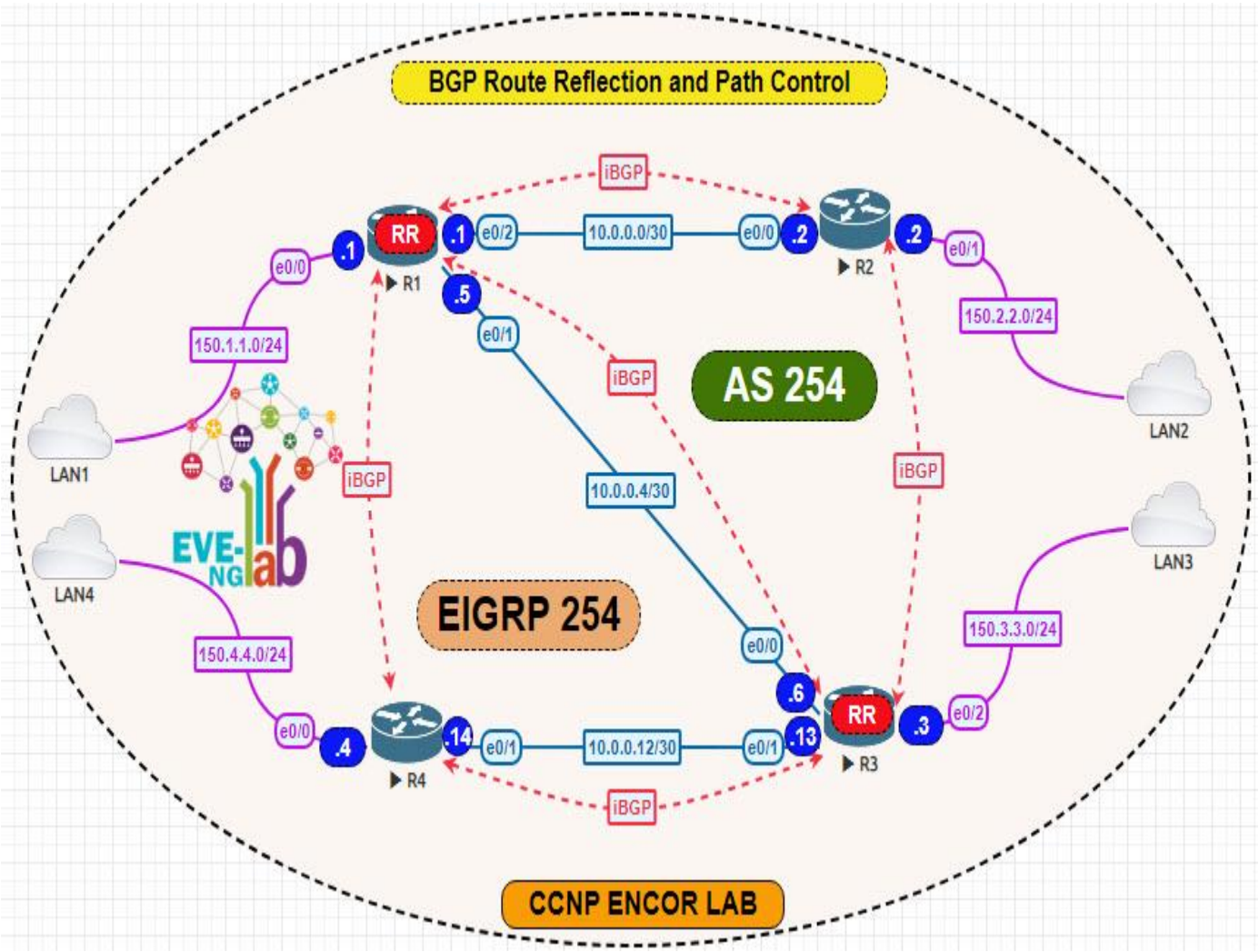
BGP Route Reflection and Path Control

Lab Objective:

The focus of this lab is to understand BGP implementation and configuration in Cisco IOS routers. Additional technologies tested include route reflection and path control.

Lab Topology:

The lab network topology is illustrated below:



Task 1

Configure hostnames and IP addressing on all routers as illustrated in the network topology.

Task 2

Configure the following Loopback 0 interfaces on all routers:

R1 - Loopback 0: IP Address 1.1.1.1/32

R2 - Loopback 0: IP Address 2.2.2.2/32

R3 - Loopback 0: IP Address 3.3.3.3/32

R4 - Loopback 0: IP Address 4.4.4.4/32

Next, configure EIGRP, using AS 254, on all routers and enable EIGRP for all interfaces EXCEPT for the 150.x.x.x/24 LAN subnets connected to R1, R2, R3, and R4. Verify your configuration.

Task 3

Configure internal BGP on R1, R2, R3, and R4 shown below. Use peer-group configuration on R2 and R4 but NOT on R1 and R3:

1. All routers should use their Loopback 0 interface addresses as their router IDs

2. All routers should peer using their Loopback 0 interface addresses

3. R1 and R3 should be configured as Route Reflectors

4. R2 should peer with R1 and R3

5. R4 should peer with R1 and R3

6. R1 and R3 belong to the same cluster to reduce the size of the RIB

7. All routers should use TCP MD5 authentication with a password of 'CCNP'

8. BGP Hellos should be sent every 5 seconds and the Hold Time should be set to 15 seconds

Verify your configuration using the appropriate commands.

Task 4

Advertise the 150.x.x.x/24 subnets on all routers via BGP. These prefixes should be redistributed into BGP on every router. In the future, there will be external BGP connections to one or more ISPs. Management has decided that the 150.x.x.x/24 subnets should never be advertised to these ISPs. Ensure that these prefixes are NEVER advertised out of AS 254. You are NOT allowed to use prefix lists or any type of filters. Verify your configuration using the appropriate commands. Verify that each router can also ping every other router's 150.x.x.x/24 LAN subnet.

Task 5

Ensure that R2 and R4 always prefer routes received from R3 to those received from R1 for each other's 150.x.x.x/24 prefixes. You are only allowed to configure ONE router. Your solution should be globally significant; however, you are NOT allowed to modify any of the BGP default administrative distance values. You can modify BGP attributes as you see fit. Verify the configuration using the appropriate commands.

Configuration

Task 1
Configure hostnames and IP addressing on all routers as illustrated in the network topology.

Task 2
Configure the following Loopback 0 interfaces on all routers:
R1 - Loopback 0: IP Address 1.1.1.1/32
R2 - Loopback 0: IP Address 2.2.2.2/32
R3 - Loopback 0: IP Address 3.3.3.3/32
R4 - Loopback 0: IP Address 4.4.4.4/32
Next, configure EIGRP, using AS 254, on all routers and enable EIGRP for all interfaces EXCEPT for the 150.x.x.x/24 LAN subnets connected to R1, R2, R3, and R4. Verify your configuration.

a.

