



Free Questions for 300-510 by dumpshq

Shared by Duran on 12-12-2023

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Question 1

Question Type: MultipleChoice

Guidelines

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

Refer to the Tasks tab to view the tasks for this lab item.

Refer to the Topology tab to access the device console(s) and perform the tasks.

Console access is available for all required devices by clicking the device icon or using the tab(s) above the console window.

All necessary preconfigurations have been applied.

Do not change the enable password or hostname for any device.

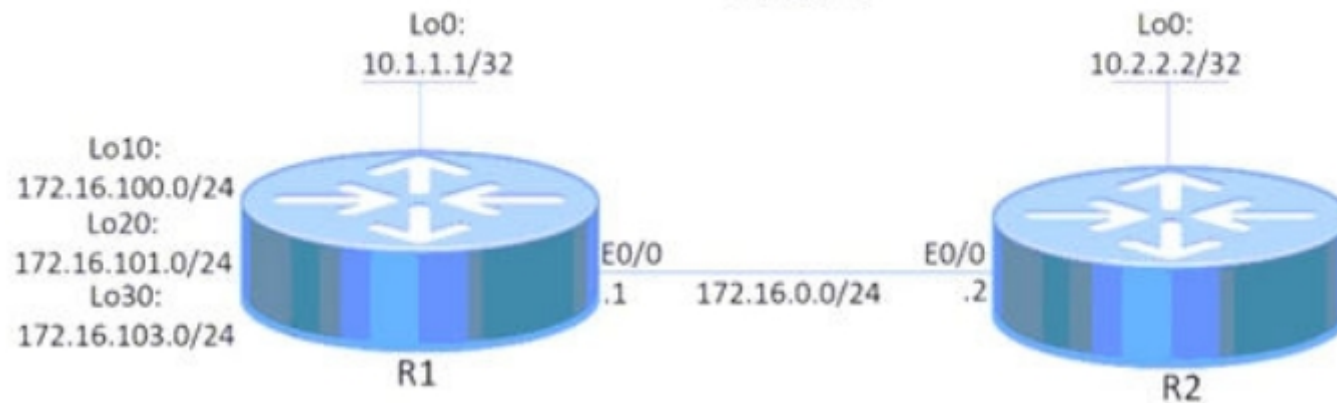
Save your configurations to NVRAM before moving to the next item.

Click Next at the bottom of the screen to submit this lab and move to the next question.

When Next is clicked, the lab closes and cannot be reopened.

Topology

OSPF Process ID 10 Area 0



Tasks

Configure and verify an OSPF neighbor adjacency between R1 and R2 in OSPF area 0 according to the topology to achieve these goals:

1. R1 pings the Loopback0 interface of R2. Use interface-level configuration to complete this task.
2. R2 pings the Loopback0 interface of R1. Use interface-level configuration to complete this task.
3. R2 receives a single summary route 172.16.100.0/22 for networks 172.16.100.0/24, 172.16.101.0/24, and 172.16.103.0/24.

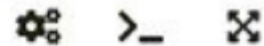
Options:

A- Explanation:

R1

R2

```
R1>en
R1#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#int lo
R1(config)#int lo0
R1(config-if)#ip ospf 10 area 0
R1(config-if)#exit
R1(config)#int lo 10
R1(config-if)#ip ospf nei
R1(config-if)#ip ospf net
R1(config-if)#ip ospf network point-to-po
R1(config-if)#ip ospf network point-to-point
R1(config-if)#int lo 20
R1(config-if)#ip ospf net po
R1(config-if)#ip ospf net point-to-po
R1(config-if)#ip ospf net point-to-point
R1(config-if)#exit
R1(config)#int lo
R1(config)#int lo30
R1(config-if)#ip ospf netwo poi
R1(config-if)#ip ospf netwo point-to-po
R1(config-if)#ip ospf netwo point-to-point
R1(config-if)#
R1(config-if)#exit
R1(config)#int et
R1(config)#int ethernet 0/0
R1(config-if)#ip ospf 10 area 0
R1(config-if)#exit
R1(config)#router ospf 10
R1(config-router)#area 1 rang 172.16.100.0 255.255.252.0
R1(config-router)#exit
```



