سيسكو في **6** ساعات

الكورس

يختصر أكثر من مائة ساعة
يركز على احتياجات المهندسين
في سوق العمل
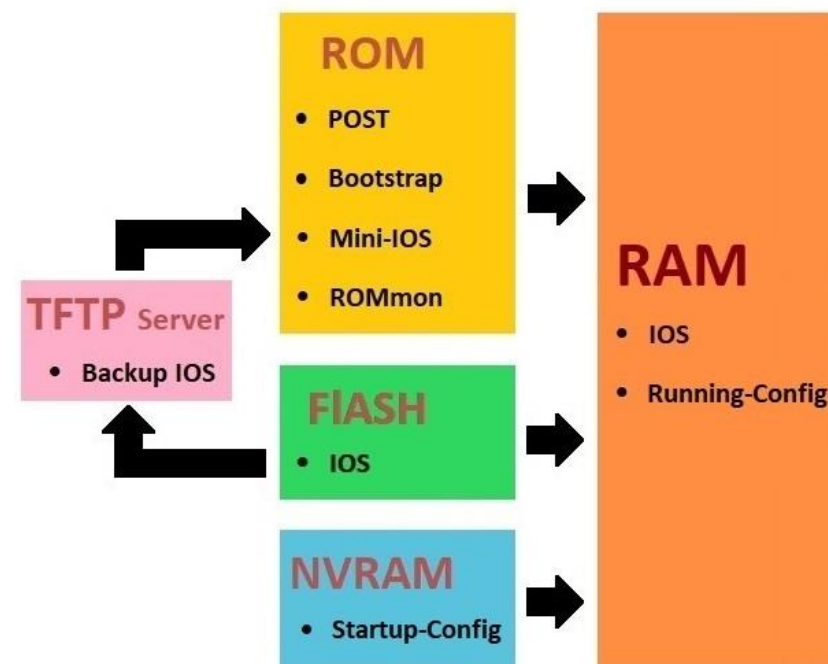
القلادة أكاديمي

القلادة القابضة

- CCNA Exam (Router)

What is the purpose of the POST on router?

determine additional hardware has been added

locate an IOS image for booting

set the configuration register

enable a TFTP server

Which process search for IOS to load it into the router?

bootstrap

mini-IOS

ROMMON mode

POST

ROM
- POST
- Bootstrap
- Mini-IOS
- ROMmon

TFTP Server
- Backup IOS

FlASH
- IOS

NVRAM
- Startup-Config

RAM
- IOS
- Running-Config

- CCNA Exam (Router)

What is the sequence to find the IOS in the router ?

Flash, TFTP server, ROM

NVRAM, TFTP server, ROM

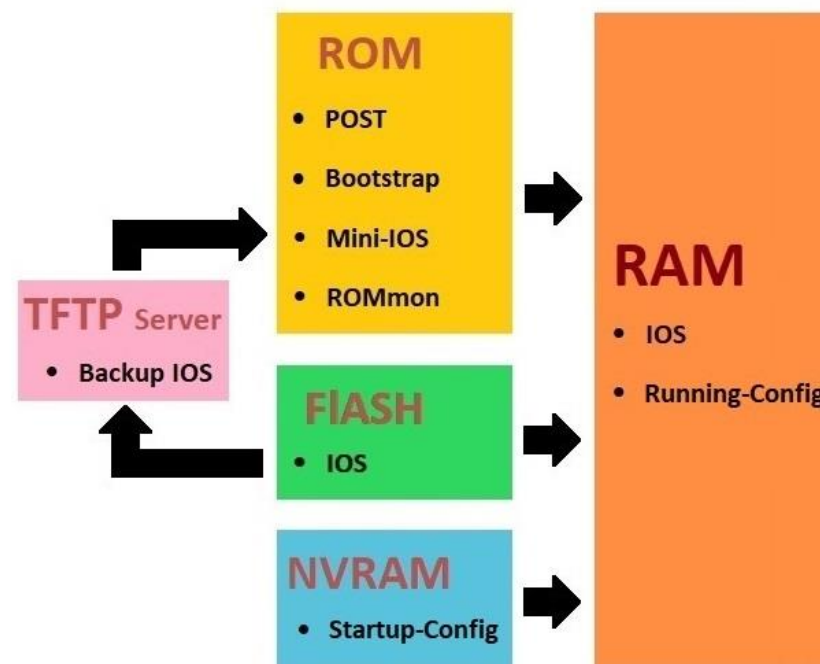TFTP server, Flash, ROM

ROM, Flash, TFTP server

Which command is used to backup IOS to TFTP server?