R-1	R-2	R-3	R-4
en conf t hostname R-1 inter e0/0 ip add 10.0.0.2 255.255.255.252 no shu exit inter e0/1 ip add 150.2.2.2 255.255.255.0 no shu exit inter loo 0 ip add 1.1.1.1 255.255.255.255 exit	en conf t hostname R-2 inter e0/0 ip add 10.0.0.2 255.255.255.252 no shu exit inter e0/1 ip add 150.2.2.2 255.255.255.0 no shu exit inter loo 0 ip add 2.2.2.2 255.255.255.255 exit	en conf t hostname R-3 inter e0/0 ip add 10.0.0.2 255.255.255.252 no shu exit inter e0/1 ip add 150.2.2.2 255.255.255.0 no shu exit inter loo 0 ip add 3.3.3.3 255.255.255.255 exit	en conf t hostname R-4 inter e0/0 ip add 10.0.0.2 255.255.255.252 no shu exit inter e0/1 ip add 150.2.2.2 255.255.255.0 no shu exit inter loo 0 ip add 4.4.4.4 255.255.255.255 exit

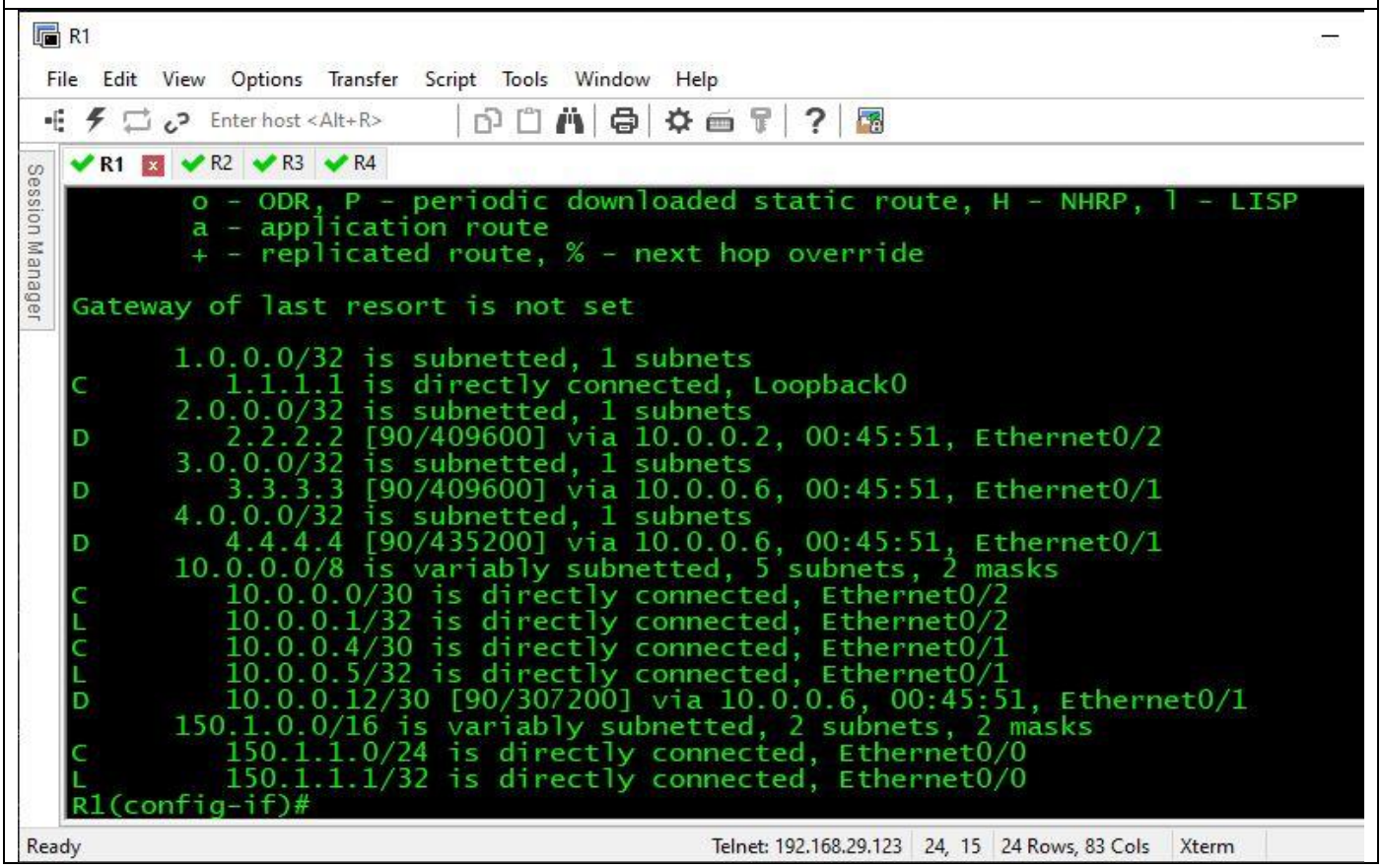
- Next, configure EIGRP, using AS 254, on all routers and enable EIGRP for all interfaces EXCEPT for the 150.x.x.x/24 LAN subnets connected to R1, R2, R3, and R4. Verify your configuration.

b.

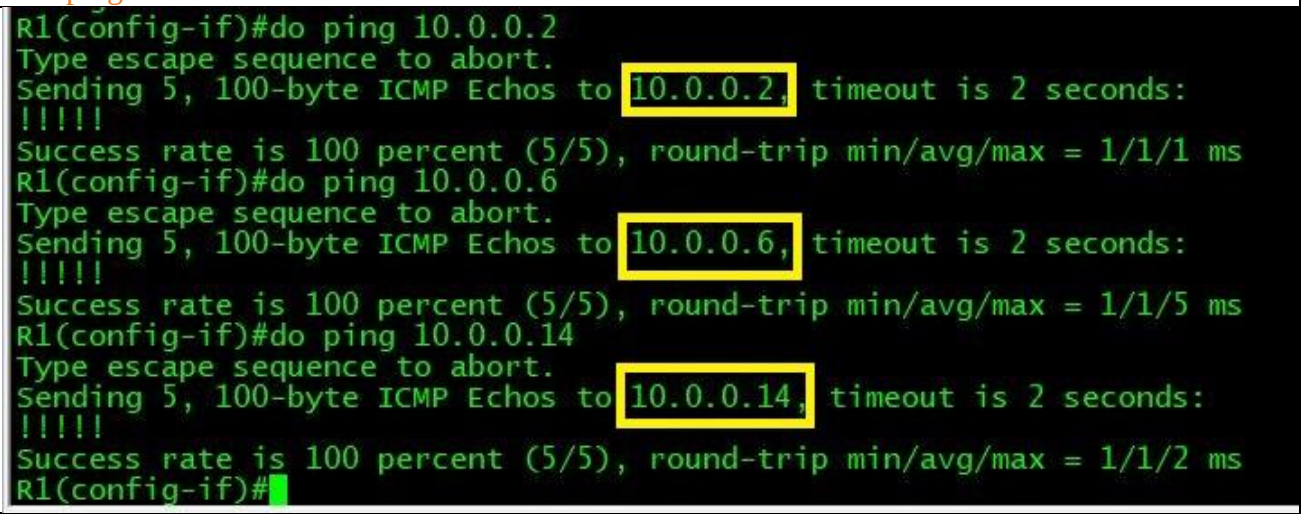
R-1	R-2	R-3	R-4
En Conf t router eigrp 254 network 1.1.1.1 passive-interface default no passive-interface Ethernet0/1 no passive-interface Ethernet0/2 network 10.0.0.0 0.0.0.3 network 10.0.0.4 0.0.0.3 no auto-summary exit	En Conf t router eigrp 254 network 2.2.2.2 passive-interface default no passive-interface Ethernet0/0 network 10.0.0.0 0.0.0.3 no auto-summary exit	En Conf t router eigrp 254 network 3.3.3.3 passive-interface default no passive-interface Ethernet0/0 no passive-interface Ethernet0/1 network 10.0.0.4 0.0.0.3 network 10.0.0.12 0.0.0.3 no auto-summary exit	En Conf t router eigrp 254 network 4.4.4.4 passive-interface default no passive-interface Ethernet0/1 network 10.0.0.12 0.0.0.3 no auto-summary exit

