LAB10: OSPF – IPv6

Disclaimer

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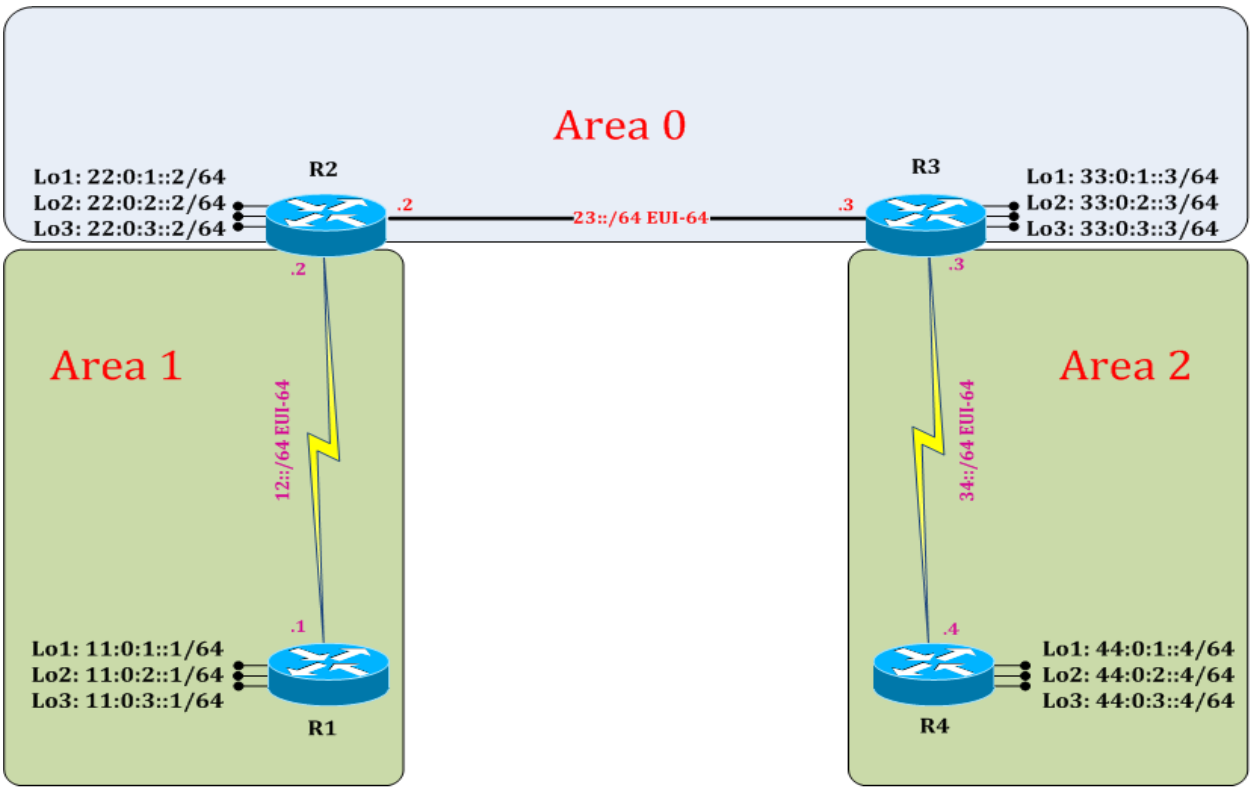
LAB 10: Diagram

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



LAB 10: IPv6 OSPF Authentication:

Task 1: Configure IPv6 OSPF Authentication

Step 1 Enter the interface where authentication is required and select the encryption mode:

R1:
```
interface s2/0
ipv6 ospf authentication ipsec spi 256 md5
0123456789ABCDEF0123456789ABCDEF
exit
```

Step 2 Enable IPv6 OSPF authentication on both the neighbors:

R2:
```
interface s2/0
ipv6 ospf authentication ipsec spi 256 md5
0123456789ABCDEF0123456789ABCDEF
exit
```

Task 2: Verification:

Step 1 Verification of authentication by following command:

```
R1#show run
! (To display the contents of the currently running configuration file or the
configuration the show running-config command in privileged EXEC mode.)

 interface Serial2/0
 ipv6 address 12::/64 eui-64
 ipv6 ospf authentication ipsec spi 256 md5
0123456789ABCDEF0123456789ABCDEF
 ipv6 ospf 1 area 1
```

```
R2#show run

 interface Serial2/0
 ipv6 address 12::/64 eui-64
 ipv6 ospf authentication ipsec spi 256 md5
0123456789ABCDEF0123456789ABCDEF
 ipv6 ospf 1 area 1
```

Step 2 Verify OSPF neighborship by following command:

```
R1#clear ipv6 ospf process
R2#clear ipv6 ospf process
! (Will flush current IPv6 OSPF process and initiate fresh OSPF process.)


R1#show ipv6 ospf neighbors
! (Gives list of OSPF neighbors)

OSPFv3 Router with ID (11.0.3.1) (Process ID 1)

Neighbor ID     Pri   State           Dead Time   Interface ID    Interface
22.0.3.2        0     FULL/ -         00:00:32    11              Serial2/0

R2#show ipv6 ospf neighbors
! (Gives list of OSPF neighbors)

OSPFv3 Router with ID (22.0.3.2) (Process ID 2)

Neighbor ID     Pri   State           Dead Time   Interface ID    Interface
33.0.3.3        1     FULL/DR         00:00:39    3               Ethernet0/0
11.0.3.1        0     FULL/ -         00:00:39    11              Serial2/0
```

(OSPF neighbors will authenticate the key and if key matches, OSPF neighborship will be formed. Fresh IPv6 OSPF neighborship can be verified in IPv6 OSPF neighbor table.)