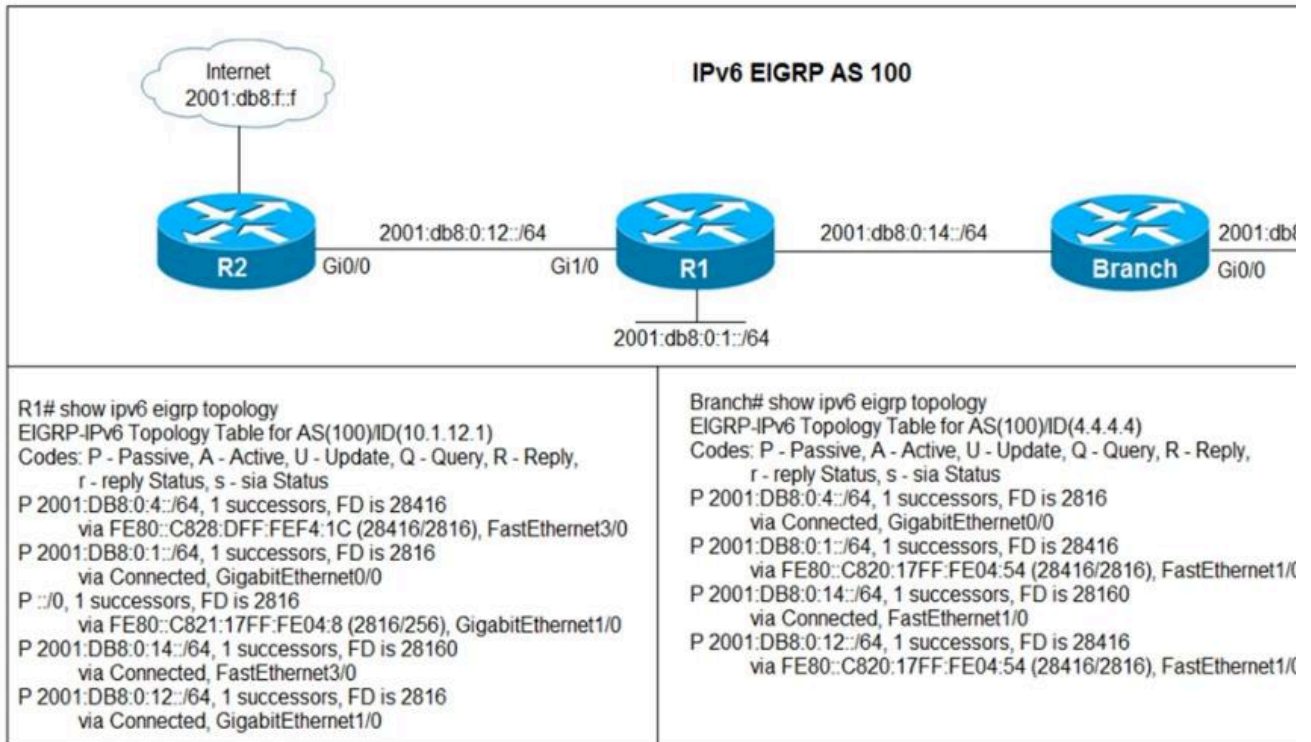# Implementing Cisco Enterprise Advanced Routing and Services (ENARSI)

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


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

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

A. Issue the eigrp stub command on R1.

B. Issue the no eigrp stub command on R1.

C. Issue the eigrp stub command on R2.

D. Issue the no eigrp stub command on R2.

Answer(s): B

---

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

A.

B.

C.

D.