Verification.

R-1 # show ip route



	# show ip eigrp neighbor
R-1	R1(config-if)#do sho ip eigrp nei EIGRP-IPv4 Neighbors for AS(254) H Address Interface Hold Uptime (sec) SRTT (ms) RTO Q Cnt Seq Num 1 10.0.0.2 Et0/2 11 00:59:55 1596 5000 0 4 0 10.0.0.6 Et0/1 13 00:59:55 1598 5000 0 8 R1(config-if)#
R-2	R2(config)#do sho ip eigrp neighbor EIGRP-IPv4 Neighbors for AS(254) H Address Interface Hold Uptime (sec) SRTT (ms) RTO Q Cnt Seq Num 0 10.0.0.1 Et0/0 13 01:07:54 10 100 0 6 R2(config)#
R-3	R3(config)#do sho ip eigrp neighbor EIGRP-IPv4 Neighbors for AS(254) H Address Interface Hold Uptime (sec) SRTT (ms) RTO Q Cnt Seq Num 1 10.0.0.5 Et0/0 13 01:10:44 9 100 0 5 0 10.0.0.14 Et0/1 11 01:10:44 9 100 0 5
R-4	R4(config)#do sho ip eigrp neighbor EIGRP-IPv4 Neighbors for AS(254) H Address Interface Hold Uptime (sec) SRTT (ms) RTO Q Cnt Seq Num 0 10.0.0.13 Et0/1 11 01:13:16 12 100 0 9

	# do ping
R-1	

```
R1(config-if)#do ping 10.0.0.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.0.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
R1(config-if)#do ping 10.0.0.6
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.0.6, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/5 ms
R1(config-if)#do ping 10.0.0.14
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 10.0.0.14, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/2 ms
R1(config-if)#
```

Task 3

Configure internal BGP on R1, R2, R3, and R4 shown below. Use peer-group configuration on R2 and R4 but NOT on R1 and R3:

1. All routers should use their Loopback 0 interface addresses as their router IDs
2. All routers should peer using their Loopback 0 interface addresses
3. R1 and R3 should be configured as Route Reflectors
4. R2 should peer with R1 and R3
5. R4 should peer with R1 and R3
6. R1 and R3 belong to the same cluster to reduce the size of the RIB
7. All routers should use TCP MD5 authentication with a password of 'CCNP'
8. BGP Hellos should be sent every 5 seconds and the Hold Time should be set to 15 seconds

Verify your configuration using the appropriate commands

Configure internal BGP on R1, R2, R3, and R4

c.

R-1	R-2	R-3	R-4
En Conf t router bgp 254 neighbor 10.0.0.2 remote-as 254 neighbor 10.0.0.2 next-hop-self neighbor 10.0.0.6 remote-as 254 neighbor 10.0.0.6 next-hop-self neighbor 10.0.0.14 remote-as 254	En Conf t router bgp 254 neighbor 10.0.0.1 remote-as 254 neighbor 10.0.0.1 next-hop-self neighbor 10.0.0.6 remote-as 254 neighbor 10.0.0.6 next-hop-self neighbor 1.1.1.1 remote-as 254	En Conf t router bgp 254 neighbor 10.0.0.2 remote-as 254 neighbor 10.0.0.2 next-hop-self neighbor 10.0.0.5 remote-as 254 neighbor 10.0.0.5 next-hop-self neighbor 10.0.0.14 remote-as 254	En Conf t router bgp 254 neighbor 10.0.0.5 remote-as 254 neighbor 10.0.0.5 next-hop-self neighbor 10.0.0.13 remote-as 254 neighbor 10.0.0.13 next-hop-self neighbor 20.0.0.1 remote-as 100

neighbor 10.0.0.14 next-hop-self neighbor 2.2.2.2 remote-as 254 neighbor 3.3.3.3 remote-as 254 neighbor 4.4.4.4 remote-as 254 neighbor 2.2.2.2 next-hop-self neighbor 3.3.3.3 next-hop-self neighbor 4.4.4.4 next-hop-self neighbor 2.2.2.2 update-source loopback0 neighbor 3.3.3.3 update-source loopback0 neighbor 4.4.4.4 update-source loopback0 network 150.1.1.0 mask 255.255.255.0 exit	neighbor 3.3.3.3 remote-as 254 neighbor 1.1.1.1 next-hop-self neighbor 3.3.3.3 next-hop-self neighbor 1.1.1.1 update-source loopback0 neighbor 3.3.3.3 update-source loopback0 network 150.2.2.0 mask 255.255.255.0 exit	neighbor 10.0.0.14 next-hop-self neighbor 1.1.1.1 remote-as 254 neighbor 2.2.2.2 remote-as 254 neighbor 4.4.4.4 remote-as 254 neighbor 1.1.1.1 next-hop-self neighbor 2.2.2.2 next-hop-self neighbor 4.4.4.4 next-hop-self neighbor 1.1.1.1 update-source loopback0 neighbor 2.2.2.2 update-source loopback0 neighbor 4.4.4.4 update-source loopback0 network 150.3.3.0 mask 255.255.255.0 exit	neighbor 20.0.0.1 next-hop-self neighbor 1.1.1.1 remote-as 254 neighbor 3.3.3.3 remote-as 254 neighbor 1.1.1.1 next-hop-self neighbor 3.3.3.3 next-hop-self neighbor 1.1.1.1 update-source loopback0 neighbor 3.3.3.3 update-source loopback0 network 150.4.4.0 mask 255.255.255.0 exit do wr

Use peer-group configuration on R2 and R4

- should be configured as Route R1 and R3 Reflectors.
- 6. R1 and R3 belong to the same cluster to reduce the size of the RIB.

d.