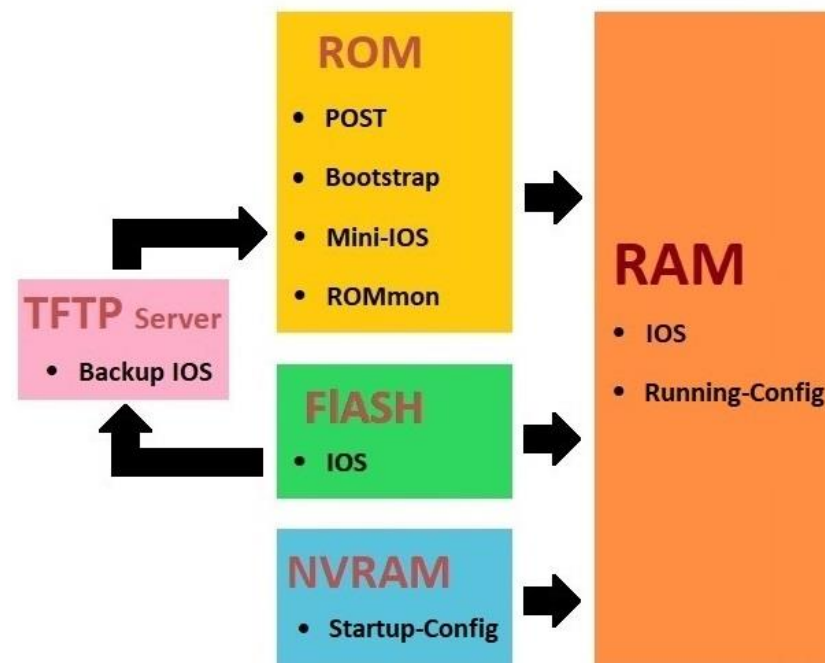Copy flash tftp

Copy tftp flash

Copy ios tftp

Copy nvram tftp

ROM
- POST
- Bootstrap
- Mini-IOS
- ROMmon

TFTP Server
- Backup IOS

FlASH
- IOS

NVRAM
- Startup-Config

RAM
- IOS
- Running-Config

- CCNA Exam (Router)

Which command is used to erase everything on router ?

Write erase

Erase data

Erase things

Delete data

Which command is used to change hostname on Cisco ?

Hostname

change host

Host new

New hostname

ROM
- POST
- Bootstrap
- Mini-IOS
- ROMmon

TFTP Server
- Backup IOS

FlASH
- IOS

NVRAM
- Startup-Config

RAM
- IOS
- Running-Config

- CCNA Exam (Router)

Which command will show the currently running configurations ?

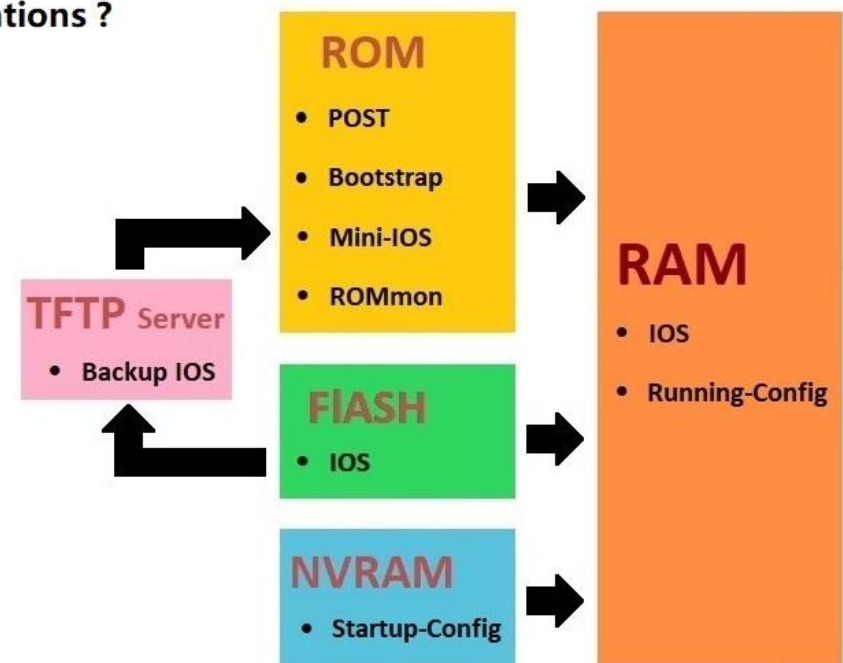Show running

Show version

Show all settings

Show startup

Which command will show the running configurations ?