R1

R2

```
R2>
R2>
R2>en
R2#config t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#int lo
R2(config)#int lo0
R2(config-if)#ip ospf 10 area 0
R2(config-if)#^Z
R2#
R2#
R2#c
*Aug 26 11:44:48.122: %SYS-5-CONFIG_I: Configured from console by
  console
R2#copy run start
R2#copy run startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
R2#
R2#sh ip route ospf
Codes: L - local, C - connected, S - static, R - RIP, M - mobile,
  B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter
area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external ty
pe 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
```

Answer:

A

Question 2

Question Type: MultipleChoice

Refer to the exhibit.

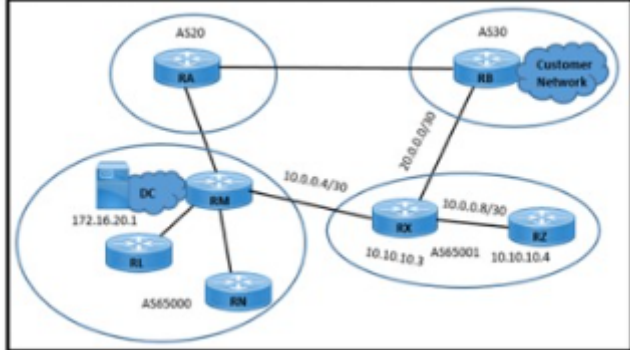

```

*Jan 26 12:18:15.035: %BGP-3-NOTIFICATION: sent to neighbor 10.0.0.6 2/2
(peer in wrong AS) 2 bytes 000A
RM# FFFF FFFF FFFF FFFF FFFF FFFF 0035 0104 000A 00B4 0A0A 0A03
1802 0601 0400 0100 0102 0280 0502 0202 0052 0641 0400 0000 0A

RX#
*Jan 26 12:17:57.623: %BGP-3-NOTIFICATION: received from neighbor 10.0.0.5
2/2 (peer in wrong AS) 2 bytes 000A
RX#
*Jan 26 12:18:00.679: %BGP-3-NOTIFICATION: received from neighbor 10.0.0.5
2/2 (peer in wrong AS) 2 bytes 000A

RB#show ip bgp
Network          Next Hop        Metric LocPrf Weight Path
*> 10.0.0.8/30   20.0.0.2        0         0 10 ?
*> 10.0.0.20/30  20.0.0.2        2         0 10 ?
*> 10.0.0.28/30  20.0.0.2        0         0 10 ?
*> 10.10.10.3/32 20.0.0.2        0         0 10 ?
*> 10.10.10.4/32 20.0.0.2        2         0 10 ?
*> 192.168.30.1/32 20.0.0.2       2         0 10 ?
RB#

```



Refer to the exhibit. An engineer working for a private telecommunication company with an employee id: 4233:46:364 notices that the customer network going through AS30-AS65001-AS65000 is experiencing packet drops when it accesses an application at 172.16.20.1/32 In the DC cloud. The BGP link between AS20 and AS30 is inaccessible because of a fiber cut. Routers RL, RN, and RZ are configured with confederation identifier 10. Which action resolves this Issue?

- RX(config)#router bgp 65001
RX(config-router)# no synchronization
RX(config-router)# bgp confederation identifier 10
 - RB(config)#router bgp 30
RB(config-router)# neighbor 10.10.10.3 remote-as 65001
 - RX(config)#router bgp 65001
RX(config-router)# bgp confederation peers 65000
 - RM(config)#router bgp 65000
RM(config-router)# bgp confederation peers 65001
-

Options:

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

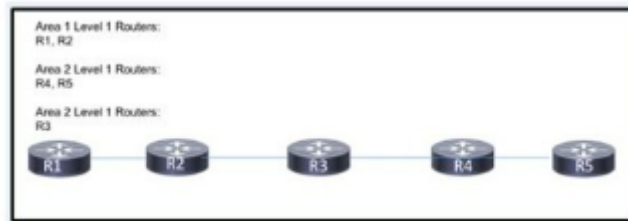
Answer:

A

Question 3

Question Type: MultipleChoice

Refer to the exhibit.