R-1	R-2	R-3	R-4
En Conf t router bgp 254 neighbor 2.2.2.2 route-reflector-client neighbor 3.3.3.3 route-reflector-client exit	En Conf t router bgp 254 neighbor ibgp peer-group neighbor ibgp remote-as 254 neighbor ibgp next-hop-self neighbor ibgp update-source Loopback0 neighbor ibgp password CCNP neighbor ibgp version 4 neighbor ibgp timers 5 15 15 neighbor 4.4.4.4 peer-group ibgp exit	En Conf t router bgp 254 neighbor 1.1.1.1 route-reflector-client neighbor 4.4.4.4 route-reflector-client exit	En Conf t router bgp 254 neighbor ibgp peer-group neighbor ibgp remote-as 254 neighbor ibgp next-hop-self neighbor ibgp update-source Loopback0 neighbor ibgp password CCNP neighbor ibgp version 4 neighbor ibgp timers 5 15 15 neighbor 2.2.2.2 peer-group ibgp exit do wr

- 7. All routers should use TCP MD5 authentication with a password of 'CCNP'

R-1	R-3
En Conf t Router bgp 254 Neighbor 3.3.3.3 password CCNP exit	En Conf t Router bgp 254 Neighbor 1.1.1.1 password CCNP exit

**Note already configure R2 and R4 in peer-group(d.)

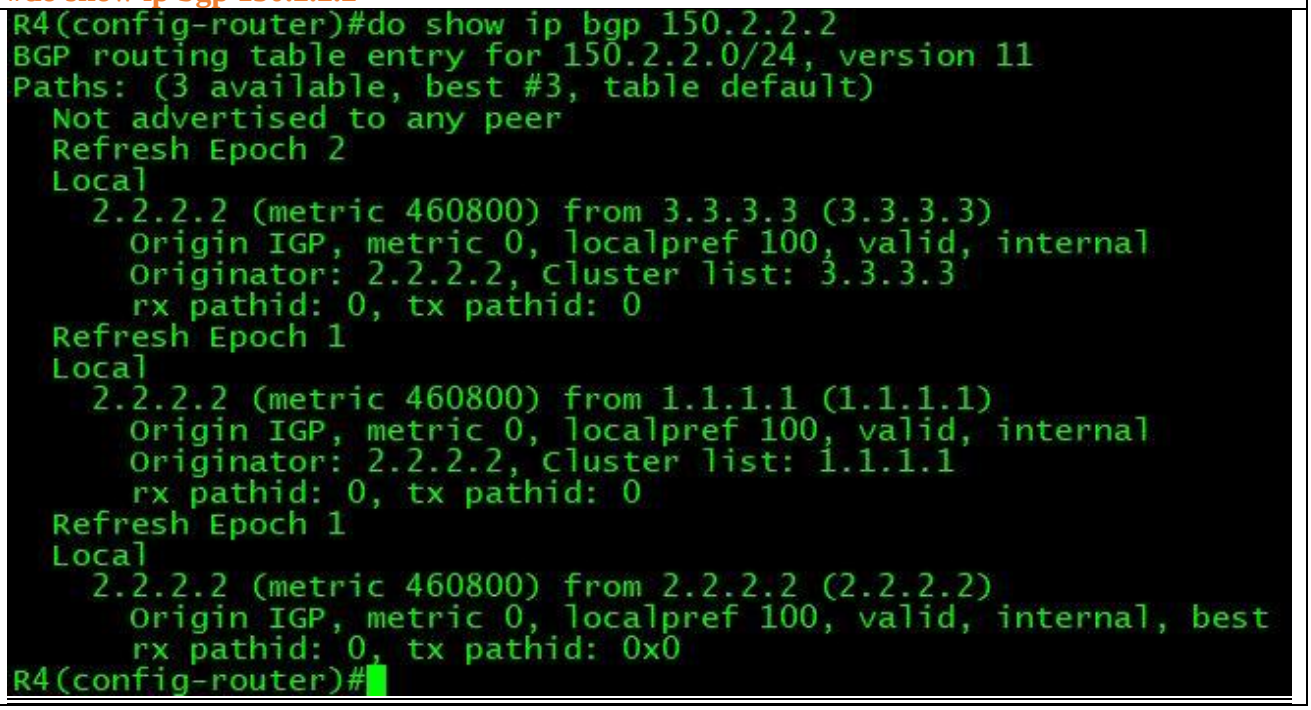
- 8. BGP Hellos should be sent every 5 seconds and the Hold Time should be set to 15 seconds

Verify your configuration using the appropriate commands

	R2(config)#do show ip bgp neighbors | section hold time
R-2	R2(config-router)#do show ip bgp neighbors | section hold time Last read 00:00:24, last write 00:00:15, hold time is 180, keepalive interval is 60 seconds Last read 00:00:42, last write 00:00:19, hold time is 180, keepalive interval is 60 seconds Last read 00:00:03, last write 00:00:03, hold time is 15, keepalive interval is 5 seconds Configured hold time is 15, keepalive interval is 5 seconds R2(config-router)#
R-4	R4(config-router)#do show ip bgp neighbors | section hold time Last read 00:00:47, last write 00:00:08, hold time is 180, keepalive interval is 60 seconds Last read 00:00:00, last write 00:00:00, hold time is 15, keepalive interval is 5 seconds Configured hold time is 15, keepalive interval is 5 seconds Last read 00:00:41, last write 00:00:56, hold time is 180, keepalive interval is 60 seconds R4(config-router)#

Cluster verify: -

R-2	**#do show ip bgp 150.4.4.4**
R-2	R2(config-router)#do sho ip bgp 150.4.4.4 BGP routing table entry for 150.4.4.0/24, version 7 Paths: (3 available, best #3, table default) Not advertised to any peer Refresh Epoch 1 Local 4.4.4.4 (metric 460800) from 3.3.3.3 (3.3.3.3) Origin IGP, metric 0, localpref 100, valid, internal Originator: 4.4.4.4, Cluster list: 3.3.3.3 rx pathid: 0, tx pathid: 0 Refresh Epoch 1 Local 4.4.4.4 (metric 460800) from 1.1.1.1 (1.1.1.1) Origin IGP, metric 0, localpref 100, valid, internal Originator: 4.4.4.4, Cluster list: 1.1.1.1 rx pathid: 0, tx pathid: 0 Refresh Epoch 1 Local 4.4.4.4 (metric 460800) from 4.4.4.4 (4.4.4.4) Origin IGP, metric 0, localpref 100, valid, internal, best rx pathid: 0, tx pathid: 0x0 R2(config-router)#

