0
B 2002::2/128 [200/0]
 via 2001::2
```

Refer to the exhibit SW100 cannot receive routes from R1 Which configuration resolves the issue?

☐ R1  
router bgp 100  
address-family ipv6  
neighbor 2001::2 route-reflector-client  
neighbor 2001:ABC:AABB:1100:1122:1111:2222:AAA2 route-reflector-client

R2  
router bgp 100  
address-family ipv6  
neighbor 2001::2  
neighbor 2001::1 next-hop-self

☐ R1  
router bgp 100  
address-family ipv6  
neighbor 2001::2 route-reflector-client  
neighbor 2001:ABC:AABB:1100:1122:1111:2222:AAA2 route-reflector-client

R2  
router bgp 100  
address-family ipv6  
neighbor 2001::2  
neighbor 2001::1 as-override

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☐ R1  
router bgp 100  
address-family ipv6  
no synchronization

R2  
router bgp 100  
address-family ipv6  
no synchronization  
SW100  
router bgp 100  
address-family ipv6  
no synchronization

☐ R1  
router bgp 100  
address-family ipv6  
redistribute connected

R2  
router bgp 100  
address-family ipv6  
redistribute connected

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

Correct Answer: A  
Section:



#### QUESTION 173

Refer to the exhibit.

```
*Sep 3 23:18:21.264: EIGRP: Neighbor (10.1.2.192) not yet found
*Sep 3 23:19:18.675: Going down: Peer 10.1.2.1 total=2 stub 0, iib-stub=0 iid-all=0
*Sep 3 23:19:18.675: EIGRP: Handle deallocation failure [1]
*Sep 3 23:19:18.675: EIGRP: Neighbor 10.1.2.1 went down on Tunnel1.
*Sep 3 23:19:22.943: EIGRP: New peer 10.1.2.1.
*Sep 3 23:19:22.943: %DUAL-5-NBRCHANGE: EIGRP-IPv4 3111: Neighbor 10.1.2.1 (Tunnel1) is up: new adjacency
```

Refer to the exhibit. Which configuration command establishes an EIGRP neighbor adjacency between the hub and spoke?

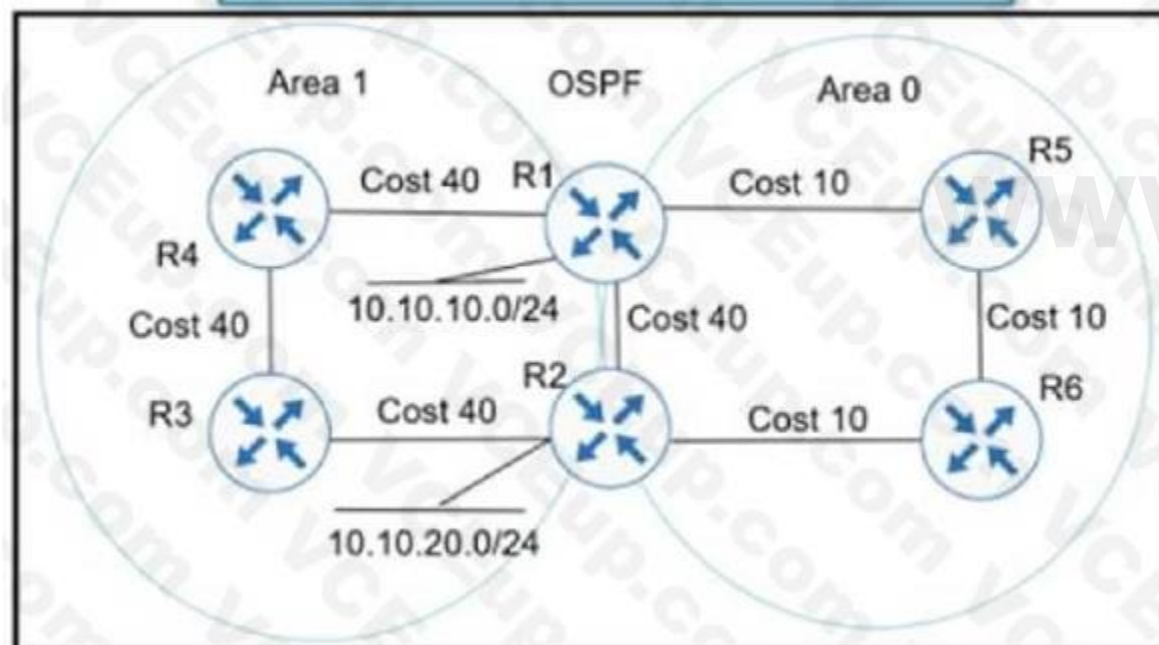
- A. connected 10.1.2.192 command on spoke router
- B. network 10.1.2.192 command on spoke router
- C. eigrp-peer 10.1.2.192 command on the hub router
- D. neighbor 10.1.2.192 command on hub router

**Correct Answer: D**

**Section:**

#### QUESTION 174

Refer to the exhibit.



Refer to the exhibit Which action ensures that 10 10 10 0/24 reaches 10 10 20 0/24 through the direct link between R1 and R2?

- A. Configure R1 and R2 LAN links as nonpassive.
- B. Configure R1 and R2 links under area 1
- C. Configure OSPF link cost to 1 between R1 and R2
- D. Configure OSPF path cost to 3 between R1 and R2

**Correct Answer: B**

**Section:**

#### QUESTION 175

Refer to the exhibit.