All of the Below

#show running-config

#show run

#sh run

ROM
- POST
- Bootstrap
- Mini-IOS
- ROMmon

TFTP Server
- Backup IOS

FlASH
- IOS

NVRAM
- Startup-Config

RAM
- IOS
- Running-Config

- CCNA Exam (Router)

How to put enable password on Cisco router?

R1(config)# enable password password

R1(config)# write password enable

R1(config)# enable secret

R1#enable password password

How can you check if F1/0 is down?

R1#show ip interface F1/0

R1# show run

R1#show ip F1/0

R1(config)# show interface F1/0

- CCNA Exam (Router)

Which command which on the F0/1 interface?

R1(config-if)#no shut

R1(config-if)#on

R1(config)#F0/1 no shut

R1(config-if)#serial 0/1 on

Which is the best method to use in accessing router in japan ?

By using Telnet

By using Team Viewer

Cannot be connected

Need to go to Japan

- CCNA Exam (Router)

Which command can set the timer in Console or VTY to 3 minutes and 10 seconds ?

(config-line)#exec-timeout 3 10

(config-line)#no exec-timeout

(config)#exec-timeout 3 10

F0/0   F0/1

How do I stop a CLI from translate the wrong comamand ?

Router(config)# no ip domain-lookup

Router(config)# no domain

Router# stop domain

IOS Command Line

Router# sow

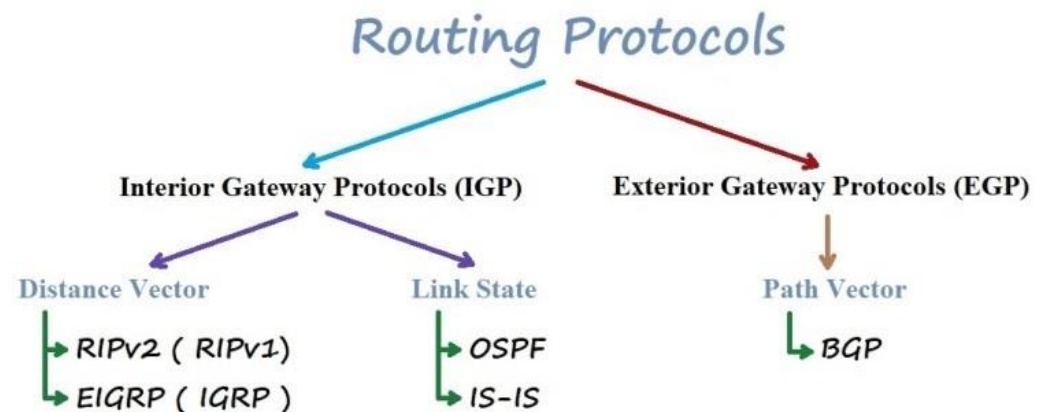Translating "sow"...domain server (255.255.255.255) % Name lookup aborted

Router#

- CCNA Exam (Router)

Which of the following is routed protocol ?

IP

IPX

Rip

BGP

Which of the following is routing protocol ?

Rip

BGP

IP

IPX

Routing Protocols

Interior Gateway Protocols (IGP)   Exterior Gateway Protocols (EGP)

Distance Vector   Link State   Path Vector

RIPv2 (RIPv1)   OSPF   BGP
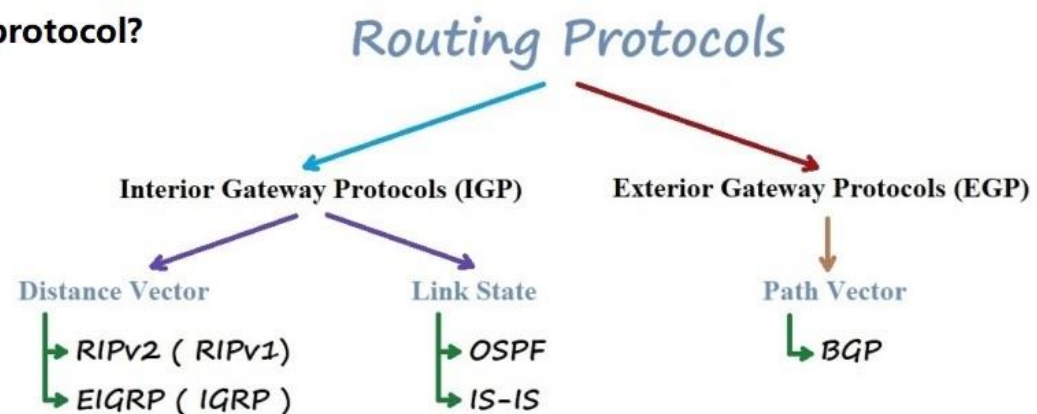
EIGRP (IGRP)   IS-IS

- CCNA Exam (Router)

Which one of the following is exterior gateway protocol?