R-4	#do show ip bgp 150.2.2.2
R-4	

```
R4(config-router)#do show ip bgp 150.2.2.2
BGP routing table entry for 150.2.2.0/24, version 11
Paths: (3 available, best #3, table default)
  Not advertised to any peer
  Refresh Epoch 2
  Local
    2.2.2.2 (metric 460800) from 3.3.3.3 (3.3.3.3)
      Origin IGP, metric 0, localpref 100, valid, internal
      Originator: 2.2.2.2, Cluster list: 3.3.3.3
      rx pathid: 0, tx pathid: 0
  Refresh Epoch 1
  Local
    2.2.2.2 (metric 460800) from 1.1.1.1 (1.1.1.1)
      Origin IGP, metric 0, localpref 100, valid, internal
      Originator: 2.2.2.2, Cluster list: 1.1.1.1
      rx pathid: 0, tx pathid: 0
  Refresh Epoch 1
  Local
    2.2.2.2 (metric 460800) from 2.2.2.2 (2.2.2.2)
      Origin IGP, metric 0, localpref 100, valid, internal, best
      rx pathid: 0, tx pathid: 0x0
R4(config-router)#
```

Task 4

Advertise the 150.x.x.x/24 subnets on all routers via BGP. These prefixes should be redistributed into BGP on every router. In the future, there will be external BGP connections to one or more ISPs. Management has decided that the 150.x.x.x/24 subnets should never be advertised to these ISPs. Ensure that these prefixes are NEVER advertised out of AS 254. You are NOT allowed to use prefix lists or any type of filters. Verify your configuration using the appropriate commands. Verify that each router can also ping every other router's 150.x.x.x/24 LAN subnet.

e.

Already advertise the 150.x.x.x/24 subnet on all routers via BGP check (C.).

- These prefixes should be redistributed into BGP on every router. For this: - Redistribute EIGRP into BGP vis-versa. Command is in blow table.
- Ensure that these prefixes are NEVER advertised out of AS 254. You are NOT allowed to use prefix lists or any type of filters. Verify your configuration using the appropriate commands.
- For this: - To achieve this task I have to enable **synchronization** rule. (By default now a days CISCO decided to disable this rule.) commend as below table.
- By enabling synchronization in every router, **iBGP** route's will not advertise to **eBGP.** And also we cannot ping this **150.x.x.x/24 subnets**.
- For this we have to advertise these subnets in **IGP** protocols like (RIP, OSPF, EIGRP or ISIS).
- We already run EIGRP so we can advertise this subnet's. Check below table.

R-1	R-2	R-3	R-4
en conf t ! router eigrp 254 network 150.1.1.0 0.0.0.255	en conf t ! router eigrp 254 network 150.2.2.0 0.0.0.255 exit !	en conf t ! synchronization router bgp 254 redistribute eigrp 254 metric 10000 exit	en conf t ! router bgp 254 synchronization ! exit !

redistribute bgp 254 metric 10000 1000 255 255 1500 exit ! router bgp 254 synchronization ! exit	router bgp 254 synchronization ! exit	! router eigrp 254 network 150.3.3.0 0.0.0.255 ! exit	router eigrp 254 network 150.3.3.0 0.0.0.255 ! exit

R-1#do ping

```
R1#ping 150.4.4.4
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 150.4.4.4, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/4/17 ms
R1#ping 150.3.3.3
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 150.3.3.3, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
R1#ping 150.2.2.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 150.2.2.2, timeout is 2 seconds:
!!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 1/1/1 ms
R1#
```

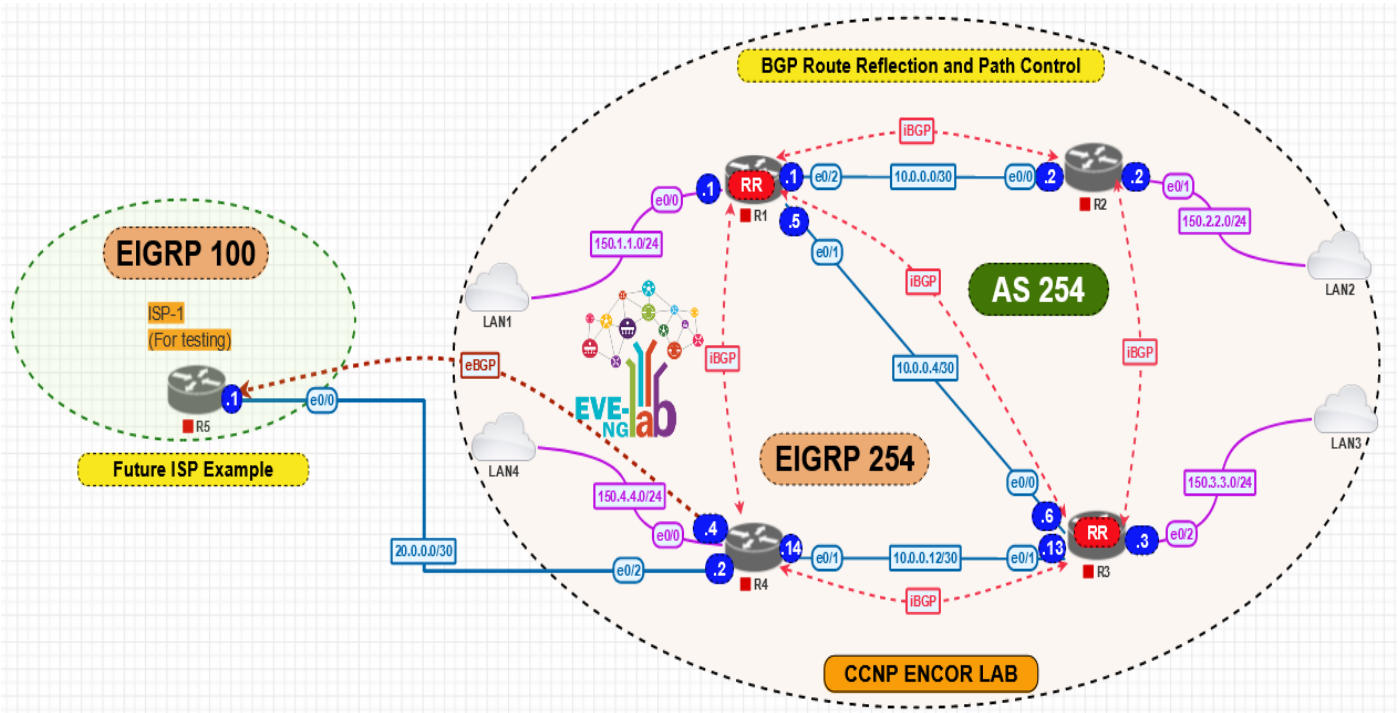
**Now we able to ping with every router with 150.x.x.x/24 subnet, because of redistribution in IGP.