```
March 10 19:28:53.254 GMT: %SNMP-3-AUTHFAIL: Authentication
failure for SNMP request from host 10.1.1.1

snmp-server community public RO 15
snmp-server community private RW 16
!
logging snmp-authfail
!
access-list 15 permit 10.1.1.1
access-list 16 permit 10.1.1.2
```

Refer to the exhibit Which action resolves the issue?

- A. Configure host IP address in access-list 16
- B. Configure SNMPv3 on the router
- C. Configure SNMP authentication on the router
- D. Configure a valid SNMP community string

**Correct Answer: D**

**Section:**

**Explanation:**

:

#### QUESTION 176

Refer to the exhibit.

```
ip prefix-list 1 permit 172.16.0.0/16
ip prefix-list 2 permit 192.168.2.0/24
!
route-map RED permit 10
match ip address prefix-list 1
set ip next hop 10.1.1.1
continue 20
exit
!
route-map RED permit 20
match ip address prefix-list 2
set ip next hop 10.2.2.2
end
```

The forwarding entries show that the next hop for prefixes from the 172.16.0.0/16 network is set to 10.2.2.2 instead of 10.1.1.1. Which action resolves the issue?

- A. Add set ip next hop 10.1.1.1 in route-map RED permit 20.
- B. Add the continue statement in route-map RED permit 10 instead of continue 20.

- C. Remove match ip address prefix-list 1 from route-map RED permit 10.
- D. Remove the continue 20 statement from route-map RED permit 10

**Correct Answer: D**  
**Section:**

**QUESTION 177**  
Refer to the exhibit.

```
CPE# show ip route static
<output omitted>
S* 0.0.0.0/0 is directly connected, Dialer0
S 198.51.100.0/24 [1/0] via 192.168.1.1
S 203.0.113.0/24 [1/0] via 192.168.2.1

CPE# show run | section router ospf
router ospf 1
 redistribute static subnets

CPE# show ip ospf database | begin Type-5
Type-5 AS External Link States

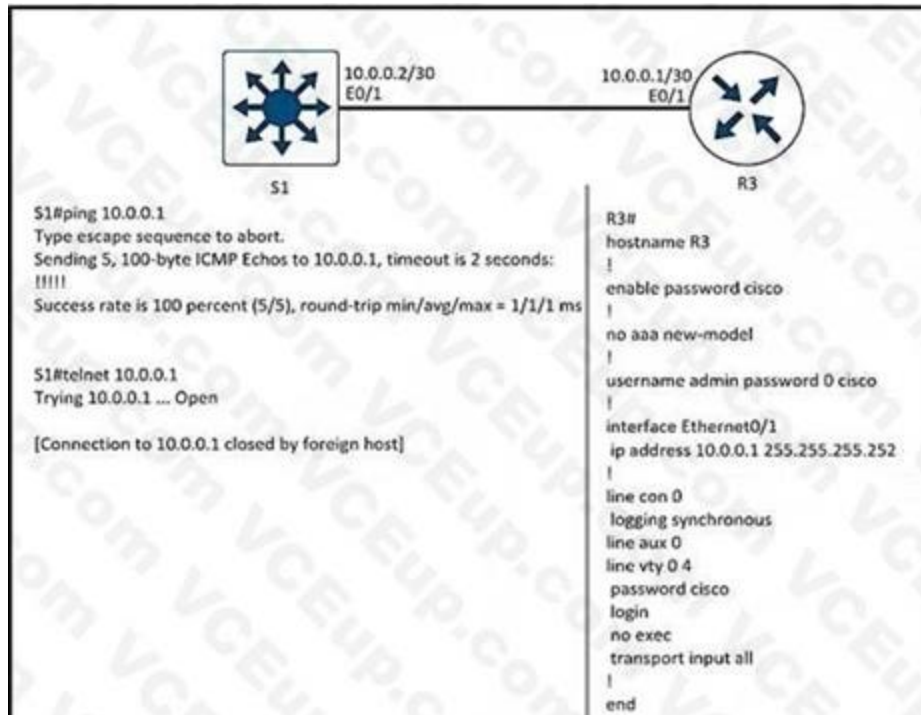
Link ID ADV Router Age Seq# Checksum Tag
198.51.100.0 192.168.0.1 14 0x80000001 0x0007D0 0
203.0.113.0 192.168.0.1 14 0x80000001 0x009C5C 0
```

Refer to the exhibit. The default route is not advertised to the neighboring router. Which action resolves the issue?

- A. Configure the redistribute static metric 200 subnets command under OSPF.
- B. Configure OSPF on the Dialer0 interface.
- C. Configure the network 0.0.0.0 255.255.255.255 area 0 command under OSPF.
- D. Configure the default-information originate command under OSPF.

**Correct Answer: D**  
**Section:**

**QUESTION 178**  
Refer to the exhibit.



Refer to the exhibit. A network engineer cannot remote access R3 using Telnet from switch S1. Which action resolves the issue?

- A. Allow the inbound connection via the exec command on R3.
- B. Add the transport input telnet command on R3.
- C. Allow to use the ssh -I admin 10.0.0.1 command on the switch.
- D. Add the login admin command on the switch.

**Correct Answer: A**

**Section:**

#### QUESTION 179

Refer to the exhibit.