BGP

RIP

IGRP

EIGRP

At which layer of OSI routing protocol work?

Network

Transport

Data link

Presentation

Routing Protocols

```
                        Routing Protocols
                         /            \
                        /              \
    Interior Gateway Protocols (IGP)    Exterior Gateway Protocols (EGP)
          /          \                              |
         /            \                             |
   Distance Vector   Link State                  Path Vector
        |                 |                           |
   → RIPv2 ( RIPv1)   → OSPF                       → BGP
   → EIGRP ( IGRP )   → IS-IS
```

- CCNA Exam (Router)

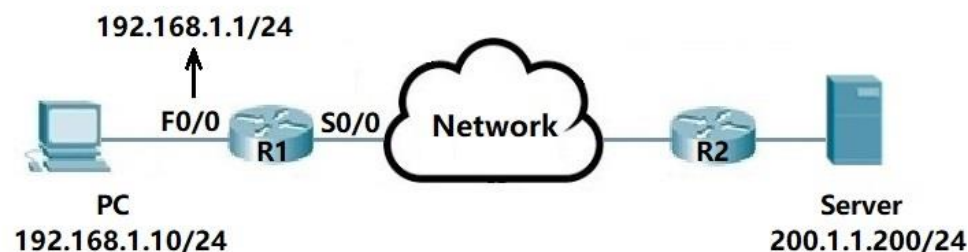**Which command is used to see R1 routing table ?**

R1#show ip route

R1#show ip routing

R1#show routing table

R1#show table

192.168.1.1/24

F0/0   S0/0   Network   R2

PC
192.168.1.10/24

Server
200.1.1.200/24

If R1 Received packet with destination 192.168.1.255,
What He will Do ?

R1 will drop this packet because this is not a valid IP

R1 will forward the packet out all interfaces.

R1 forwards the frame

R1 will ecapsulate the packet

- CCNA Exam (Router)

PC Must access files on the Server.

What command could be configured on R1 ?

ip route 0.0.0.0 0.0.0.0 S0/0

ip route 0.0.0.0 0.0.0.0 200.1.1.200
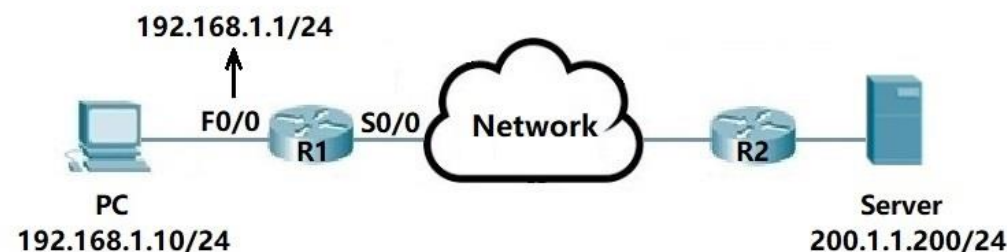
ip route 200.1.1.200 255.255.255.0 192.168.1.1

ip route 192.168.1.0 255.255.255.0 200.1.1.200

Pc Cannot Reach the server , Why ?

Static route is configured incorrectly

IP route is not Enable

Fastethernet is disable

192.168.1.1/24

```
PC
192.168.1.10/24
```
F0/0   R1   S0/0   Network   R2

Server
200.1.1.200/24

```
R1# show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP,
    D - EIGRP, EX - EIGRP external, O - OSPF, IA -
    N1 - OSPF NSSA external type 1, N2 - OSPF type 2
Gateway of last resort is 172.19.22.2 to network 0.0.0.0

C  192.168.1.0   is directly connected, FastEthernet0/0
C  172.18.22.0 is directly connected, Serial0/0
S* 0.0.0.0/0 [1/0] via 172.19.22.2
```

- CCNA Exam (Router)

Refer to exhibit. If R1 recieves a packet destined to 172.16.1.1 , to which IP address does it send the packet?

192.168.14.4

192.168.12.2

192.168.13.3

192.168.15.5

What will be the Administrative distance (AD) of directly connected interfaces?