R-3#show ip bgp

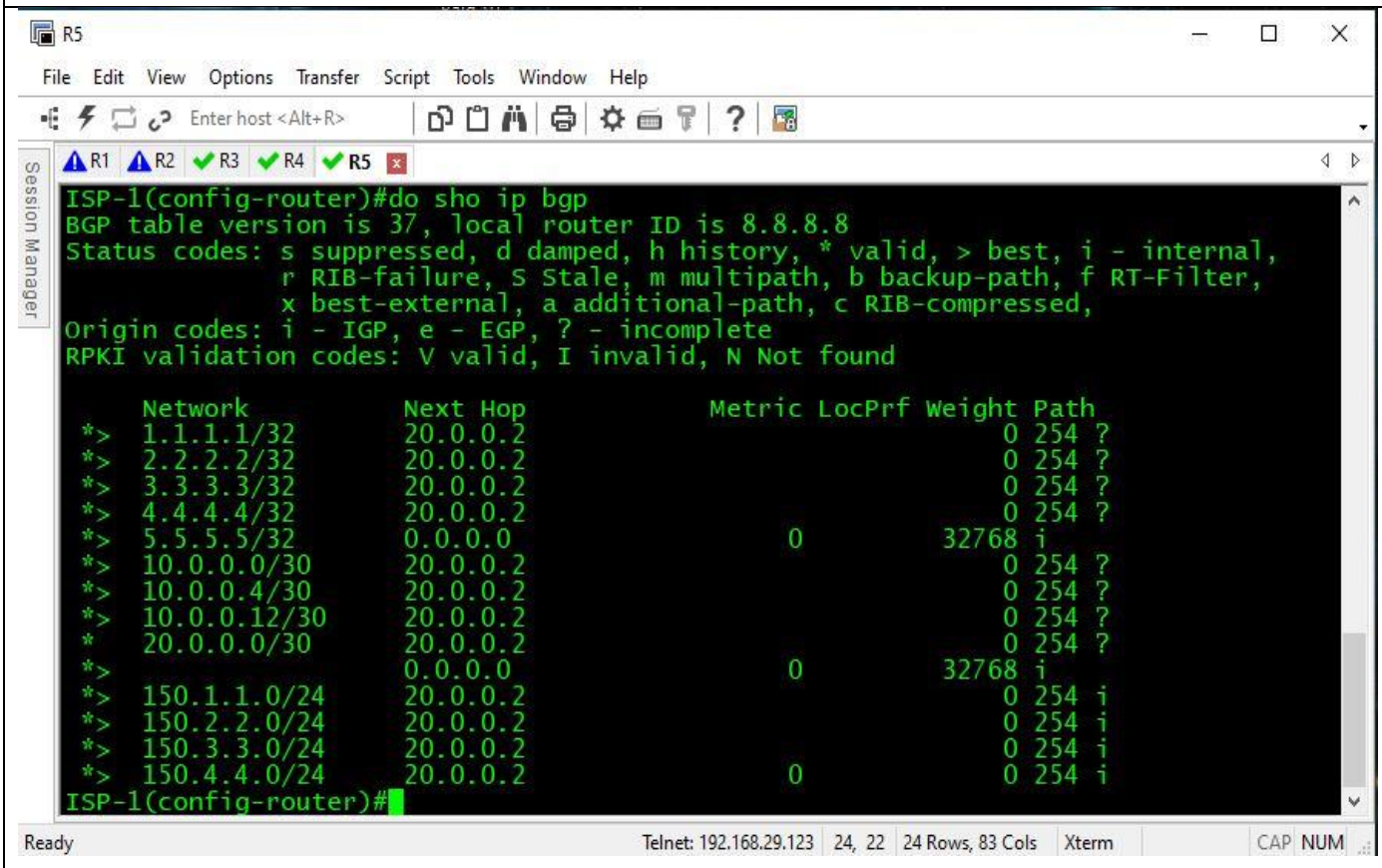
```
R3
File  Edit  View  Options  Transfer  Script  Tools  Window  Help
Enter host <Alt+R>
R1  R2  R3  R4
Session Manager

R3>
R3>en
R3#sho ip bgp
BGP table version is 13, local router ID is 3.3.3.3
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
 *>  1.1.1.1/32       10.0.0.5                 10000          32768 ?
 *>  2.2.2.2/32       10.0.0.5                 10000          32768 ?
 *>  3.3.3.3/32       0.0.0.0                      0          32768 ?
 *>  4.4.4.4/32       10.0.0.14                10000          32768 ?
 *>  10.0.0.0/30      10.0.0.5                 10000          32768 ?
 *>  10.0.0.4/30      0.0.0.0                      0          32768 ?
 *>  10.0.0.12/30     0.0.0.0                      0          32768 ?
 *>  20.0.0.0/30      10.0.0.14                10000          32768 ?
 * i 150.1.1.0/24     1.1.1.1                      0    100       0 i
 * i                  10.0.0.5                     0    100       0 i
 *>                   10.0.0.5                 10000          32768 ?
 * i 150.2.2.0/24     10.0.0.2                     0    100       0 i
 * i                  10.0.0.2                     0    100       0 i
 * i                  2.2.2.2                      0    100       0 i
 *>                   10.0.0.5                 10000          32768 ?
 *>  150.3.3.0/24     0.0.0.0                      0          32768 i
 * i 150.4.4.0/24     10.0.0.14                    0    100       0 i
 * i                  4.4.4.4                      0    100       0 i
 * i                  10.0.0.14                    0    100       0 i
 *>                   10.0.0.14                10000          32768 ?
R3#
R3#
```

**When we enable synchronization, bgp route's not selected as a best path.

To proof this, I add one more router as ISP-1 enable eBGP connectivity with R4.



