

LAB2: OSPF – IPv4

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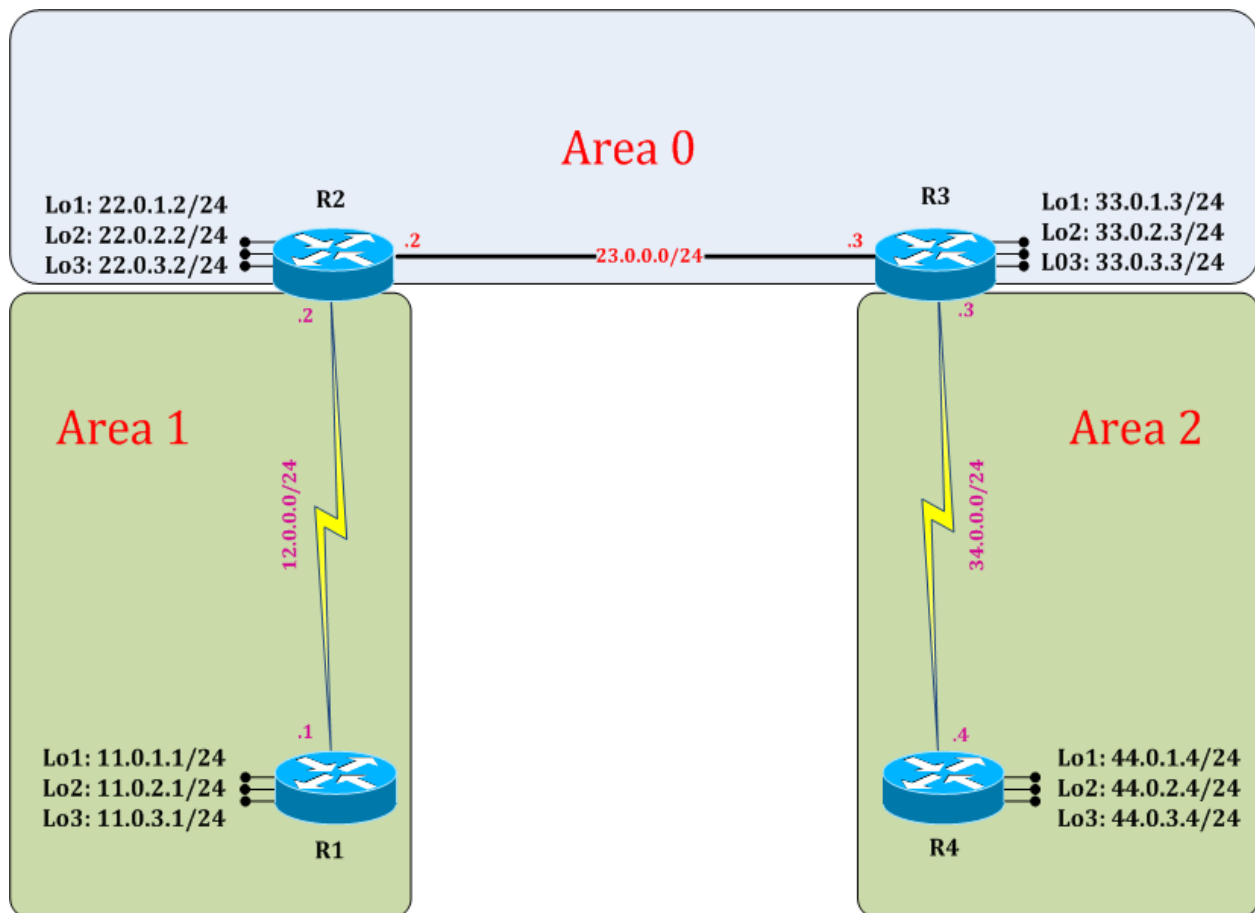
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OSPF: Authentication

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LAB 2: Diagram

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



LAB 2: OSPF Authentication

Task 1: Configure IPv4 OSPF Authentication

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

```
R1:
interface s2/0
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 cisco
exit
```

Step 2 Enable OSPF authentication on both the neighbors

```
R2:
interface serial 2/0
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 cisco
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)
```

```
interface Serial 2/0
ip address 12.0.0.1 255.255.255.0
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 cisco
serial restart-delay 0
```

```
R2#show run
!(To display the contents of the currently running configuration file)
```

```
interface Serial 2/0
ip address 12.0.0.2 255.255.255.0
ip ospf authentication message-digest
ip ospf message-digest-key 1 md5 cisco
serial restart-delay 0
```

Step 2 Verify OSPF neighborhood by following command:

```
R1#clear ip ospf process
```

```
R2#clear ip ospf process
```

! (Will flush current OSPF process and initiate fresh OSPF process.)

```
R1#show ip ospf neighbors
```

! (Gives details and list of EIGRP neighbors)

Neighbor ID	Pri	State	Dead Time	Address	Interface
22.0.3.2	0	FULL/ -	00:00:31	12.0.0.2	Serial2/0

```
R2#show ip ospf neighbors
```

! (Gives details and list of EIGRP neighbors)

Neighbor ID	Pri	State	Dead Time	Address	Interface
33.0.3.3	1	FULL/DR	00:00:33	23.0.0.3	Ethernet0/0
11.0.3.1	0	FULL/ -	00:00:31	12.0.0.1	Serial2/0

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