0

1

90

110

```
R1@show ip route
Codes: C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF , IA - OSPF inter
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external
       E1 - OSPF external type 1, E2 - OSPF external type 2

Gateway of last resort is 192.168.14.4 to network 0.0.0.0

C    192.168.12.0/24 is directly connected, FastEthernet0/0
C    192.168.13.0/24 is directly connected, FastEthernet0/1
C    192.168.14.0/24 is directly connected, FastEthernet1/0
     192.168.10.0/24 is variably subnetted, 3 subnets, 3 masks
O       192.168.10.0/24 [110/2] via 192.168.14.4, 00:02:01, F1/0
O       192.168.10.32/27 [110/11] via 192.168.13.3, 00:00:52,F0/1
O       192.168.0.0/16 [110/2] via 192.168.15.5, 00:05:01, F1/1
D       192.168.10.1/32 [90/52778] via 192.168.12.2 00:03:44, F0/0
O*E2 0.0.0.0/0 [110/1] via 192.168.14.4, 00:00:10, F1/0
```

- CCNA Exam (Router)

What is the main reason of using RIP?

For small network

Easy to manage

Support all features

All of the above

What is the main disadvantage of RIPv2?

RIPv2 cannot work with large network

RIPv2 doesnot support classless routing

RIPv2 is not compatible of all routers

None of the above

Rip version		
Ripv1	**Ripv2**	**Ripng**
IPv4	IPv4	IPv6
Classfull	VLSM	VLSM
15 hop	15 hop	15 hop
broadcasts	multicast	multicast
N.N.N.255	224.0.0.9	FF02::9
UDP(520)	UDP(520)	UDP(521)
————	MD5	MD5

- CCNA Exam (Router)

RIPv2 is _____

Distance vector

Hybird

Link state

None of the above

What is the administrative distance of RIP V1?

120

90

20

0

Rip version		
Ripv1	**Ripv2**	**Ripng**
IPv4	IPv4	IPv6
Classfull	VLSM	VLSM
15 hop	15 hop	15 hop
broadcasts	multicast	multicast
N.N.N.255	224.0.0.9	FF02::9
UDP(520)	UDP(520)	UDP(521)
_____	MD5	MD5

- CCNA Exam (Router)

You are using RIPng in your company, what is the purpose ?

Support IPv6

Support IPv4

Support VLSM

Support Multicasting

How many hop limits does RIPv2 supports?

15

14

16

255

Rip version		
Ripv1	**Ripv2**	**Ripng**
IPv4	IPv4	IPv6
Classfull	VLSM	VLSM
15 hop	15 hop	15 hop
broadcasts	multicast	multicast
N.N.N.255	224.0.0.9	FF02::9
UDP(520)	UDP(520)	UDP(521)
————	MD5	MD5

- CCNA Exam (Router)

Refer to exhibit. route 10.1.1.0 is marked invlid on R1 ,How much time is left before that route is removed from the routing table?

60 seconds

30 seconds

180 seconds

240 seconds

```
R1# show ip protocols
Routing Protocol is "rip"
 Sending updates every 30 seconds, next due in 8 seconds
 Invalid after 180 seconds, hold down 180, flushed after 240
 Outgoing updates filter list for all interfaces is not set
 Incoming update filter for all interfaces is not set
 <output omitted>

R1#
```

Which command can enable Rip ?

R(config)#Router Rip

R(config)#Enable Rip

R(config)#Rip

- CCNA Exam (Router)

Refer to the exhibit. IP 172.16.10.0 not advertise ,
Which command will correct the problem?

Enable RIPv2

Enable passive interface

Enable manual summarization

Enable autosummarization

```
R1
interface F0/0
        IP addres 172.16.10.1   255.255.255.0

Router rip
        network 172.16.0.0
no auto-summary
```

Which command will broadcast your R1 interface in Rip v2?

R(config-router)#Network x.x.x.x

R(config-router)#Broadcast x.x.x.x

R(config-router)#RIP Network x.x.x.x

R(config-router)#IP x.x.x.x

- CCNA Exam (Router)

EIGRP is _____

Hybrid

Distance vector

Link state

None of the above

Which multicast address is used for sending routing information in EIGRP?

224.0.0.10

224.0.0.9

224.0.0.8

224.0.0.7

Eigrp
VLSM
224 hop
Multicast
224.0.0.10
Authentication (MD5)
RTP to send Packets

- CCNA Exam (Router)

Which type of EIGRP route describes feasible successor?

backup route,stored in the topology table

primary route,stored in the routing table

backup route,stored in the routing table

primary route,stored in the topology table

What is the administrative distance of Internal EIGRP?

