LAB19: EIGRP – IPv6

Disclaimer

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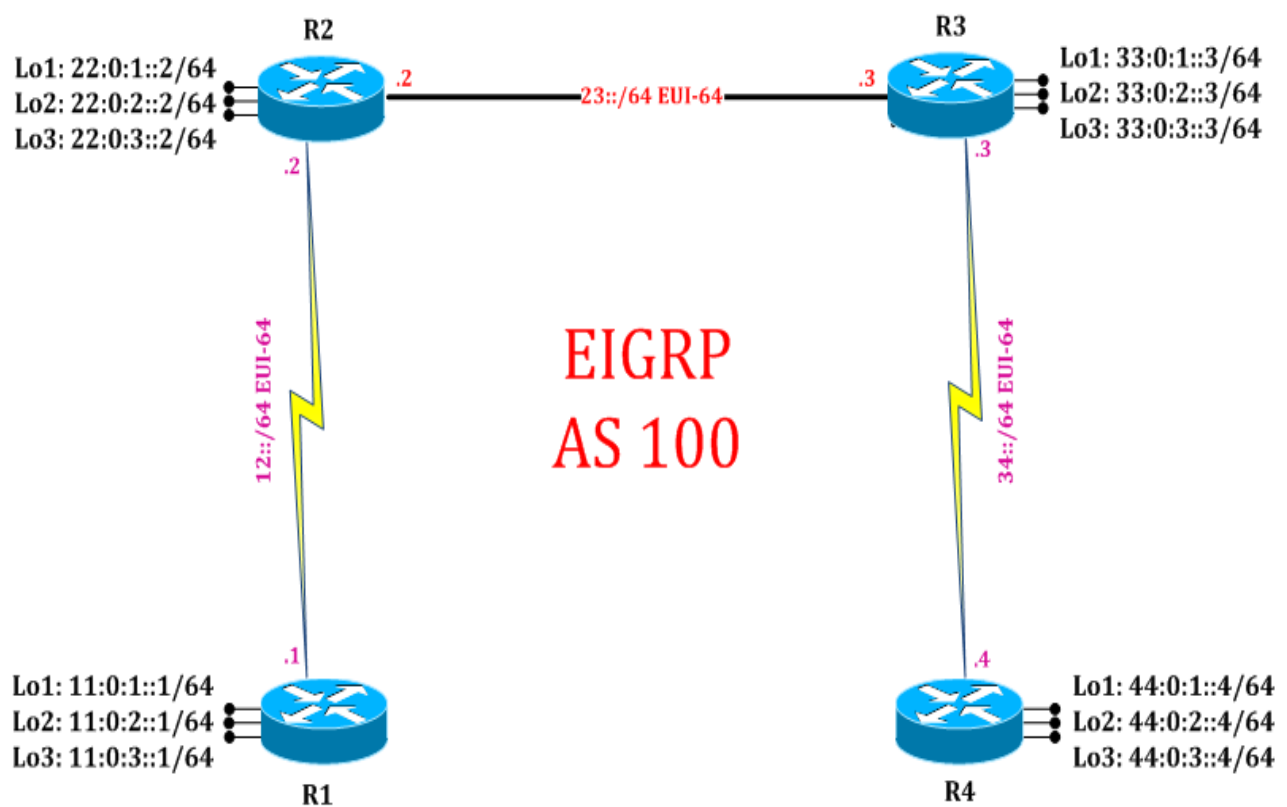

Routing Switching Tigers Forum

EIGRP: Authentication

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LAB 19: Diagram

Note: This Lab was developed on Cisco IOS Version15.2(4) M1 ADVENTERPRISEK9-M.

LAB 19: IPv6 EIGRP Authentication

Task 1: Configure IPv6 EIGRP Authentication

Step 1   In the configuration mode of router configure create Key chain and assign key

```
R1:
key chain akbar        ! (Creating a key chain with name akbar)
key 1                  ! (Selecting a key 1)
key-string cisco       ! (Assigning a key-string by which it will authenticate with
exit                     neighbor, which should be same on both the side)
```

Step 2   Enter the interface where authentication is required and select the encryption mode

```
R1:
interface serial 2/0
ipv6 authentication mode eigrp 100 md5        ! (Selecting encryption mode MD5)
ipv6 authentication key-chain eigrp 100 akbar! (Selecting key-chain in which key 1
exit                                             is selected by which it will auth.)
```

Step 3   Enable IPv6 EIGRP authentication on both the neighbors

```
R2:
key chain birbal
key 1
key-string cisco
exit
interface serial 2/0
ipv6 authentication mode eigrp 100 md5
ipv6 authentication key-chain eigrp 100 birbal
exit
```

Task 2: Verification:

Step 1 Verification of authentication by following command:

R1#show running-config
! (To display the contents of the currently running configuration file)

key chain akbar
key 1
key-string cisco
!
interface Serial2/0
ipv6 authentication mode eigrp 100 md5
ipv6 authentication key-chain eigrp 100 akbar

R2#show running-config
key chain birbal
key 1
key-string cisco
!
interface Serial2/0
ipv6 authentication mode eigrp 100 md5
ipv6 authentication key-chain eigrp 100 birbal
serial restart-delay 0

Step 2 Verify IPv6 EIGRP neighborship by following command:

R1#clear ipv6 eigrp neighbors
R2#clear ipv6 eigrp neighbors
! (Will flush current IPv6 OSPF process and initiate fresh IPv6 OSPF process)

R1#show ipv6 eigrp neighbors

EIGRP-IPv6 Neighbors for AS(100)

H	Address	Interface	Hold (sec)	Uptime	SRTT (ms)	RTO	Q Cnt	Seq Num
0	Link-local address: FE80::A8BB:CCFF:FE00:100	Se2/0	11	00:01:31	12	100	0	10

R2#show ipv6 eigrp neighbors

EIGRP-IPv6 Neighbors for AS(100)

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

(IPv6 EIGRP neighbors will authenticate with key and if key matches, IPv6 EIGRP neighborship will be formed. Fresh EIGRP neighborship can be verified inIPv6 EIGRP neighbor table.)