Refer to the exhibit. This network is deployed with all connected links configured to run IS-IS. The routing protocol is enacted globally on each router, and the network engineer expects full routing Information to be shared among all routers. R5 is receiving routes from R4 but is missing routes from R1. Which action corrects the issue so that all routes are shared among the routers?

Options:

- A- Configure all routers to reside in the area.
- B- Configure R1 and R5 as Level 1/Level 2
- C- Configure R3 as a Level 2 we.
- D- Configure R5 in the same as R1,

Answer:

A

Question 4

Question Type: MultipleChoice

Refer to the exhibit.

```
Cisco(config)# extcommunity-set opaque overlay-color
Cisco(config-ext)# 1 co-flag 01
Cisco(config-ext)# end-set
Cisco(config)#
Cisco(config)# route-policy color
Cisco(config-rpl)# if destination in [10.10.10.1/32] then
Cisco(config-rpl-if)# set extcommunity color overlay-color
Cisco(config-rpl-if)# endif
Cisco(config-rpl)# pass
Cisco(config-rpl)# end-policy
```

Refer to the exhibit. An engineer is troubleshooting an issue with traffic steering using the color-only automated steering mechanism. BGP is failing to automatically steer traffic into an SR policy with the given color of a route, regardless of the next hop. The layer 2 configuration is correct, and the physical connection between the devices is working normally. Which additional command sequence must the engineer add to correct the issue?

- Cisco# **configure**
Cisco(config)# **segment-routing**
Cisco(config-sr)# **traffic-eng**
Cisco(config-sr-te)# **policy P1**
Cisco(config-sr-te-policy)# **color 1 end-point**
- Cisco(config)# **segment-routing**
Cisco(config-sr)# **traffic-eng**
Cisco(config-sr-te)# **policy P1**
Cisco(config-sr-te-policy)# **color 1 end ipv4 1.1.1.1**
Cisco(config-sr-te-policy)# **autoroute include all**
- Cisco(config)# **segment-routing traffic-eng**
Cisco(config-sr-te)# **policy P1**
Cisco(config-sr-te-policy)# **color 1 end-point ipv4 1.1.1.1**
Cisco(config-sr-te-policy)# **autoroute**
Cisco(config-sr-te-policy-autoroute)# **include all**
- Cisco(config)# **segment-routing**
Cisco(config-sr)# **traffic-eng**
Cisco(config-sr-te)# **policy P1**
Cisco(config-sr-te-policy)# **color 1 end-point ipv4 0.0.0.0**

Options:

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

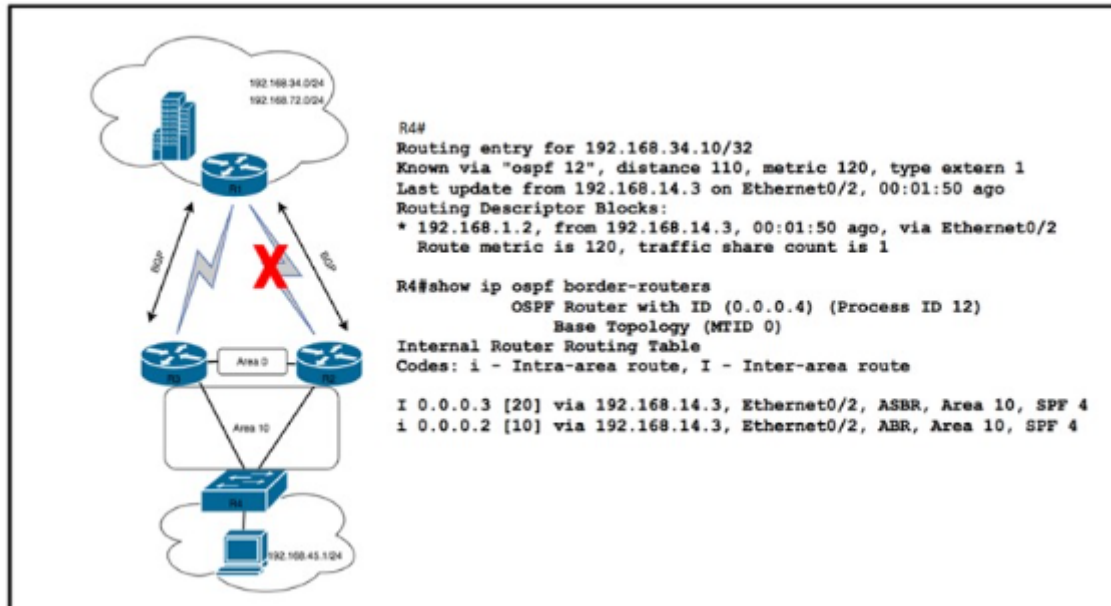
Answer:

D

Question 5

Question Type: MultipleChoice

Refer to the exhibit.



Refer to the exhibit. After a recent network implementation project, customer A is performing stress testing to verify network redundancy at the branch office connected to R4. When the link from R2 is shut down as shown, the SLA tracking object fails and the cost of the link between R2 and R4 increases to 100. However, a traceroute operation from a PC in the Branch office shows that traffic to HQ is still routed via R2. Which solution corrects the problem and optimizes traffic flow via R3 without creating operational overhead?

Options:

- A- Configure two OSPF processes on R2 and R3 and redistribute traffic between them.
- B- Redistribute routes from BGP to OSPF as type E1.
- C- Use multiarea adjacency to extend Area 10 to the link between R2 and R3.
- D- Create a virtual channel from R3 to R4.

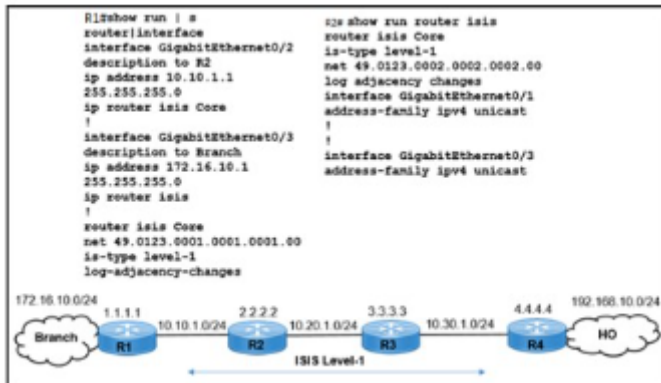
Answer:

B

Question 6

Question Type: MultipleChoice

Refer to the exhibit.



Refer to the exhibit. Users at the branch office on R1 reported issue with an application at the home office on R4. While troubleshooting the issue, a network engineer determined that

The branch-office users can connect to the home office.

The IS-IS adjacencies between R1 and R2 and R1 and the branch office are up.

Traffic from R1 to the R2 10.20.1.0/24 network is moving normally.

The application at the home office is experiencing packet drops on the connection to the Branch, and R3 cannot reach the R1 172.16.10.0/24 network.

Which action resolves the issues?

Options:

- A- Redistribute static connected routes in IS-IS on router R1.
- B- Configure the IS-IS core instance on the R1 GigabitEthernet0/3 interface.
- C- Redistribute static connected routes in IS-IS on router R4.
- D- Configure the IS-IS core instance on the R2 GigabitEthernet0/1 interface.

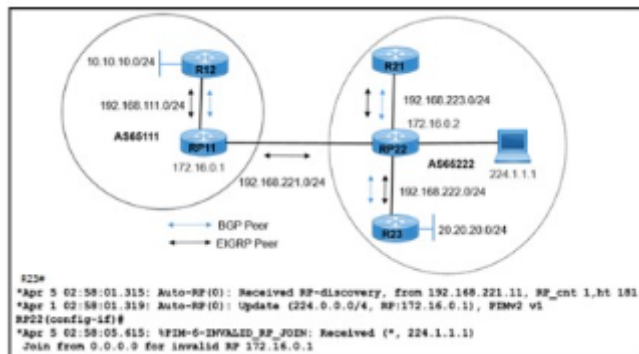
Answer:

B

Question 7

Question Type: MultipleChoice

Refer to the exhibit.