```
R1#show ip rip database
10.0.0.0/8 auto-summary
10.1.1.0/24 directly connected, GigabitEthernet0/0
10.1.3.0/24
[2] via 10.1.12.2, 00:00:03, GigabitEthernet1/0
10.1.12.0/24 directly connected, GigabitEthernet1/0
10.1.23.0/24
[1] via 10.1.12.2, 00:00:03, GigabitEthernet1/0
```

Refer to the exhibit. A customer reports that networks in the 10.0.1.0/24 space do not appear in the RIP database. What action resolves the issue?

- A. Remove summarization of 10.0.0.0/8.
- B. Permit 10.0.1.0/24 address in the ACL.
- C. Remove ACL on R1 blocking 10.0.1.0/24 network.
- D. Configure 10.0.1.0/24 network under RIP.

**Correct Answer: A**

**Section:**

#### QUESTION 180

Refer to the exhibit.



```

100.0.0.0/32 is subnetted, 3 subnets
C 100.1.1.1 is directly connected, Loopback0
D 100.2.2.2 [90/150160] via 10.1.1.2, 00:00:46, FastEthernet0/0
D 100.3.3.3 [90/158720] via 10.1.1.14, 00:00:44, FastEthernet1/0
 [90/158720] via 10.1.1.2, 00:00:44, FastEthernet0/0
10.0.0.0/8 is variably subnetted, 13 subnets, 4 masks
D 10.1.1.8/30 [90/30720] via 10.1.1.14, 00:00:44, FastEthernet1/0
C 10.1.1.12/30 is directly connected, FastEthernet1/0
C 10.1.1.0/30 is directly connected, FastEthernet0/0
D 10.1.1.4/30 [90/30720] via 10.1.1.2, 00:00:45, FastEthernet0/0
C 10.100.1.40/32 is directly connected, Loopback40
D EX 10.1.1.80/29 [170/33280] via 10.1.1.14, 00:00:45, FastEthernet1/0
 [170/33280] via 10.1.1.2, 00:00:45, FastEthernet0/0
C 10.100.1.50/32 is directly connected, Loopback50
C 10.100.1.10/32 is directly connected, Loopback10
S 10.100.1.0/24 is a summary, 00:00:48, Null0
C 10.100.1.30/32 is directly connected, Loopback30
C 10.100.1.20/32 is directly connected, Loopback20
C 10.200.1.0/24 is directly connected, FastEthernet0/1
D EX 10.247.10.0/30 [170/2174976] via 10.1.1.14, 00:00:46, FastEthernet1/0
 [170/2174976] via 10.1.1.2, 00:00:46, FastEthernet0/0

```

Refer to the exhibit. R1 must advertise all loopback interfaces IP addresses to neighbors, but EIGRP neighbors receive a summary route. Which action resolves the issue?

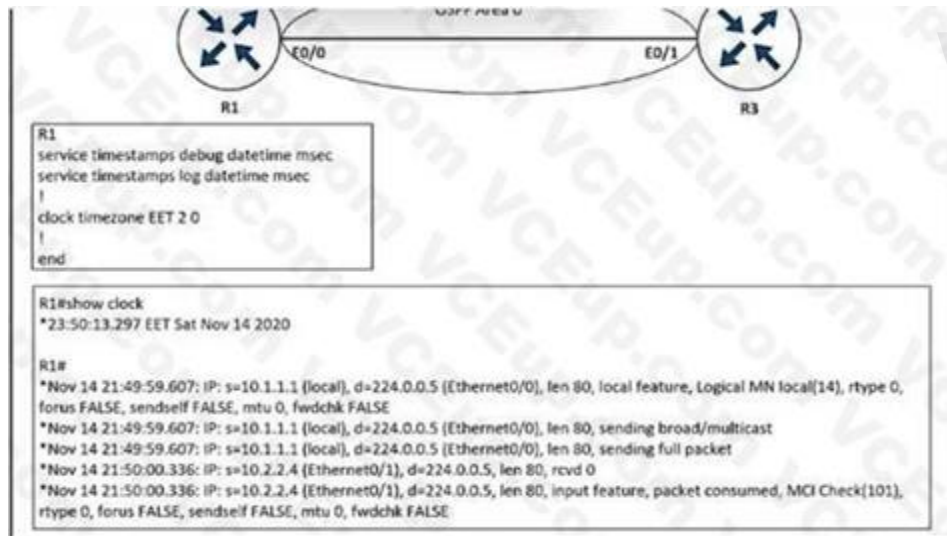
- A. Redistribute connected routes into EIGRP Enable
- B. EIGRP on loopback Interfaces.
- C. Disable auto summarization on R1.
- D. Remove the 10.100.1.0/24 static route.

**Correct Answer: D**

**Section:**

#### QUESTION 181

Refer to the exhibit.



Refer to the exhibit. An engineer cannot determine the time of the problem on R1 due to a mismatch between the router local clock and logs. Which command synchronizes the time between new log entries and the local clock on R1?