90

120

5

0
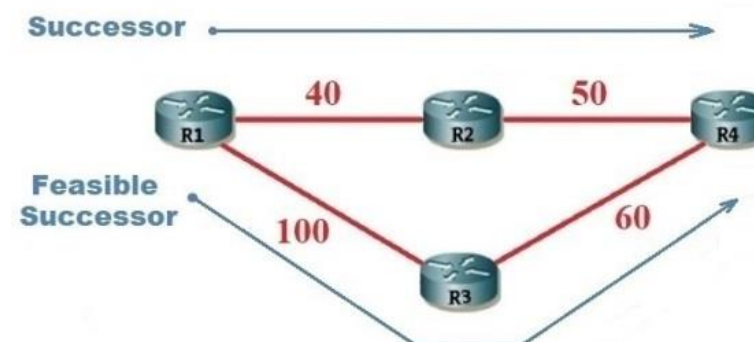
- CCNA Exam (Router)

How many type of metrics are in EIGRP?

5

0

3

7

$$\text{Eigrp Metric} = 256 \times \left(\frac{K1 \times 10M}{S\ BW} + \frac{K2 \times BW}{256 - LOAD} + \frac{K3 \times DLY}{10} \right) \times \frac{1}{REL + K4} \times \frac{K5}{1}$$

K1=1 K2=0 K3=1 K4=0 K5=0

What is the default value of K4 in EIGRP metric ?

0

1

4

10

- CCNA Exam (Router)

Which EIGRP command view the IP adresses of the neighbors ?

#show ip eigrp neighbors

#show ip eigrp interfaces

#show ip neighbors

#show ip eigrp traffic

Hello →
Hello →
Hello →

R1   R2

#No router Eigrp
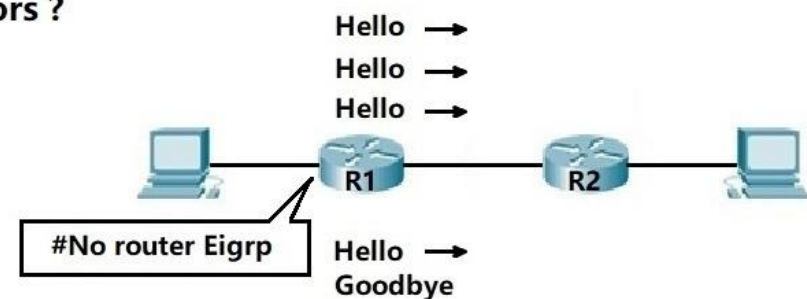
Hello →
Goodbye

Which packet tells EIGRP neighbors to Stop the relationship ?

Hello : Goodbye messages

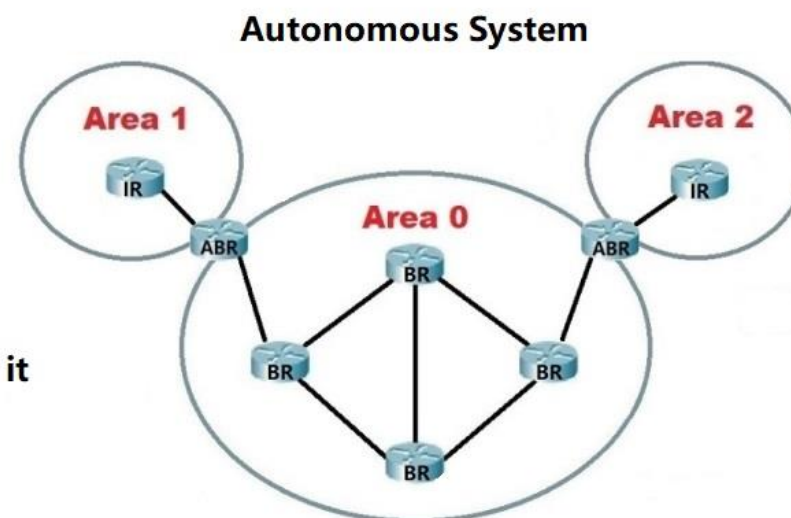successors

advertised changes

expiration of the hold timer

- CCNA Exam (Router)

What does OSPF stands for?

Open Shortest path First

Open Slowest Path First

Open Speed Path First

Open Selected path first

An Autonomous system of OSPF can have multiple areas in it

True

False

Autonomous System

Area 1

Area 2

Area 0

IR

ABR

BR

BR

BR

BR

ABR

IR

- CCNA Exam (Router)

Which area is reserved as backbone area in OSPF?

