

LAB14: Named EIGRP – IPv4

Disclaimer

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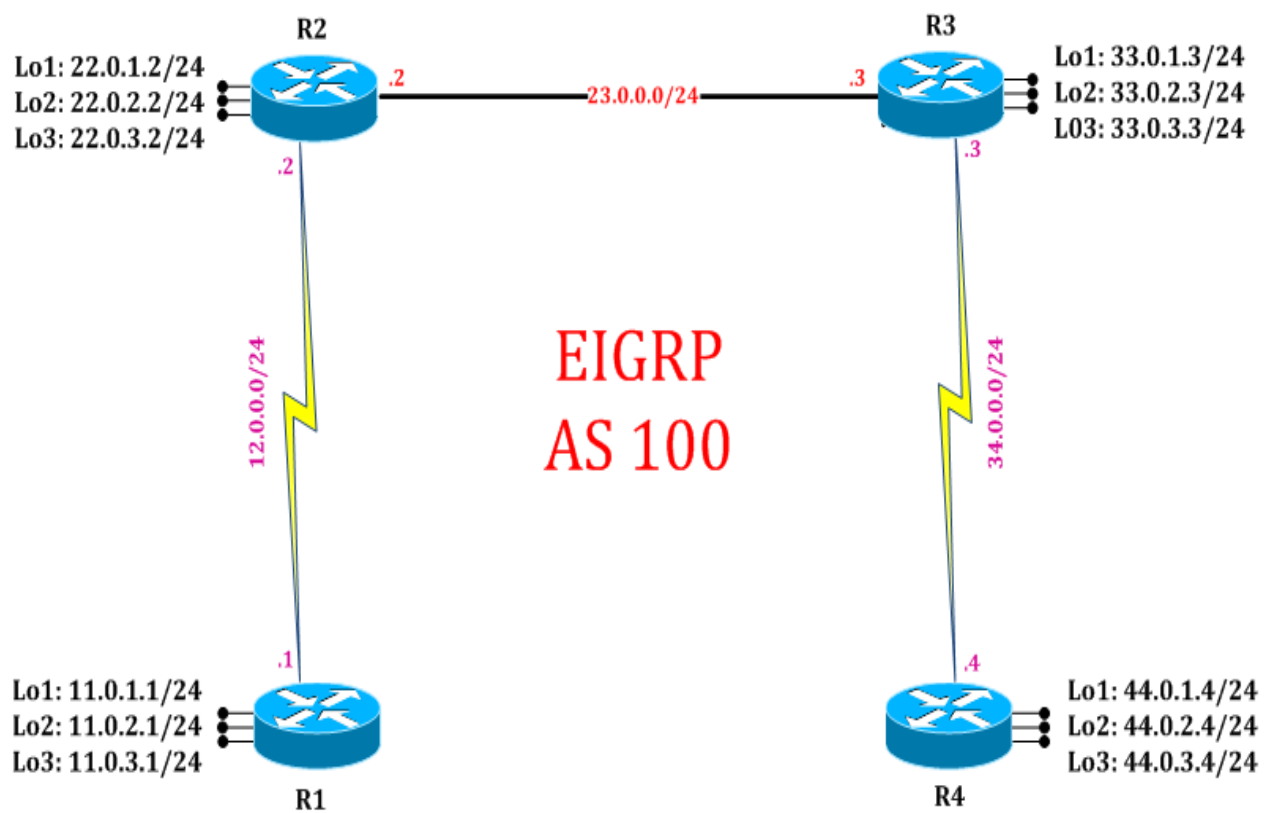
Routing
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EIGRP: Tweaks

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LAB 14: Diagram

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



LAB14: EIGRP Tweaks using name configuration

Task 1: Configure EIGRP Tweaks using named configuration

Step 1 In the configuration mode of router configure IPv4 EIGRP process with a name & enter address-family interface mode

```
R1:
router eigrp cisco
address-family ipv4 autonomous-system 100
net 12.0.0.1 255.255.255.0
net 11.0.1.1 255.255.255.0
net 11.0.2.1 255.255.255.0
net 11.0.3.1 255.255.255.0
```

Step 2 Change K – Values in EIGRP Process using metric weight command

```
R1:
router eigrp cisco
address-family ipv4 autonomous-system 100
metric weight 0 1 10 1 0 0
exit
```

```
R2:
router eigrp cisco
address-family ipv4 autonomous-system 100
metric weight 0 1 10 1 0 0
exit
```

```
R3:
router eigrp cisco
address-family ipv4 autonomous-system 100
metric weight 0 1 10 1 0 0
exit
```

```
R4:
router eigrp cisco
address-family ipv4 autonomous-system 100
metric weight 0 1 10 1 0 0
exit
```

Step 3 Verify neighborship using show ip eigrp neighbor command

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

```
EIGRP-IPv4 VR(cisco) Address-Family Neighbors for AS(100)
H Address Interface Hold Uptime SRTT RTO Q Seq
(sec) (ms) Cnt Num
1 12.0.0.1 Se2/0 12 00:00:38 14 100 0 18
0 23.0.0.3 Et0/0 11 00:00:42 12 100 0 40
```

Step 4 Change Maximum path for load-balancing, default is 16

```
R2:
router eigrp cisco
address-family ipv4 autonomous-system 100
topology base
maximum path 20
exit
```

Step 5 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 VR(cisco) Address-Family Protocol for AS(100)
Metric weight K1=1, K2=10, K3=1, K4=0, K5=0 K6=0
Metric rib-scale 128
Metric version 64bit
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
Total Prefix Count: 12
Total Redist Count: 0
Automatic Summarization: disabled
Maximum path: 20
```

Routing for Networks:

12.0.0.2/32

22.0.1.2/32

22.0.2.2/32

22.0.3.2/32

23.0.0.2/32

Routing Information Sources:

Gateway	Distance	Last Update
---------	----------	-------------

12.0.0.1	90	00:03:56
----------	----	----------

23.0.0.3	90	00:01:13
----------	----	----------

Distance: internal 90 external 170

Step 6 Change EIGRP maximum hopcount, default is 100

R2:

```
router eigrp cisco
```

```
address-family ipv4 autonomous-system 100
```

```
topology base
```

```
metric maximum-hops 255
```

Step 7 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 VR(cisco) Address-Family Protocol for AS(100)
```

```
Metric weight K1=1, K2=10, K3=1, K4=0, K5=0 K6=0
```

```
Metric version 64bit
```

```
Router-ID: 22.0.3.2
```

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

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

```
Maximum path: 4
```

```
Maximum hopcount 255
```

```
Maximum metric variance 1
```

```
Automatic Summarization: disabled
```

```
Maximum path: 4
```

```
Routing for Networks:
```

12.0.0.2/32

22.0.1.2/32

22.0.2.2/32

22.0.3.2/32

23.0.0.2/32

```
Routing Information Sources:
```

Gateway	Distance	Last Update
---------	----------	-------------

12.0.0.1 90 00:01:12
23.0.0.3 90 00:01:12
Distance: internal 90 external 170