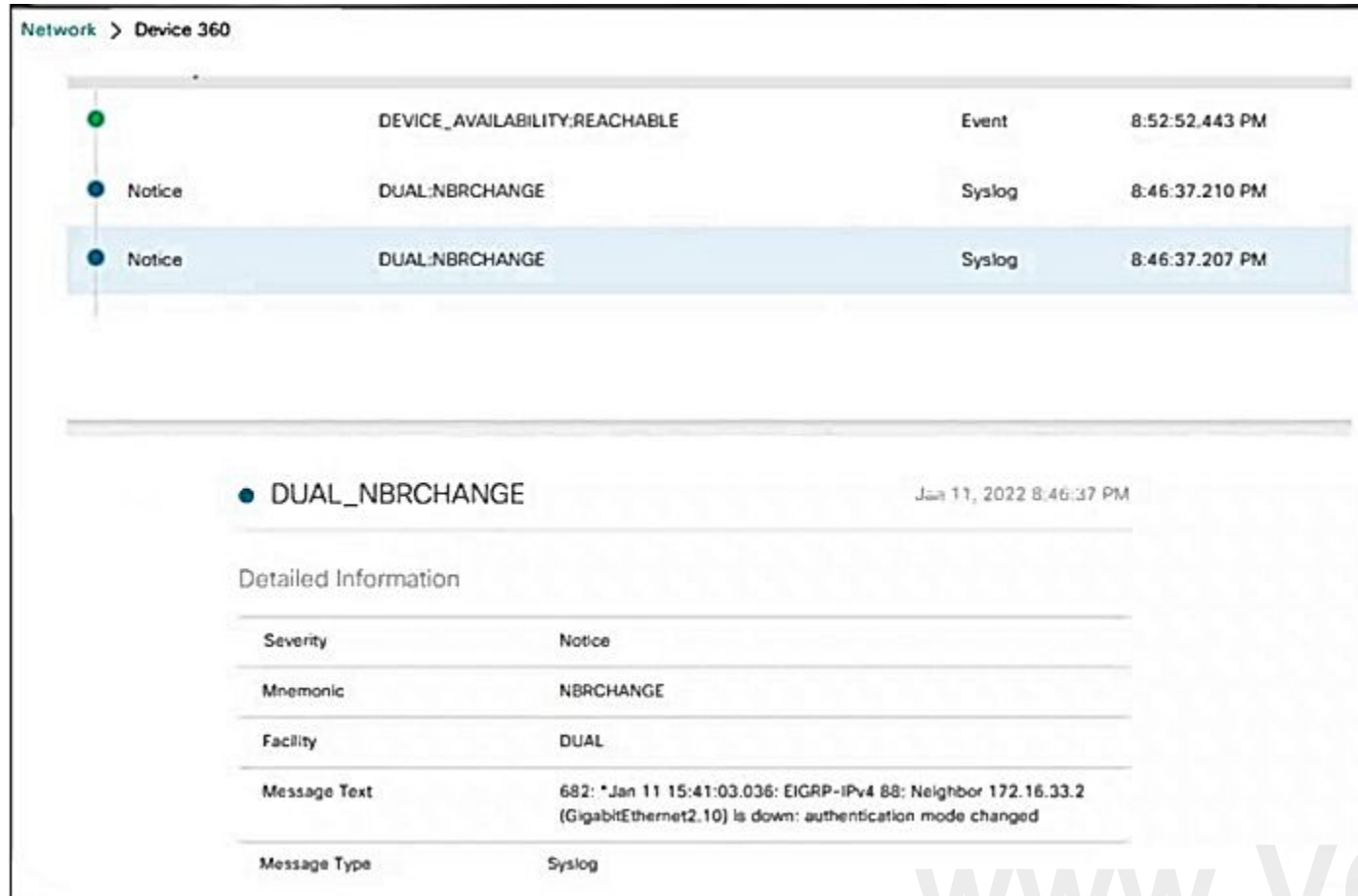
- A. service timestamps debug datetime msec show.timezone
- B. service timestamps log datetime localtime msec
- C. service timestamps debug datetime localtime msec
- D. service timestamps log datetime msec show-timezone

**Correct Answer: B**

**Section:**

### QUESTION 182

Refer to the exhibit.



Network > Device 360

| Severity | Facility | Message                       | Time           |
|----------|----------|-------------------------------|----------------|
| Event    |          | DEVICE_AVAILABILITY:REACHABLE | 8:52:52.443 PM |
| Notice   | DUAL     | DUAL:NBRCHANGE                | 8:46:37.210 PM |
| Notice   | DUAL     | DUAL:NBRCHANGE                | 8:46:37.207 PM |

**DUAL\_NBRCHANGE** Jan 11, 2022 8:46:37 PM

Detailed Information

|              |                                                                                                                           |
|--------------|---------------------------------------------------------------------------------------------------------------------------|
| Severity     | Notice                                                                                                                    |
| Mnemonic     | NBRCHANGE                                                                                                                 |
| Facility     | DUAL                                                                                                                      |
| Message Text | 682: *Jan 11 15:41:03.036: EIGRP-IPv4 88: Neighbor 172.16.33.2 (GigabitEthernet2.10) is down: authentication mode changed |
| Message Type | Syslog                                                                                                                    |

R1 test its directly connected EIGRP peer 172.16.33.2 (SW1). Which configuration resolves the issue1?

- A. key chain EIGRP key 1 key-string Cisco ! interface Gigabit Ethernet 2 IP authentication mode elgrp 88 md5 IP authentication key-chain elgrp 88 EIGRP
- B. key chain EIGRP key1 key-string Cisco ! interface Gigabit Ethernet 2.10 IP authentication mode eigrp 88 md5 IP authentication key-chain eigrp 88 Cisco
- C. key chain EIGRP key 1 key-string Cisco ! interface Gigabit Ethernet 2.10 IP authentication mode elgrp 88 md5 IP authentication key-chain eigrp 88 EIGRP
- D. key chain EIGRP key1 key-string Cisco ! interface Gigabit Ethernet 2 IP authentication mode eigrp 88 md5 IP authentication key-chain elgrp 88 Cisco

**Correct Answer: B**

**Section:**

### QUESTION 183

Refer to the exhibit.

