

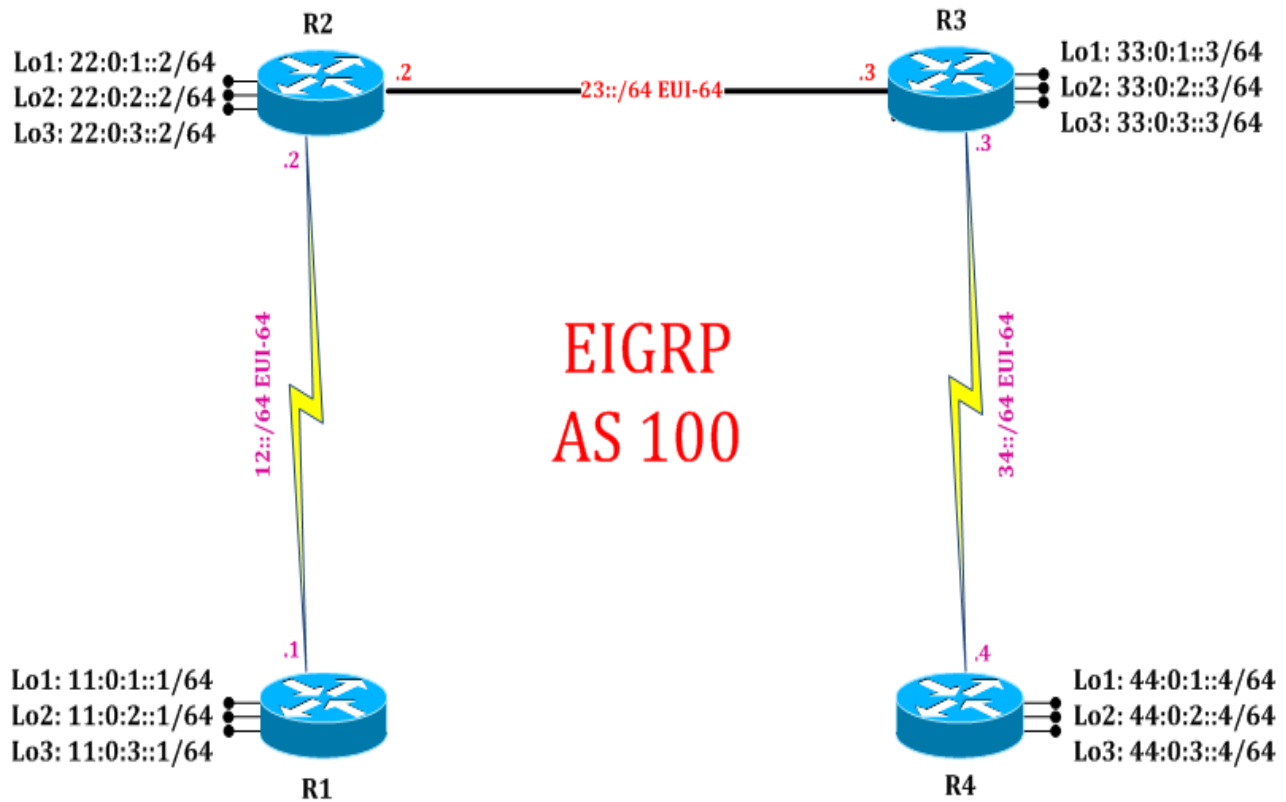
LAB22: EIGRP – IPv6

Disclaimer

This Configuration Guide is designed to assist members to enhance their skills in respective technology area. While every effort has been made to ensure that all material is as complete and accurate as possible, the enclosed material is presented on an “as is” basis. Neither the authors nor Forum assume any liability or responsibility to any person or entity with respect to loss or damages incurred from the information contained in this guide. This Lab Guide was developed by RSTForum. Any similarities between material presented in this configuration guide and any other material is completely coincidental.