Answer(s): D

---

3. R2 has a locally originated prefix 192.168.130.0/24 and has these configurations:

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

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

A. R1 sees 192.168.130.0/24 as two AS hops away instead of one AS hop away.

B. R1 does not accept any routes other than 192.168.130.0/24

C. R1 does not forward traffic that is destined for 192.168.30.0/24

D. Network 192.168.130.0/24 is not allowed in the R1 table

Answer(s): A

---

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

A. nonbroadcastmultiaccess

B. packet switching

C. policy-based routing

D. forwarding information base

Answer(s): C

---

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

EIGRP

10.1.12.0/24   R2   .2   .3   R3   .3   10.1.35.0/24

.2   10.1.23.0/24   OSPF

.2

.1   .5

R1   R5

10.1.1.0 /24   .5

10.1.24.0/24   .4   R4   .4   10.1.45.0/24
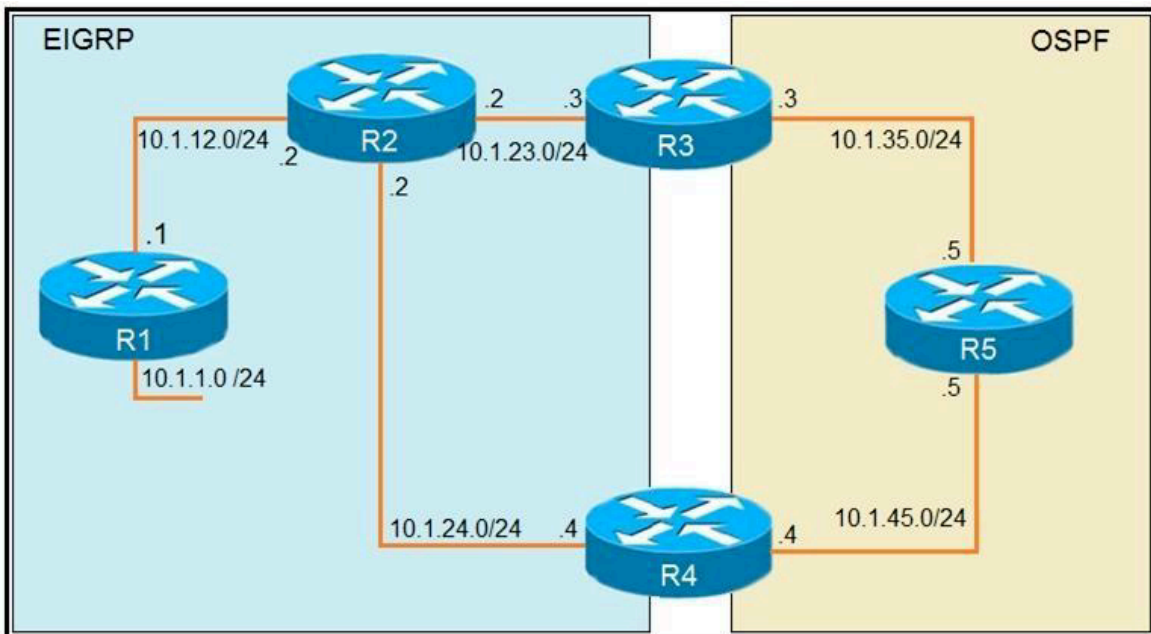
R1
router eigrp 1
  redistribute connected
  network 10.1.12.1 0.0.0.0

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

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

R5#traceroute 10.1.1.1

Type escape sequence to abort.
Tracing the route to 10.1.1.1

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

A.

B.

C.

D.

Answer(s): B

---

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

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.

Answer(s): C

---

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

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.

Answer(s): C

---

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

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.

Answer(s): B

---

9. 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.

Answer(s): C

---

10. DRAG DROP (Drag and Drop is not supported)

Drag and drop the OSPF adjacency states from the left onto the correct descriptions on the right.

Select and Place:

Init		Each router compares the DBD packets that were received from the other router.
2-way		Routers exchange information with other routers in the multiaccess network.
Down		The neighboring router requests the other routers to send missing entries.
Exchange		The network has already elected a DR and a backup BDR.
ExStart		The OSPF router ID of the receiving router was not contained in the hello message.
Loading		No hellos have been received from a neighbor router.

A. See Explanation section for answer.

Answer(s): A

---

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

not advertised?

```
R1 #show ip bgp summary
BGP router identifier 192.168.1.1, local AS number 65000
<output omitted>
Neighbor      V  AS     MsgRcvd MsgSent   Tblver  InQ OutQ Up/Down  State/PfxRcd
192.168.2.2   4  65000     28   28        22      0   0   00:21:31       0
R1#show ip bgp
BGP table version is 22, local router ID is 192.168.1.1
Status codes: s suppressed, d damped, h history, * valid, > best, i – internal,
              r RIB-failure, s stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, C RIB-compressed,
Origin codes: i – IGP, e – EGP, ? – incomplete
RPKI validation codes: V valid, I invalid, N Not found

        Network           Next Hop          Metric LocPrf     Weight    Path
*>      172.16.25.0/24    209.165.200.225        0            32768      ?
R1#
```

```
R2 #show ip bgp summary
BGP router identifier 192.168.2.2, local AS number 65000
<output omitted>
Neighbor      V  AS     MsgRcvd MsgSent   Tblver  InQ OutQ Up/Down  State/PfxRcd
192.168.1.1   4  65000     29   28        3       0   0   00:22:07       1
192.168.3.3   4  65000      7    8        3       0   0   00:02:55       0
R2#show ip bgp
BGP table version is 3, local router ID is 192.168.2.2
Status codes: s suppressed, d damped, h history, * valid, > best, i – internal,
              r RIB-failure, s stale, m multipath, b backup-path, f RT-Filter,
              x best-external, a additional-path, C RIB-compressed,
Origin codes: i – IGP, e – EGP, ? – incomplete
RPKI validation codes: V valid, I invalid, N Not found

        Network           Next Hop          Metric LocPrf     Weight    Path
* i     172.16.25.0/24    209.165.200.225    0     100        0          ?
R2#
```

