

LAB23: EIGRP – IPv6

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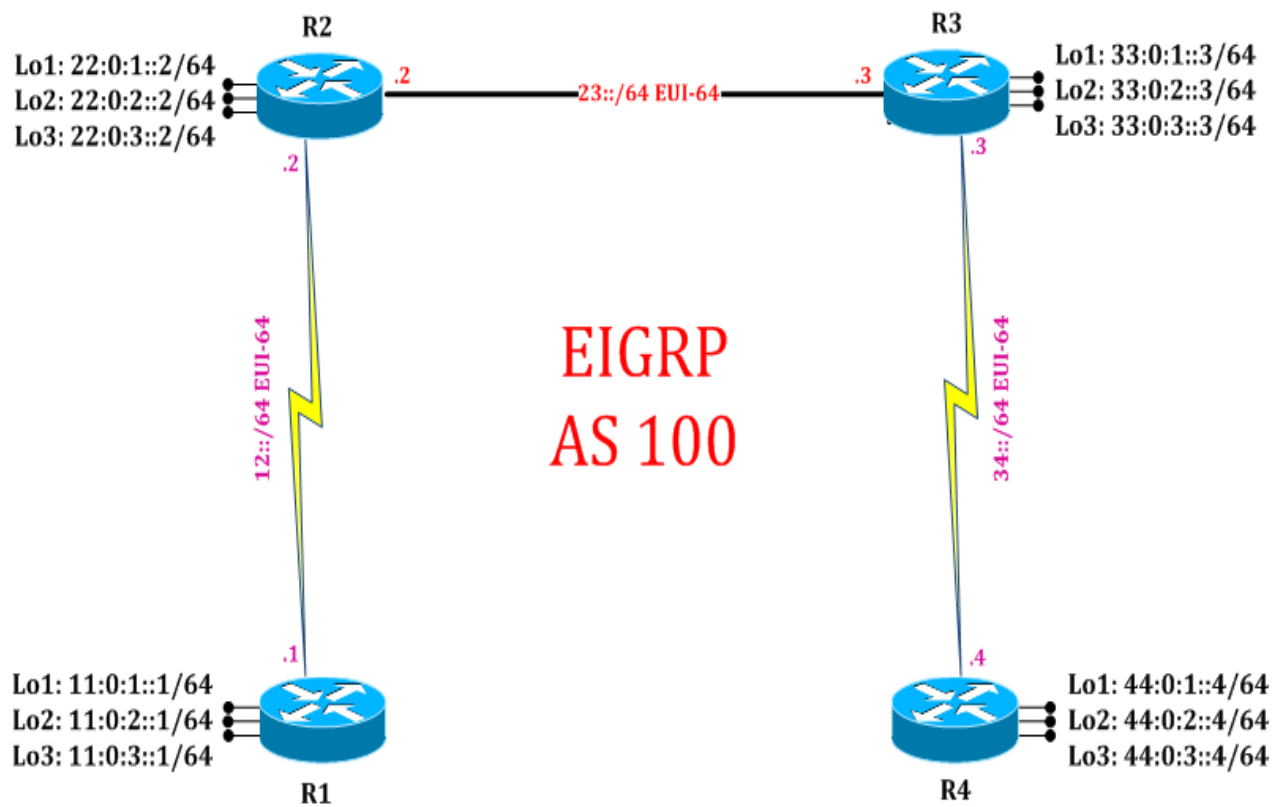
Routing
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EIGRP: Tweaks

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LAB 23: Diagram

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



LAB 23: IPv6 EIGRP Tweaks

Task 1: Configure IPv6 EIGRP Tweaks

Step 1 Change K - Values in Ipv6 EIGRP Process using metric weight command

```
R1:  
ipv6 router eigrp 100  
metric weights 0 1 10 1 0 0  
exit
```

```
R2:  
ipv6 router eigrp 100  
metric weights 0 1 10 1 0 0  
exit
```

```
R3:  
ipv6 router eigrp 100  
metric weights 0 1 10 1 0 0  
exit
```

```
R4:  
ipv6 router eigrp 100  
metric weights 0 1 10 1 0 0  
exit
```

(K value defines the Metric Weight and should be changed on every router in same autonomous)

Step 2 Verify neighborhood using show ipv6 eigrp neighbor command

```
R2#show ipv6 eigrp neighbors
```

```
EIGRP-IPv6 Neighbors for AS(100)  
H Address          Interface  Hold  Uptime  SRTT  RTO  Q  Seq  
      (sec)          (ms)      Cnt  Num  
0 Link-local address: Se2/0    11  00:01:31  12  100  0  10  
  FE80::A8BB:CCFF:FE00:100  
1 Link-local address: Et0/0    14  00:01:29   5  100  0   6  
  FE80::A8BB:CCFF:FE00:300
```

Step 3 Change Maximum path for load-balancing, default is 16

R2:

```
ipv6 router eigrp 100
maximum-path 20
```

(Maximum path for load balancing is changed to 20, default is 16)

Step 4 Verify using show ipv6 protocols command:

R2#show ipv6 protocols

```
IPv6 Routing Protocol is "connected"
IPv6 Routing Protocol is "ND"
IPv6 Routing Protocol is "eigrp 100"
EIGRP-IPv6 Protocol for AS(100)
Metric weight K1=1, K2=10, K3=1, K4=0, K5=0
Router-ID: 22.0.3.2
Topology : 0 (base)
Active Timer: 3 min
Distance: internal 90 external 170
Maximum path: 20
Maximum hopcount 100
Maximum metric variance 1
Interfaces:
Loopback1
Loopback2
Loopback3
Redistribution:
None
```

Step 5 Change IPv6 EIGRP maximum hopcount, default is 100

R1:

```
ipv6 router eigrp 100
metric maximum-hops 255
exit
```

(EIGRP scalability is by default 100 but is changed to 255. Now EIGRP scalability is changed to 255 means now EIGRP router has 255 hops visibility.)

Step 6 Verify using show ipv6 protocols command:

```
R1#show ipv6 protocols
```

```
IPv6 Routing Protocol is "connected"  
IPv6 Routing Protocol is "ND"  
IPv6 Routing Protocol is "eigrp 100"  
EIGRP-IPv6 Protocol for AS(100)  
Metric weight K1=1, K2=0, K3=1, K4=0, K5=0  
Router-ID: 22.0.3.2  
Topology : 0 (base)  
Distance: internal 90 external 170  
Maximum path: 20  
Maximum hopcount 255  
Maximum metric variance 1  
Interfaces:  
Loopback1  
Loopback2  
Loopback3  
Redistribution:  
None
```