Area 0

Area 1000

Area 1

Area 0.0.0.0

Which statement describes the process ID of OSPF ?

used to identify the OSPF database

used to represent the AS number

used to identify the areas

must be the same in all areas
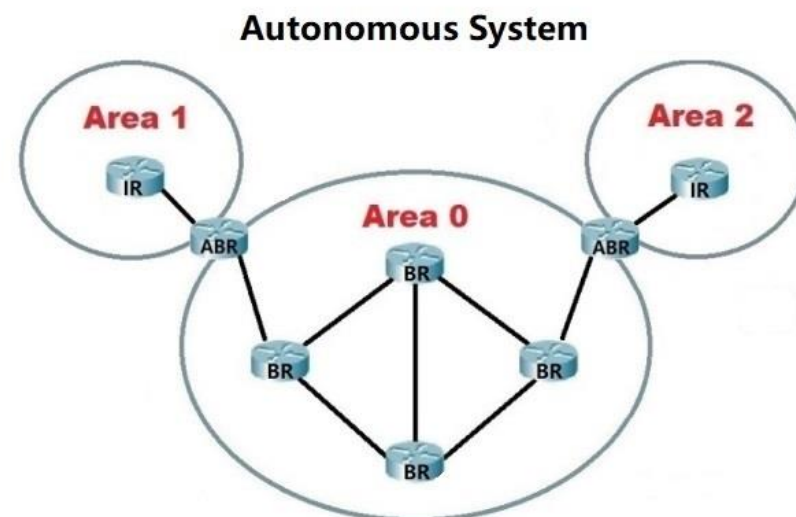
- CCNA Exam (Router)

What is the purpose of ABR In OSPF network ?

It is a router which connect one or more areas to backbone area

It is a router which is connected to more than one router

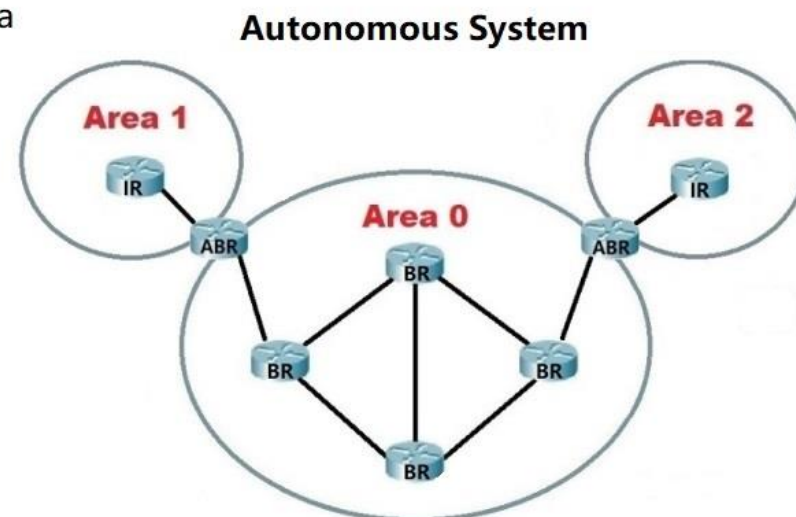It is a routers have neighbour relationship in the same area

None

What will be the wildcard mask for IP 168.231.0.7/24 ?

0.0.0.255

0.0.0.254

0.0.7.255

0.0.3.255

Autonomous System

- CCNA Exam (Router)

What is the range of priority when selecting DR or BDR ?
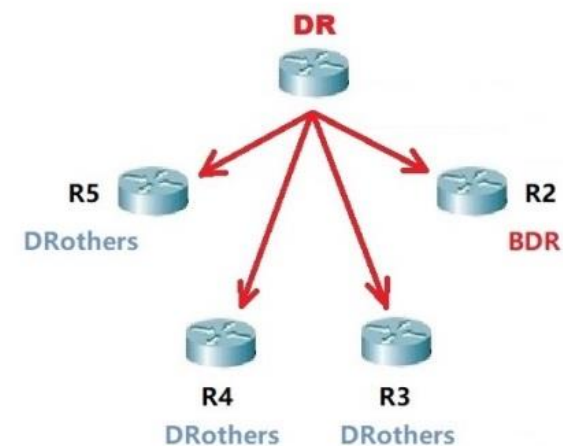
1-255

0-255

10-255

0-1

When a DR fails, and BDR takes over , what is the next selection ?