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

A. R2 does not have a route to the next hop, so R2 does not advertise the prefix to other clients.

B. Route reflector setup requires full IBGP mesh between the routers.

C. In route reflector setup, only classful prefixes are advertised to other clients.

D. In route reflector setups, prefixes are not advertised from one client to another.

Answer(s): A

---

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

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

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

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

A. By default, only internal routes and external type 1 routes are redistributed into BGP

B. Only classful networks are redistributed from OSPF to BGP

C. BGP convergence is slow, so the route will eventually be present in the BGP table

D. By default, only internal OSPF routes are redistributed into BGP

Answer(s): D

---

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

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

A. if prefixes are not received from the BGP peer

B. if prefixes reach the maximum limit

C. if a prefix list is applied on the inbound direction

D. if prefixes exceed the maximum limit

14. 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

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

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

A. Configure the service timestamps log uptime command in global configuration mode.

B. Configure the logging clock synchronize command in global configuration mode.

C. Configure the service timestamps log datetimelocaltime command in global configuration mode.

D. Make sure that the clock on the device is synchronized with an NTP server.

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

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

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

A. The router can form BGP neighborships with any other device.

B. The router cannot form BGP neighborships with any other device.

C. The router cannot form BGP neighborships with any device that is matched by the access list named "BGP".

D. The router can form BGP neighborships with any device that is matched by the access list named "BGP".

Answer(s): C

---

17. Which command displays the IP routing table information that is associated with VRF-Lite?
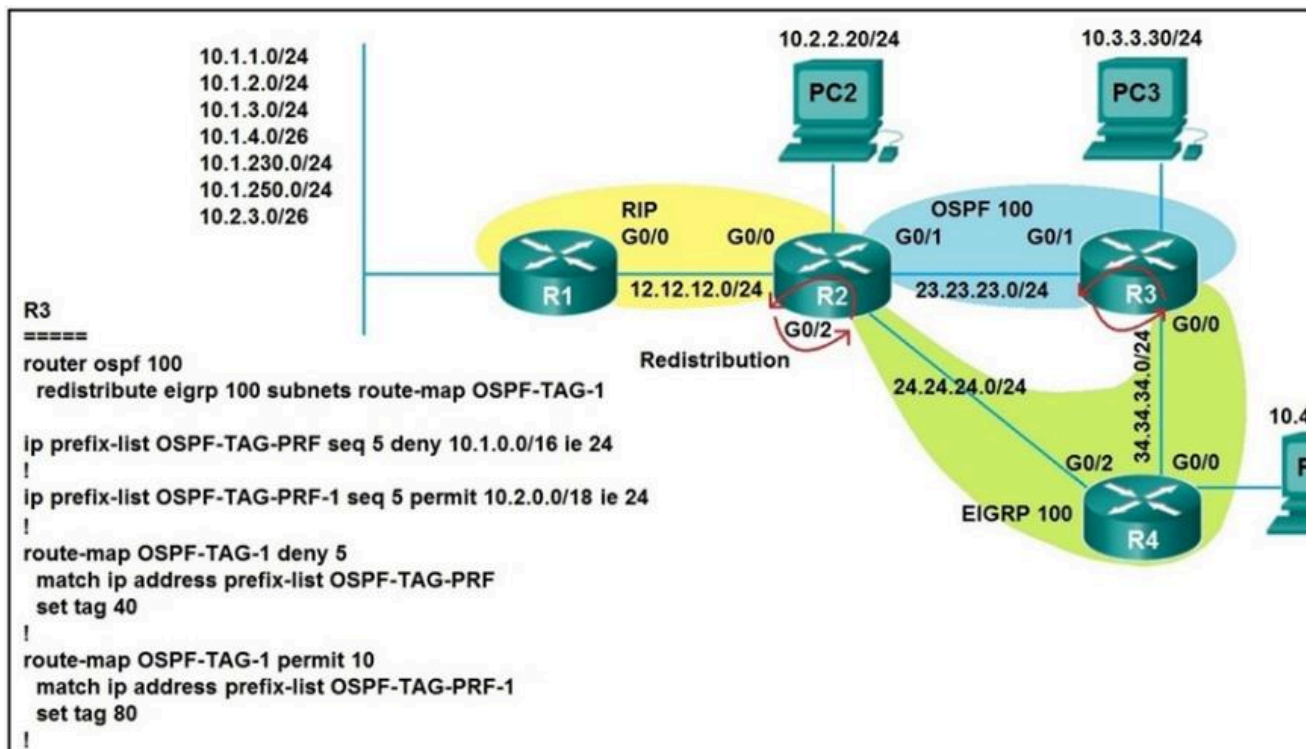
A. show ipvrf

B. show ip route vrf

C. show run vrf

D. show ip protocols vrf

Answer(s): B

---

18. 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

Answer(s): A

---

19. Which configuration adds an IPv4 interface to an OSPFv3 process in OSPFv3 address family configuration?

A. router ospfv3 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

Answer(s): C

---

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

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

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

A. OSPF redistributes RIP routes only if they have a tag of one.

B. RIP learned routes are distributed to OSPF with a tag value of one.

C. R1 adds one to the metric for RIP learned routes before redistributing to OSPF.

D. RIP routes are redistributed to OSPF without any changes.

Answer(s): B