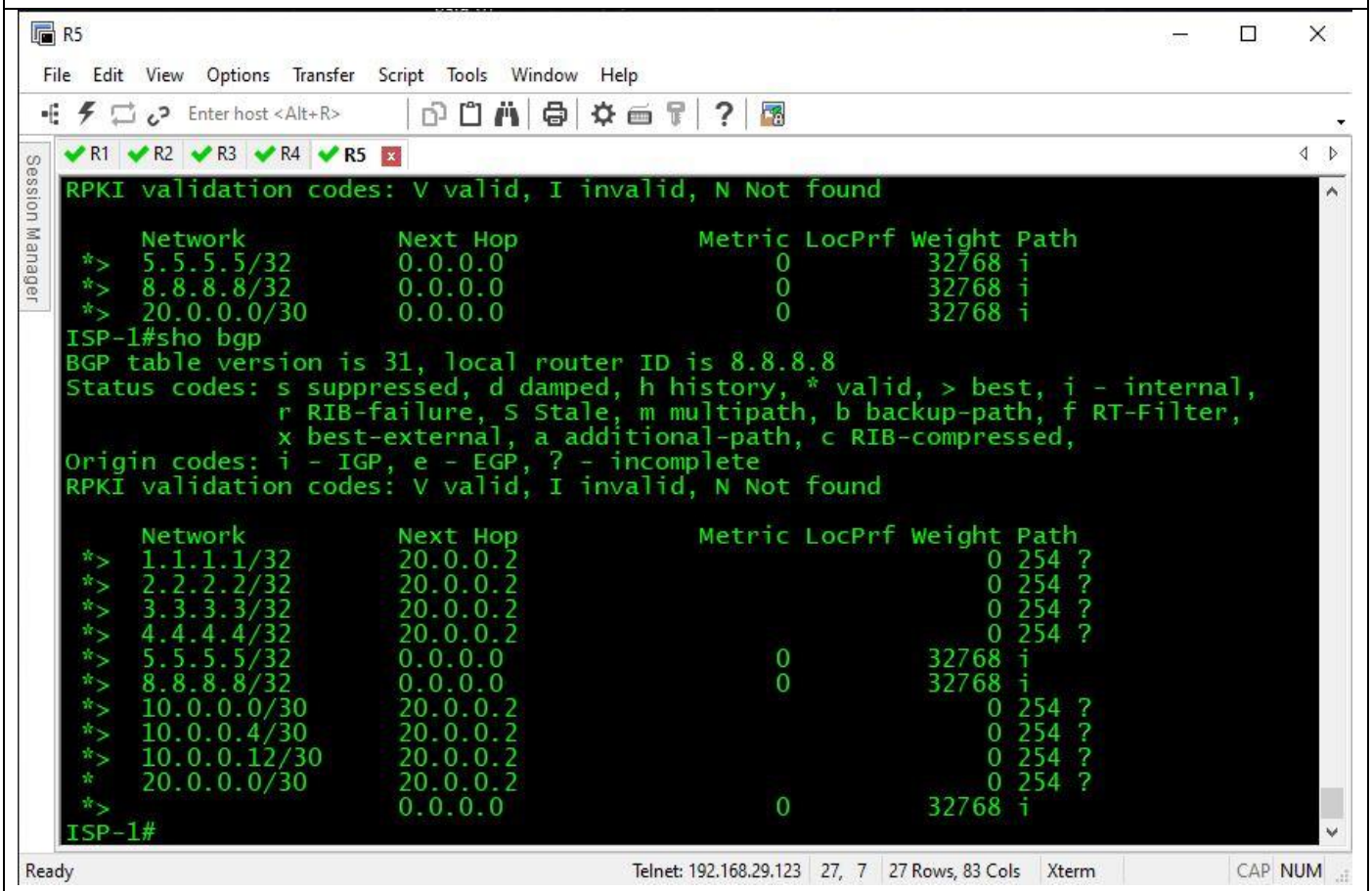
no synchronization command in iBGP



Before

**Note: If simulator give error value then restart your router. Sometime some command not extenuated well.

synchronization command in iBGP



After

ISP-1#show run | sec router

```
ISP-1#show run | sec router
router bgp 100
 bgp log-neighbor-changes
 network 5.5.5.5 mask 255.255.255.255
 network 8.8.8.8 mask 255.255.255.255
 network 20.0.0.0 mask 255.255.255.252
 neighbor 20.0.0.2 remote-as 254
 neighbor 20.0.0.2 next-hop-self
ISP-1#
```

ISP-1#show run | b r b

router bgp 100

network 5.5.5.5 mask 255.255.255.255

network 8.8.8.8 mask 255.255.255.255

network 20.0.0.0 mask 255.255.255.252

neighbor 20.0.0.2 remote-as 254

neighbor 20.0.0.2 next-hop-self

Task 5

Ensure that R2 and R4 always prefer routes received from R3 to those received from R1 for each other's 150.x.x.x/24 prefixes. You are only allowed to configure ONE router. Your solution should be globally significant; however, you are NOT allowed to modify any of the BGP default administrative distance values. You can modify BGP attributes as you see fit. Verify the configuration using the appropriate commands.

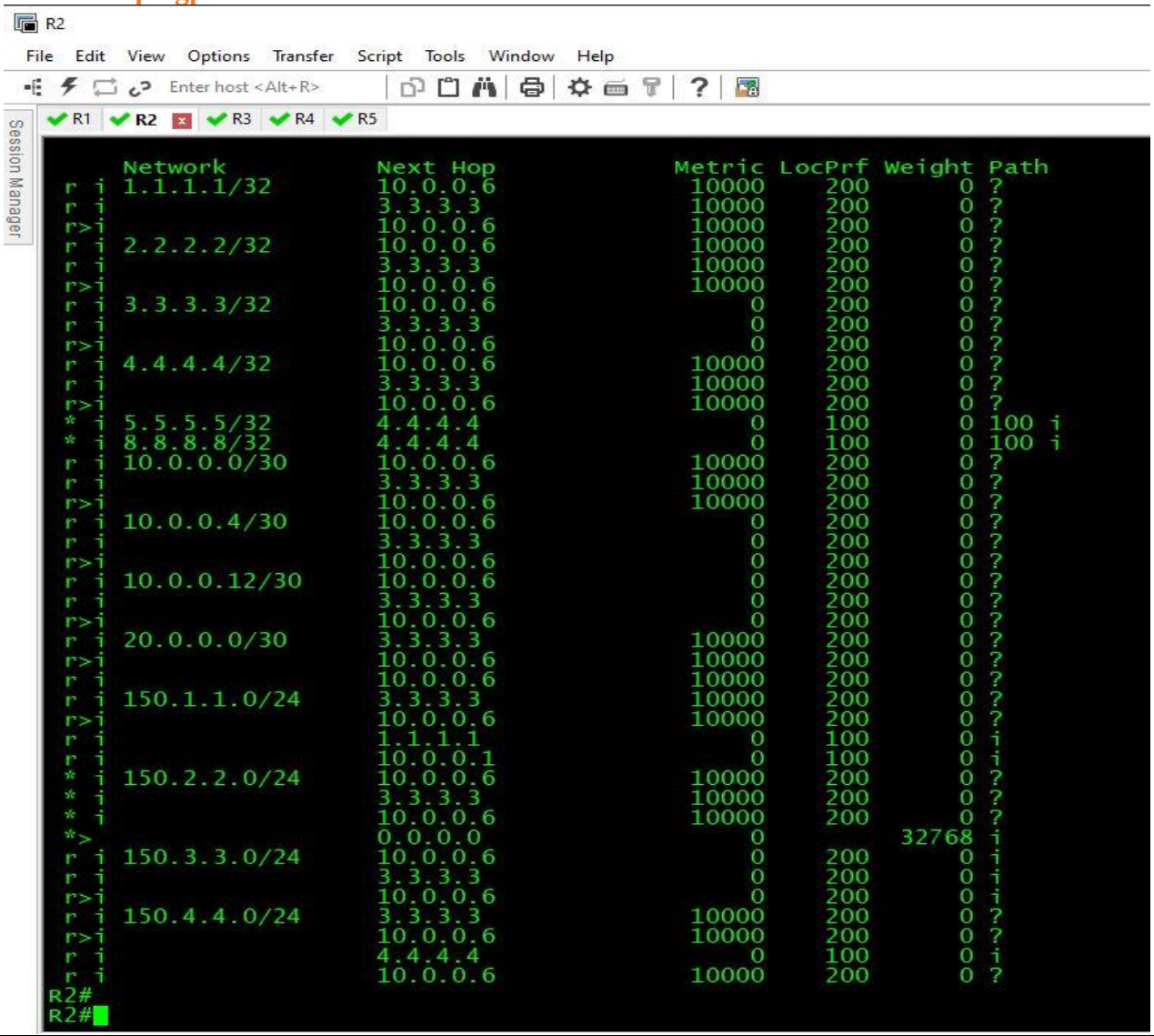
- R2 and R4 always prefer routes received from R3
- You are only allowed to configure ONE router.
- You can modify BGP attributes as you see fit.