```
ip sla 10
icmp-echo 10.1.1.10
timeout 2000
threshold 2000
frequency 40
ip sla schedule 10 life forever start-time now
!
track 1 ip sla 10 reachability
```

An engineer configured IP SLA to monitor a next hop on a router for reachability When the next hop is unreachable, the router is executing tracking and failing over another route, but packet loss is experienced because the reachability is flapping. Which action resolves the issue?

- A. Append delay up 0 down 0 to the track command

- B. Increase the timeout of the sla probe to 6000
- C. Append delay up SO down 60vto the track command
- D. Increase the frequency of the sla probe to 60.

**Correct Answer: C**

**Section:**

**Explanation:**

IP SLA (Internet Protocol Service Level Agreement) is a feature that allows you to measure network performance such as latency, jitter, packet loss, and so on. In this case, it's being used to monitor the reachability of a next hop on a router<sup>123</sup>.

When the next hop is unreachable, the router is executing tracking and failing over to another route. However, packet loss is experienced because the reachability is flapping. This could be due to the router switching back and forth between the primary and backup routes too quickly.

To resolve this issue, you can introduce a delay in the tracking process. This can be done by appending a delay to the track command. Option C suggests appending a delay of 50 seconds for the up state and 60 seconds for the down state<sup>45</sup>. This means that the router will wait for 50 seconds before declaring the tracked object as up (reachable) and 60 seconds before declaring it as down (unreachable). This delay can help prevent the router from switching routes too quickly, thus reducing the chances of reachability flapping and packet loss<sup>45</sup>.

Configure ISP Failover with Default Routes Using IP SLA Tracking - Cisco

Using IPSLA to change routing - Cisco Community

How to Use IP SLA Technology to Assess WAN Performance

Reliable Static Routing with IP SLA - NetworkLessons.com

Configuring Static Route Tracking using IP SLA (Basic)

#### QUESTION 184

Which Layer 3 VPN attribute allows different customers to connect to the same MPLS network wrth overlapping IP ranges?

- A. VRF
- B. RT
- C. MP-BGP
- D. RD

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**Correct Answer: D**

**Section:**

**Explanation:**

In a Layer 3 VPN (Virtual Private Network) over an MPLS (Multiprotocol Label Switching) network, the attribute that allows different customers to connect with overlapping IP ranges is the Route Distinguisher (RD)<sup>123</sup>.

RD is a unique identifier that is prepended to each IP address in a customer's VPN to create a unique VPNv4 address. This allows customers to use overlapping IP addresses without conflict<sup>123</sup>. The RD makes it possible for the same IP prefix to exist in different VPNs, which is crucial when customers have overlapping IP ranges<sup>123</sup>.

MPLS Layer 3 VPN Explained - NetworkLessons.com

MPLS: Layer 3 VPNs Configuration Guide - Cisco

Understanding Using MPLS-Based Layer 3 VPNs on Switches - Juniper

#### QUESTION 185

The network administrator configured CoPP so that all SNMP traffic from Cisco Prime located at 192.168.1.11 toward the router CPU is limited to 1000 kbps. Any traffic that exceeds this limit must be dropped.

```
access-list 100 permit udp any any eq 161
```

```
!
```

```
class-map CM-SNMP
```

```
match access-group 100
```

```
!
```

```
policy-map PM-COPP
```

```
class CM-SNMP
```

```
police 1000 conform-action transmit
```

```
!
```

control-plane

service-policy input PM-COPP

The network administrator is not getting the desired result for the SNMP traffic and SNMP traffic is getting dropped frequently. Which set of configurations resolves the issue?

- A. no access-list 100 access-list 100 permit tcp host 192.168.1.11 any eq 161
- B. no access-list 100 access-list 100 permit udp host 192.168.1.11 any eq 161 ! policy-map PM-COPP class CM-SNMP no police 1000 conform-action transmit police 1000000 conform-action transmit ! control-plane no service-policy input PM-COPP ! interface E 0/0 service-policy input PM-COPP ! interface E 0/1 service-policy input PM-COPP
- C. no access-list 100 access-list 100 permit udp host 192.168.1.11 any eq 161 ! policy-map PM-COPP class CM-SNMP no police 1000 conform-action transmit police 1000000 conform-action transmit
- D. policy-map PM-COPP class CM-SNMP no police 1000 conform-action transmit police 1000000 conform-action transmit

**Correct Answer: C**

**Section:**

**Explanation:**

In the context of Control Plane Policing (CoPP) in Cisco devices, the rate limit is specified in bits per second (bps), not kilobits per second (kbps). Therefore, a limit of 1000 kbps should indeed be entered as 1,000,000 bps in the CoPP configuration.

Also, the access list should be configured to match the specific SNMP traffic from the Cisco Prime IP address (192.168.1.11), as you correctly pointed out.

Here's the corrected configuration:

```
no access-list 100
```

```
access-list 100 permit udp host 192.168.1.11 any eq 161
```

```
!
```

```
policy-map PM-COPP
```

```
class CM-SNMP
```

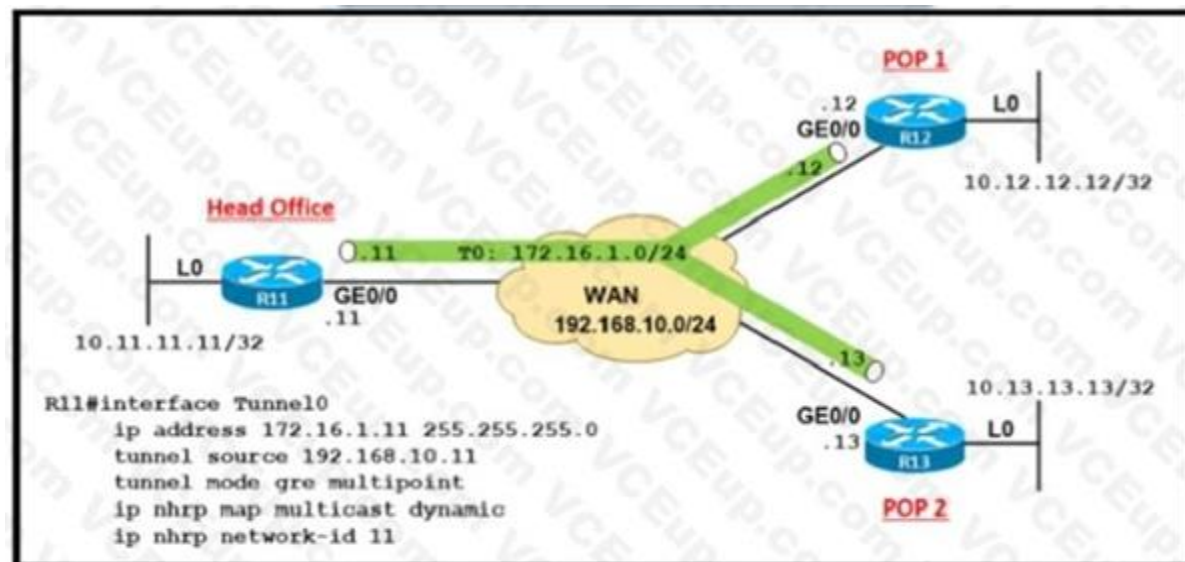
```
no police 1000 conform-action transmit
```

```
police 1000000 conform-action transmit
```

This configuration ensures that only the SNMP traffic from Cisco Prime is policed and any excess traffic is dropped, preventing the router's CPU from being overwhelmed.

#### QUESTION 186

Refer to the exhibit.



Refer to the exhibit A company builds WAN infrastructure between the head office and POPs using DMVPN hub-and-spoke topology to provide end-to-end communication All POPs must maintain point-to-point connectivity with the head office Which configuration meets the requirement at routers R12 and R13?



○ R12#  
interface Tunnel0  
ip nhrp map multicast 192.168.10.11  
ip nhrp map 172.16.1.11 192.168.10.11  
ip nhrp network-id 12  
ip nhrp nhs 172.16.1.11

R13#  
interface Tunnel0  
ip nhrp map multicast 192.168.10.11  
ip nhrp map 172.16.1.11 192.168.10.11  
ip nhrp network-id 13  
ip nhrp nhs 172.16.1.11

○ R12#  
interface Tunnel0  
ip nhrp map multicast 172.16.1.11  
ip nhrp map 172.16.1.11 192.168.10.11  
ip nhrp network-id 12  
ip nhrp nhs 192.168.10.11

R13#  
interface Tunnel0  
ip nhrp map multicast 172.16.1.11  
ip nhrp map 172.16.1.11 192.168.10.11  
ip nhrp network-id 13  
ip nhrp nhs 192.168.10.11

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☐ Configure routers R12 and R13 as:

```
interface Tunnel0
ip nhrp map multicast 172.16.1.11
ip nhrp map 172.16.1.11 192.168.10.11
ip nhrp network-id 11
ip nhrp nhs 192.168.10.11
```

☐ Configure routers R12 and R13 as:

```
interface Tunnel0
ip nhrp map multicast 192.168.10.11
ip nhrp map 172.16.1.11 192.168.10.11
ip nhrp network-id 11
ip nhrp nhs 172.16.1.11
```

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

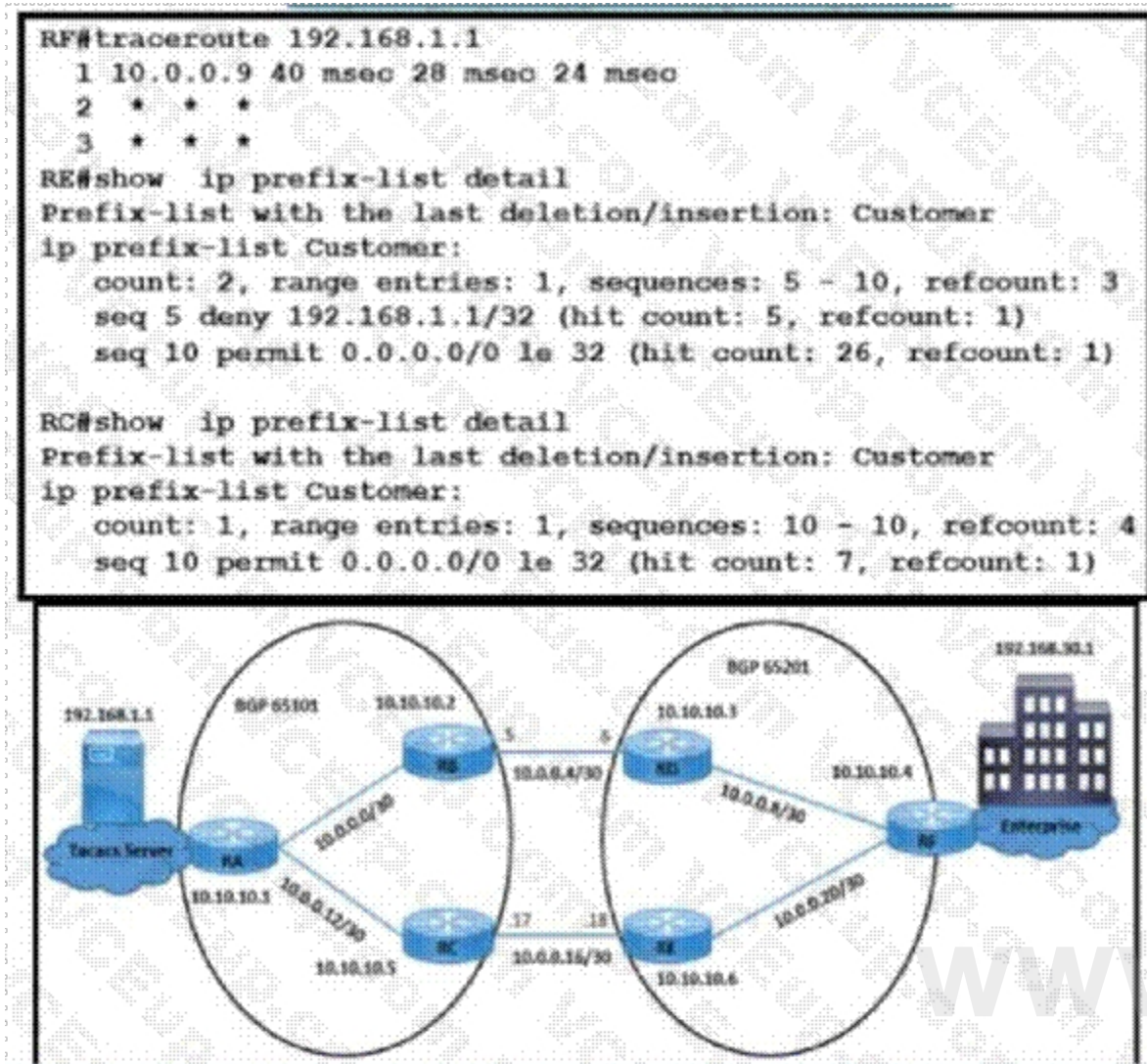
**Correct Answer: D**

**Section:**

**QUESTION 187**

Refer to the exhibit.





Refer to the exhibit The enterprise users fail to authenticate with the TACACS server when a direct fiber link fails between RB and RD The NOC team observes Users connected on AS65201 fail to authenticate with TACACS server 192 168 11 Users connected on AS65101 successfully authenticate with TACACS server 192 168 1 1 All AS65101 and AS65201 users are configured to authenticate with the TACACS server Which configuration resolves the issue?

A.

RC(config)# ip prefix-list Customer seq 5 permit 192.168.30.1/32

B.

RC(config)#router bgp 65101  
 RC(config-router)# neighbor 10.0.0.18 prefix-list Customer in

C.

RF(config)#no ip prefix-list Customer seq 5 deny 192.168.1.1/32

D.

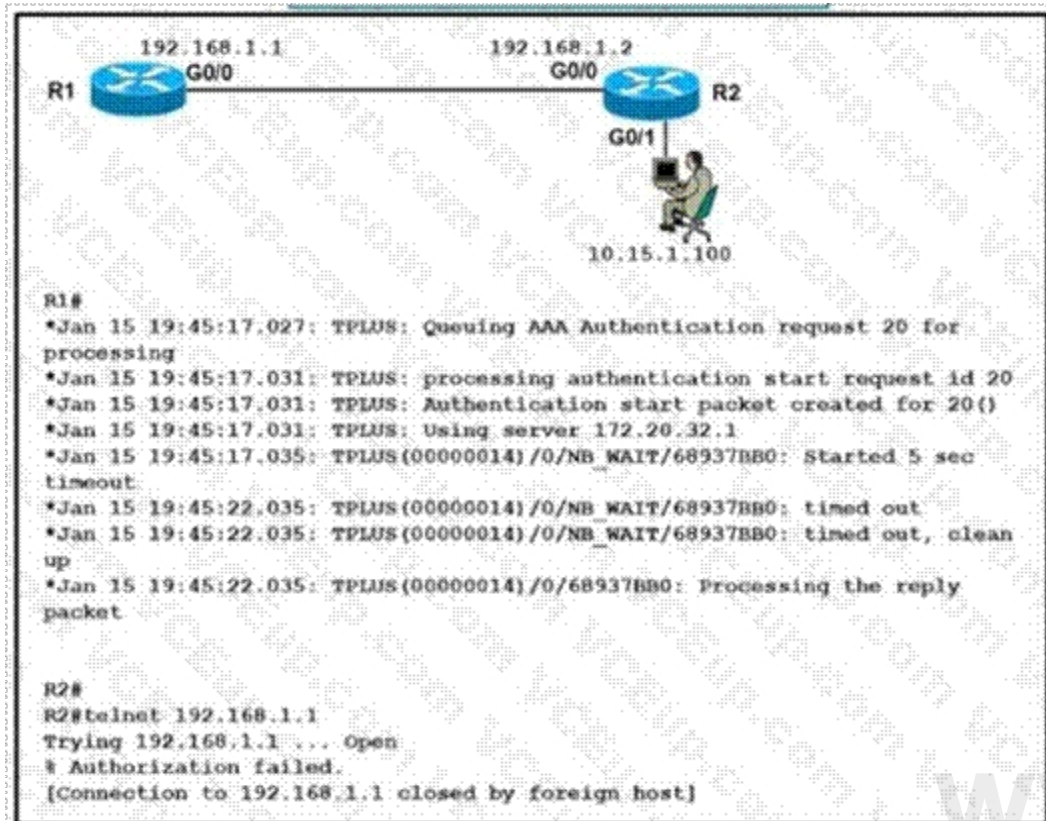
RF(config)#router bgp 65201  
 RF(config-router)# neighbor 10.0.0.17 prefix-list Customer out

Correct Answer: C

Section:

#### QUESTION 188

Refer to the exhibit.



Refer to the exhibit A network engineer is troubleshooting an AAA authentication issue for R1 from R2 When an engineer tries to open a telnet connection to R1 it opens the connection but shows a %Authorization failed error message on the terminal and closes the connection silently Which action resolves the issue?

- A. Resolve tacacs+ server host IP authentication miss configuration on the R1 router
- B. Resolve tacacs+ server reachability from the R1 router.
- C. Configure the tacacs+ server host IP on the R1 router
- D. Configure authorization commands in the tacacs\* server for the R1 router.

Correct Answer: D

Section:

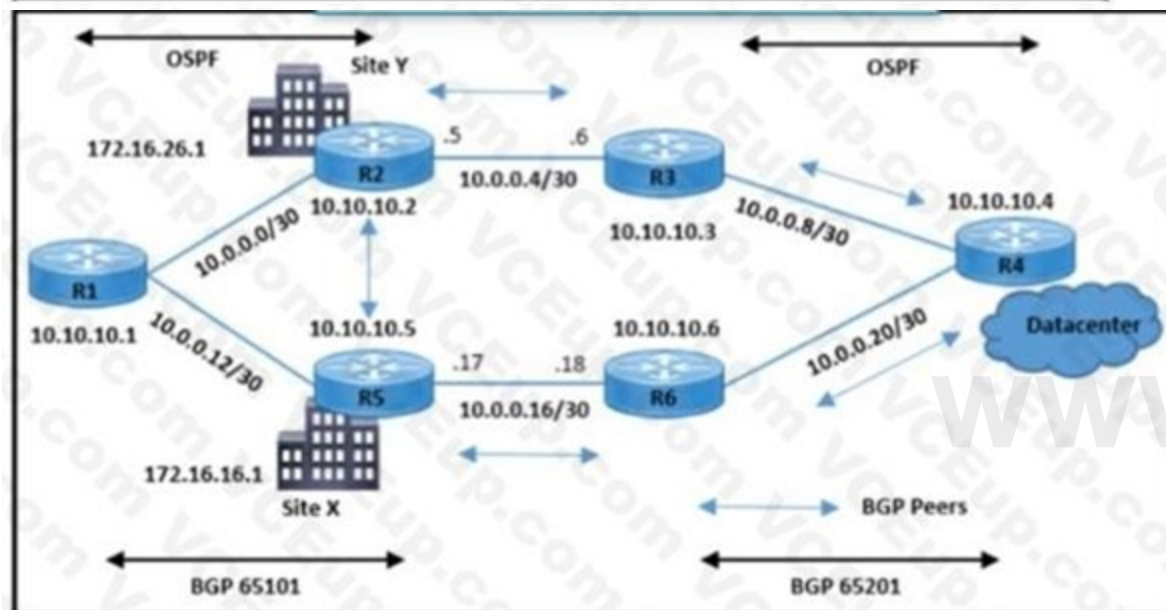
#### QUESTION 189

Refer to the exhibit.



