

LAB13: EIGRP – IPv4

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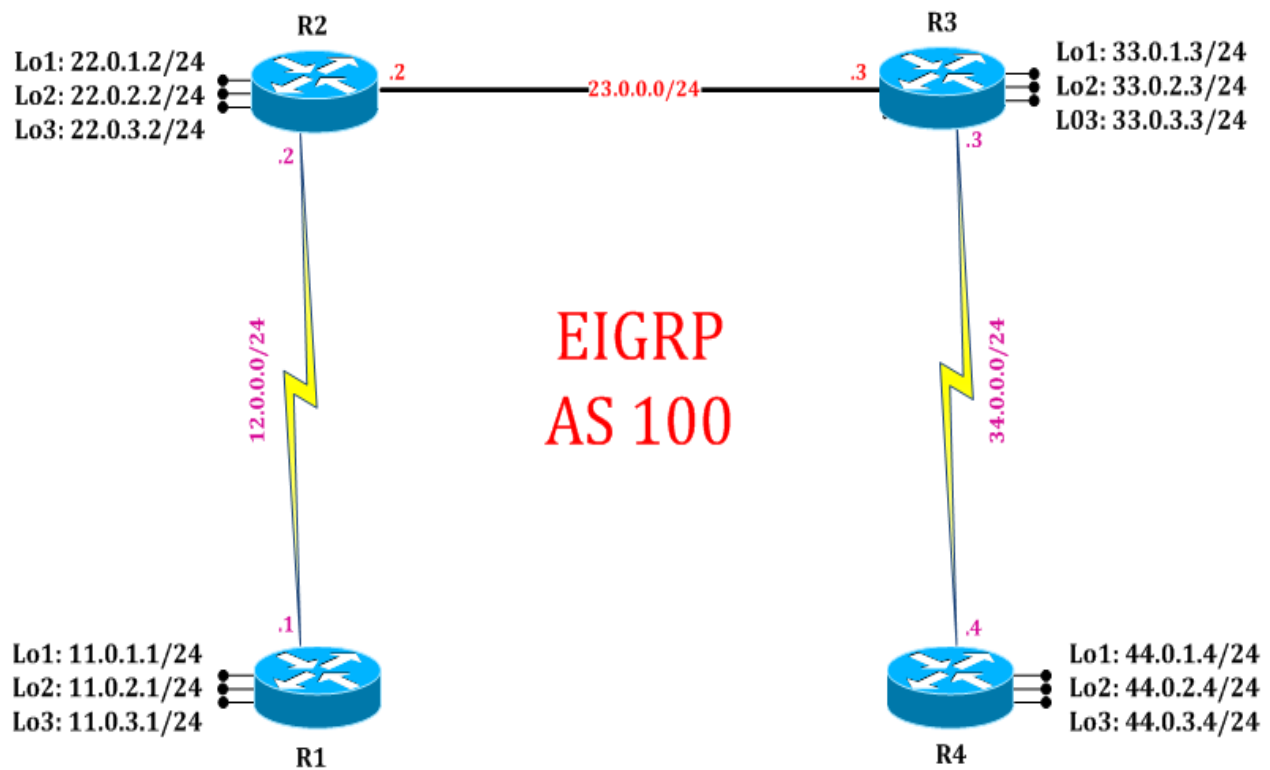
Routing
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EIGRP: Tweaks

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LAB 13: Diagram

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



LAB 13: EIGRP Tweaks

Task 1: Configure EIGRP Tweaks

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

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

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

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

```
R4:  
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 ip eigrp neighbor command

```
R2#show ip eigrp neighbors
```

```
EIGRP-IPv4 Neighbors for AS(100)  
H Address          Interface      Hold  Uptime  SRTT  RTO  Q  Seq  
      (sec)          (ms)          Cnt  Num  
1 23.0.0.3         Et0/0         12   00:01:57  9    100  0   9  
0 12.0.0.1         Se2/0         12   00:01:43  17   102  0  13
```

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

```
R2:  
router eigrp 100  
maximum-path 20  
exit
```

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

Step 4 Verify using show ip protocols command

```
R2#show ip protocols
```

```
*** IP Routing is NSF aware ***
```

```
Routing Protocol is "eigrp 100"
```

```
Outgoing update filter list for all interfaces is not set
```

```
Incoming update filter list for all interfaces is not set
```

```
Default networks flagged in outgoing updates
```

```
Default networks accepted from incoming updates
```

```
EIGRP-IPv4 Protocol for AS(100)
```

```
Metric weight K1=1, K2=10, K3=1, K4=0, K5=0
```

```
NSF-aware route hold timer is 240
```

```
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
```

```
Automatic Summarization: disabled
```

```
Maximum path: 20
```

```
Routing for Networks:
```

```
0.0.0.0
```

```
Routing Information Sources:
```

```
Gateway      Distance  Last Update
```

```
12.0.0.1      90       00:00:05
```

```
23.0.0.3      90       00:00:05
```

```
Distance: internal 90 external 170
```

Step 5 Change EIGRP maximum hopcount, default is 100

```
R2:
```

```
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 ip protocols command

```
R2#show ip protocols
```

```
*** IP Routing is NSF aware ***
```

```
Routing Protocol is "eigrp 100"
```

```
Outgoing update filter list for all interfaces is not set
```

```
Incoming update filter list for all interfaces is not set
```

```
Default networks flagged in outgoing updates
```

```
Default networks accepted from incoming updates
```

```
EIGRP-IPv4 Protocol for AS(100)
```

```
Metric weight K1=1, K2=10, K3=1, K4=0, K5=0
```

```
NSF-aware route hold timer is 240
```

```
Router-ID: 22.0.3.2
```

```
Topology : 0 (base)
```

```
Active Timer: 3 min
```

```
Distance: internal 90 external 170
```

```
Maximum path: 20
```

```
Maximum hopcount 255
```

```
Maximum metric variance 1
```

```
Automatic Summarization: disabled
```

```
Maximum path: 20
```

```
Routing for Networks:
```

```
0.0.0.0
```

```
Routing Information Sources:
```

```
Gateway      Distance  Last Update
```

```
12.0.0.1      90        00:00:55
```

```
23.0.0.3      90        00:00:55
```

```
Distance: internal 90 external 170
```