For this: we use **local-preference** attribute in router **R3.**

Do not forget to clear ip bgp ☺

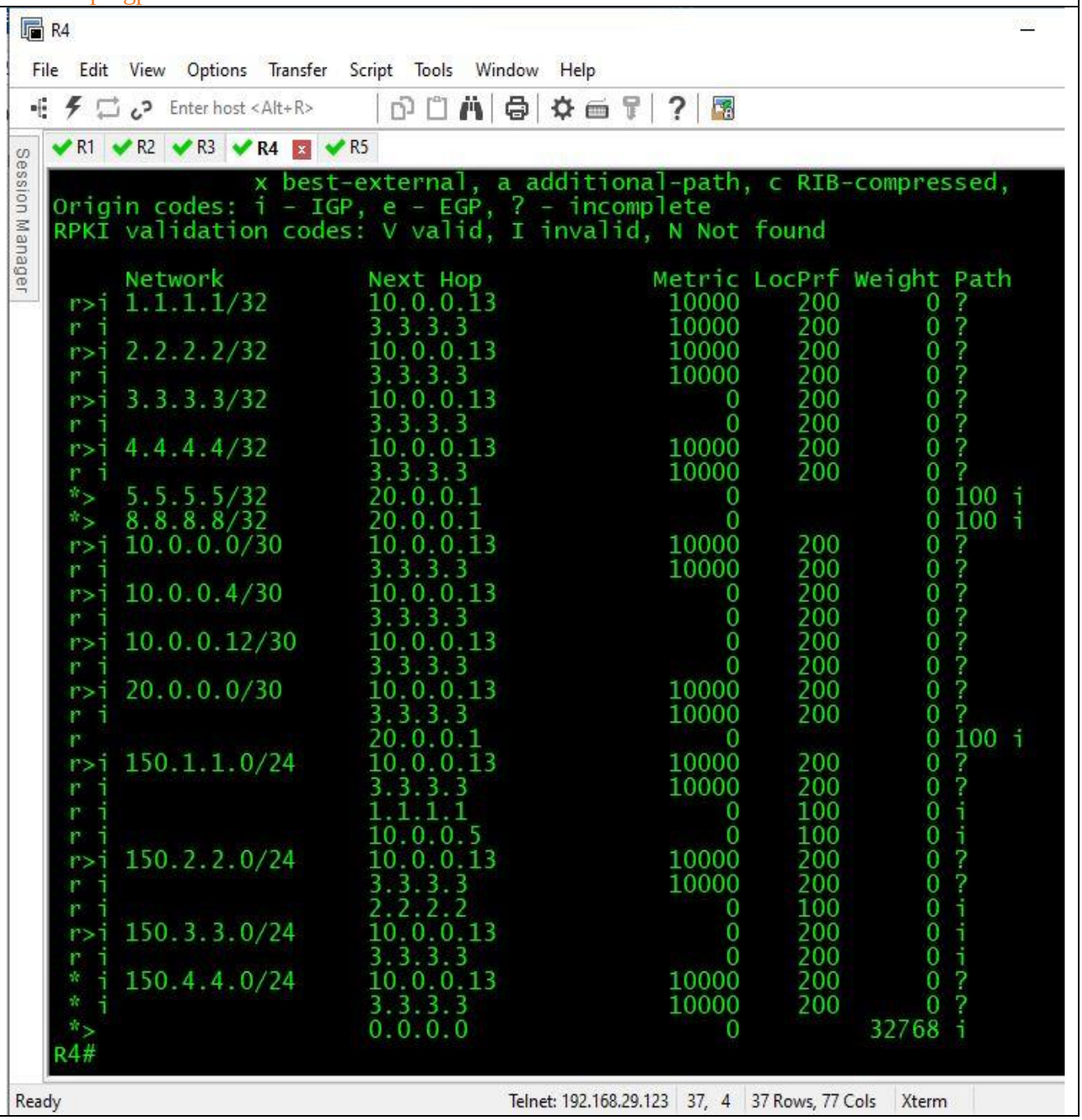
R-1	R-2	R-3	R-4
		en conf t ! router bgp 254 bgp local-preference 200 exit ! do clear ip bgp * !	

R-2 **#do show ip bgp**




```
     Network          Next Hop            Metric LocPrf Weight Path
r i  1.1.1.1/32       10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i  2.2.2.2/32       10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i  3.3.3.3/32       10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i  4.4.4.4/32       10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
* i  5.5.5.5/32       4.4.4.4                  0    100      0 100 i
* i  8.8.8.8/32       4.4.4.4                  0    100      0 100 i
r i  10.0.0.0/30      10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i  10.0.0.4/30      10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i  10.0.0.12/30     10.0.0.6                 0    200      0 ?
r i                   3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i  20.0.0.0/30      3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i                   10.0.0.6                 0    200      0 ?
r i  150.1.1.0/24     3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i                   1.1.1.1                  0    100      0 i
r i                   10.0.0.1                 0    100      0 i
* i  150.2.2.0/24     10.0.0.6                 0    200      0 ?
* i                   3.3.3.3                  0    200      0 ?
* i                   10.0.0.6                 0    200      0 ?
*>                    0.0.0.0                  0             32768 i
r i  150.3.3.0/24     10.0.0.6                 0    200      0 i
r i                   3.3.3.3                  0    200      0 i
r>i                   10.0.0.6                 0    200      0 i
r i  150.4.4.0/24     3.3.3.3                  0    200      0 ?
r>i                   10.0.0.6                 0    200      0 ?
r i                   4.4.4.4                  0    100      0 i
r i                   10.0.0.6                 0    200      0 ?
R2#
R2#
```

R-4	#show ip bgp



Now all prefer routes received from R3.

*****All Task Completed***** ☺

Useful Verification Command's

#show run | sec bgp
#show run | sec eigrp
#show run | sec router
#show run | b r b
show ip eigrp neighbor
#do show ip bgp neighbors | section hold time
#do show ip protocols | sec bgp
#do show bgp summary
#do show ip bgp
#do show ip bgp 150.4.4.4