To select BDR

To select BROthers

To select DR

To select AS

- CCNA Exam (Router)

**OSPF configuration of routers R1 and R2.
The routers cannot establish relationship ,
based on the information in the graphic ,
What is the cause of this problem?**

The hello and dead timers are not configured properly

The OSPF area is not configured properly

The piority on R1 should be set higher

The cost on R1 should be set higher

R1: Ethernet0 is up, line protocol is up
Internet address 192.168.1.2/24, Area 0
Process ID 1, Router ID 192.168.31.33, Network Type BROADCAST, Cost: 10
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 192.168.31.33, Interface address 192.168.1.2
No backup designated router on this network
Timer intervals configured, Hello 5, Dead 20, Wait 20, Retransmit 5

R2: Ethernet0 is up, line protocol is up
Internet address 192.168.1.1/24, Area 0
Process ID 2, Router ID 192.168.31.11, Network Type BROADCAST, Cost: 10
Transmit Delay is 1 sec, State DR, Priority 1
Designated Router (ID) 192.168.31.11, Interface address 192.168.1.1
No backup designated router on this network
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5

- CCNA Exam (Router)

Refer to the exhibit, what summary address would be sent from R1 ?

172.16.0.0/16

172.16.0.0/20

172.64.0.0/16

172.64.128.0/24
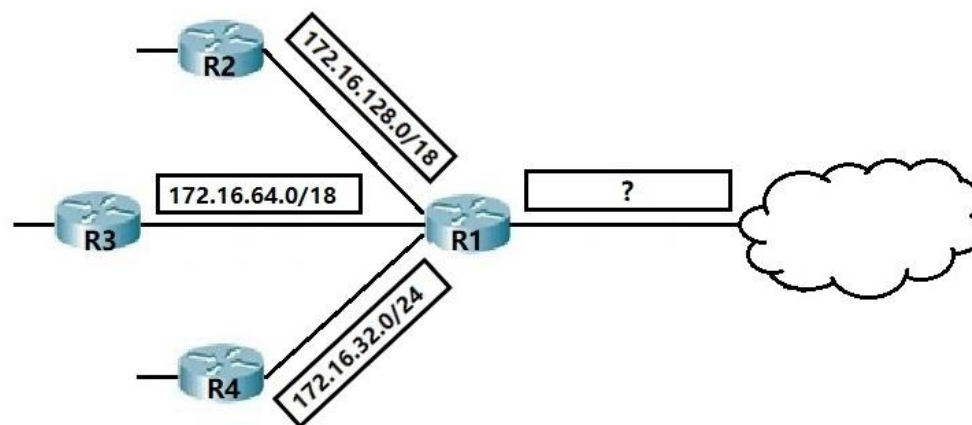
R1 and R4 cannot establish an adacency in OSPF, What is causing the problem?

There is an area ID mismatch

There is an encapsulation mismatch
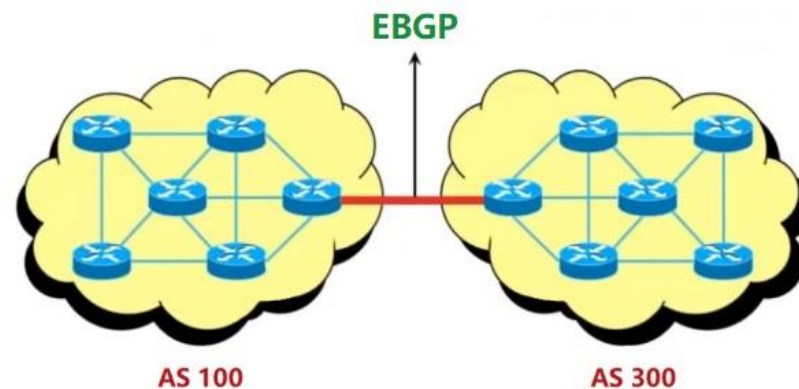
There is an OSPF hello mismatch

```
R1#show running-config

interface Serial1/0
ip address 172.16.32.2 255.255.255.252
encapsulation ppp
ip ospf 3 area 0
```

```
R4#show running-config

interface Serial1/0
ip address 172.16.32.1 255.255.255.252
encapsulation ppp
ip ospf 4 area 2
```

- CCNA Exam (Router)

What is the default admin distance for eBGP?

20

10

200

120

What routing protocol code does the routing table use for eBGP?

B

C

D

E

EBGP

AS 100

AS 300

- CCNA Exam (Router)

What command to verify that your eBGP relationship has formed?

show ip bgp summary

show ip community-list

show ip bgp paths

show ip route

What command do you use to form a BGP peering?

neighbor

Network

peer

adjacency

EBGP

AS 100   AS 300