```
R5#
*Sep 19 08:29:51.088: BGP: 10.10.10.2 open active, local address 10.0.0.14
*Sep 19 08:29:51.120: BGP: 10.10.10.2 read request no-op
*Sep 19 08:29:51.124: BGP: 10.10.10.2 open failed: Connection refused by
remote host, open active delayed 12988ms (20000ms max, 60% jitter)

R2#show ip bgp neighbors 10.10.10.5
BGP neighbor is 10.10.10.5, remote AS 65101, internal link
 BGP version 4, remote router ID 0.0.0.0
 BGP state = Active
 Last read 00:01:18, last write 00:01:18, hold time is 15, keepalive
interval is 3 seconds
 Configured hold time is 15, keepalive interval is 3 seconds
 Minimum holdtime from neighbor is 0 seconds
 Address tracking is enabled, the RIB does have a route to 10.10.10.5
 Connections established 13; dropped 13
 Last reset 00:01:18, due to User reset
 Transport(tcp) path-mtu-discovery is enabled
 No active TCP connection
```



Refer to the exhibit A customer reported a failure and intermittent disconnection between two office buildings site X and site Y The network team finds that site X and site Y are exchanging email application traffic with the data center network Which configuration resolves the issue between site X and site Y?

A.

```
RC(config)# ip prefix-list Customer seq 5 permit 192.168.30.1/32
```

B.

```
RC(config)#router bgp 65101
RC(config-router)# neighbor 10.0.0.18 prefix-list Customer in
```

C.

```
RF(config)#no ip prefix-list Customer seq 5 deny 192.168.1.1/32
```

D.

```
RF(config)#router bgp 65201
RF(config-router)# neighbor 10.0.0.17 prefix-list Customer out
```

Correct Answer: C

Section:

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