LAB 22: Diagram

Note: This Lab was developed on Cisco IOS Version 15.2(4) M1 ADVENTERPRISEK9-M.



LAB 22: IPv6 EIGRP Stub

Task 1: Configure IPv6 EIGRP Stub

Step 1 In the configuration mode of router configure loopbacks with IPv6 network address in sequence.

```
R1:
interface loopback 1
ipv6 address 11:0:1::1/64
exit
interface loopback 2
ipv6 address 11:0:2::1/64
exit
interface loopback 3
ipv6 address 11:0:3::1/64
exit
```

Step 2 Configure IPv6 EIGRP stub with connected option

```
R1:
Ipv6 router eigrp 100
eigrp stub ?
connected      Do advertise connected routes
leak-map       Allow dynamic prefixes based on the leak-map
receive-only   Set receive only neighbor
redistributed  Do advertise redistributed routes
static         Do advertise static routes
summary        Do advertise summary routes

eigrp stub connected
exit
```

(IPv6 EIGRP Stub router will do advertise its connected routes to the neighbor router.)

Step 3 Configure IPv6 EIGRP stub with connected static option

```
R1:
ipv6 router eigrp 100
eigrp stub static
exit
```

(IPv6 EIGRP Stub router will do advertise static routes. Router R2 will not receive 11 network from Stub router because Stub router will only receive and will not advertise its own 11 network to Router R2.)

Step 4 Configure IPv6 EIGRP stub with receive only option

```
R1:
ipv6 router eigrp 100
eigrp stub receive-only
exit
```

(IPv6 EIGRP Stub router will only receive routes from its neighbor but will not advertise any routes to its neighbor.)

Task 2: Verification:

Step 1 Verify route in neighbors router routing table by following command:

```
R2#show ipv6 route
```

```
IPv6 Routing Table - default - 18 entries
Codes: C - Connected, L - Local, S - Static, U - Per-user Static route
       B - BGP, HA - Home Agent, MR - Mobile Router, R - RIP
       H - NHRP, I1 - ISIS L1, I2 - ISIS L2, IA - ISIS interarea
       IS - ISIS summary, D - EIGRP, EX - EIGRP external, NM - NEMO
       ND - ND Default, NDp - ND Prefix, DCE - Destination, NDr - Redirect
       O - OSPF Intra, OI - OSPF Inter, OE1 - OSPF ext 1, OE2 - OSPF ext 2
       ON1 - OSPF NSSA ext 1, ON2 - OSPF NSSA ext 2, l - LISP
C 12::/64 [0/0]
   via Serial2/0, directly connected
L 12::A8BB:CCFF:FE00:200/128 [0/0]
   via Serial2/0, receive
C 22:0:1::/64 [0/0]
   via Loopback1, directly connected
L 22:0:1::2/128 [0/0]
   via Loopback1, receive
C 22:0:2::/64 [0/0]
   via Loopback2, directly connected
L 22:0:2::2/128 [0/0]
   via Loopback2, receive
C 22:0:3::/64 [0/0]
   via Loopback3, directly connected
L 22:0:3::2/128 [0/0]
   via Loopback3, receive
C 23::/64 [0/0]
   via Ethernet0/0, directly connected
L 23::A8BB:CCFF:FE00:200/128 [0/0]
   via Ethernet0/0, receive
D 33:0:1::/64 [90/409600]
   via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
D 33:0:2::/64 [90/409600]
   via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
```

```
D 33:0:3::/64 [90/409600]
  via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
D 34::/64 [90/2195456]
  via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
D 44:0:1::/64 [90/2323456]
  via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
D 44:0:2::/64 [90/2323456]
  via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
D 44:0:3::/64 [90/2323456]
  via FE80::A8BB:CCFF:FE00:300, Ethernet0/0
L FF00::/8 [0/0]
  via Null0, receive
```

(Router R2 will not receive 11 network from Stub router because Stub router will only receive and will not advertise its own 11 network to Router R2.)