Refer to the exhibit. R21 is a multicast source sending multicast traffic 224.1.1.1 to R23, with RP22 serving as the rendezvous point inside AS65222. A network engineer noticed that when R21 goes down, R12 in AS65111 starts to send the same multicast group 224.1.1.1 through RP11. Which action resolves the issue?

Options:

- A-** Block service groups 224.0.1.39 and 224.0.1.40 between the two autonomous systems
- B-** Disable PIM parse mode between RP11 and RP22 in the two autonomous systems.
- C-** Advertise RP2 with a high local preference in AS65222.
- D-** Enable passive interface under EIGRP between the two autonomous systems.

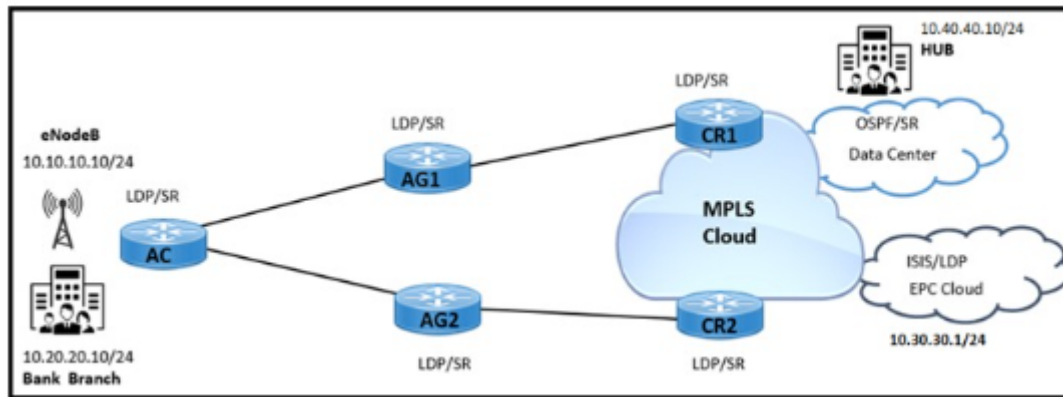
Answer:

A

Question 8

Question Type: MultipleChoice

Refer to the exhibit.



Refer to the exhibit. A service provider has LDP and segment routing running in the network. Mobility traffic is carried through LDP and enterprise traffic is carried through segment routing. Which configuration must be implemented to connect the bank branch with the HUB site on routers?

Options:

- A-** Configure segment-routing Sr-prefer prefix-list on AG1 and AG2 router for 10.10.10.10/24.
- B-** Enable segment-routing Mpls Sr-prefer on CR1 and CR2 routers for 10.0.0.0/8.
- C-** Enable segment-routing Mpls Sr-prefer on AG1 and AG2 routers for 10.0.0.0/8.
- D-** Configure segment-routing sr-prefer prefix-list on CR1 and CR2 routers for 10.20.20.10/24.

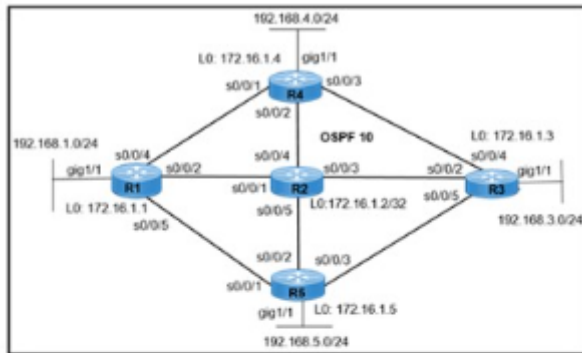
Answer:

D

Question 9

Question Type: MultipleChoice

Refer to the exhibit.



```
R4 (config)# mpls label protocol ldp
R4 (config)# mpls ldp router-id loopback 0
R4 (config)# interface serial 0/0/1
R4 (config-if) # mpls-ip
R4 (config)# interface serial 0/0/2
R4 (config-if) # mpls-ip
R4 (config)# interface serial 0/0/3
R4 (config-if) # mpls-ip
```

```
R2 (config)# mpls label protocol ldp
R2 (config)# mpls ldp router-id loopback 0
R2 (config)# interface serial 0/0/1
R2 (config-if) # mpls-ip
R2 (config)# interface serial 0/0/3
R2 (config-if) # mpls-ip
```

```
R4 (config)# mpls ldp router-id loopback 0
R4 (config)# interface serial 0/0/1
R4 (config-if) # mpls-ip
R4 (config)# interface serial 0/0/2
R4 (config-if) # mpls-ip
R4 (config)# interface serial 0/0/3
R4 (config-if) # mpls-ip

R2 (config)# mpls label protocol ldp
R2 (config)# mpls ldp router-id loopback 0
R2 (config)# interface serial 0/0/1
R2 (config-if) # mpls-ip
R2 (config)# interface serial 0/0/3
R2 (config-if) # mpls-ip
R2 (config)# interface serial 0/0/5
R2 (config-if) # mpls-ip
```

Refer to the exhibit. MPLS traffic from 192.168.4.0/24 to 192.168.5.0/24 is failing to pass over the link from R4 to R2. The engineer verified that:

Cisco Express Forwarding Is enabled on all routers.

All routers reach all networks via OSPF.

MPLS traffic from 192.168.1.0/24 to 192.168.3.0/24 is passing normally over the link from R1 to R2.

Which action resolves the issue?

Options:

- A- On router R4, remove the mpls ip command on the s/O/O/2 interface.
- B- On router R2, configure the mpls ip command on the SIO/O/4 interface.
- C- On router R4, configure the mpls label protocol ldp command on all serial interfaces.
- D- On router R2, configure the mpls label protocol ldp command on the interface.

Answer:

B

Question 10

Question Type: MultipleChoice

Refer to the exhibit.

```
R1>show ip bgp
BGP table version is 1986541, local router ID is 172.16.212.76
Status codes: s suppressed, d damped, h history, * valid, > best, i - internal
Origin codes: i - IGP, e - EGP, ? - incomplete

   Network        Next Hop        Metric LocPrf Weight Path
*> 11.21.10.0/24   172.16.211.4    0           0 3421 12131 152 i
*> 11.22.14.0/24   172.11.12.54    0           0 3421 15243 3242 35673 35673 i
*> 11.23.15.0/24   192.16.22.19    0           0 3421 15243 3242 35673 152 i
*> 11.24.16.0/24   17.1.212.79     0           0 3421 1345 4166 15298 35673 32451 i
*> 11.25.17.0/24   15.65.21.9      120          0 3421 1345 152 15298 35673 32451 i
*> 11.26.20.0/23   11.16.212.7     215          0 3421 2211 2214 2854 i
```

Refer to the exhibit. Company A established BGP sessions with several ISPs. A network engineer at the company must filter out all traffic except for routes that transit AS 152. The engineer configured the filtering policy "permit _152S_(_[0.9])" on R1, but after applying

the configuration, the engineer notices that other routes are still visible. Which action resolves the issue?

- Change the filtering policy to `ip as-path access-list 1 permit _152_`.
- Add a second filtering policy in the format `ip access-list 1 permit ^152_([0-9]+)`.
- Change the filtering policy to `ip explicit-path 1 permit $152^`.
- Add a second filtering policy in the format `ip prefix-list 1 permit ^152^`.

Options:

- A-** Option A
- B-** Option B
- C-** Option C
- D-** Option D

Answer:

A

Question 11

Question Type: MultipleChoice

An ISP has an MPLS VPN-based network with 12 PE routers. How many peerings are required between the 12 routers if the engineer has not configured route reflectors?

Options:

A- 60

B- 66

C- 78

D- 84

Answer:

B

Question 12

Question Type: MultipleChoice

What is the purpose of ACL type prefix set entries in RPL prefix sets?

Options:

- A- They hold IPv4 or IPv6 prefixes that do not match specifications.
- B- They hold IPv4 or IPv6 prefix match specifications.
- C- They hold IPv6 prefix match specifications.
- D- They hold IPv4 prefixes that do not match specifications.

Answer:

B

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