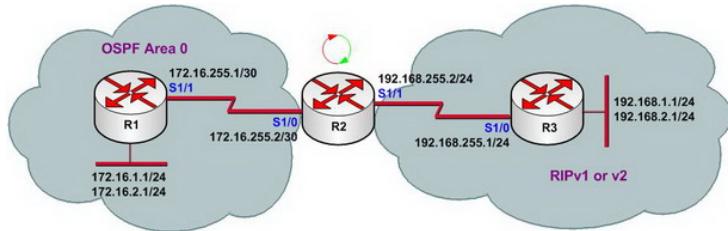


Redistribution Lab1 - Redistributing into RIP and OSPF

?Lab Objectives?

1. To master the re-release configuration of OSPF and RIP.
2. To master the E1 and E2 types of route to OSPF.

?Lab Topology?



?Lab Steps?

1. Configure the router's IP address, and use the Ping command to confirm the connect's interoperability of each router.
2. To configure the OSPF route protocols of R1 and R2, and RIP route protocols of R2 and R3.
3. Check the routing table of R1?R2 and R3.

R1#show ip route

Gateway of last resort is not set

172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks

C 172.16.255.0/30 is directly connected, Serial1/1

C 172.16.1.0/24 is directly connected, Loopback0

C 172.16.2.0/24 is directly connected, Loopback1

R2#show ip route

Gateway of last resort is not set

172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks

C 172.16.255.0/30 is directly connected, Serial1/0

O 172.16.1.0/24 [110/65] via 172.16.255.1, 00:02:47, Serial1/0

O 172.16.2.0/24 [110/65] via 172.16.255.1, 00:02:47, Serial1/0

192.168.255.0/30 is subnetted, 1 subnets
C 192.168.255.0 is directly connected, Serial1/1
R 192.168.1.0/24 [120/1] via 192.168.255.1, 00:00:10, Serial1/1
R 192.168.2.0/24 [120/1] via 192.168.255.1, 00:00:10, Serial1/1

R3#show ip route

Gateway of last resort is not set

C 192.168.255.0/24 is directly connected, Serial1/0
C 192.168.1.0/24 is directly connected, Loopback0
C 192.168.2.0/24 is directly connected, Loopback1

4. According to the show ip route command can be seen only route R2 can learn to the complete entire network route. Because, Route R2 is in the borders of network OSPF and RIP. it runs two different routing protocols at the same time.

5. In order to ensure the R1 and R2 to learn the entire network route, to configure the route re-release on R2. The configuration is as follows:

```
R2(config)#router ospf 1
R2(config-router)#redistribute rip metric 200 subnets
R2(config-router)#exit
R2(config)#router rip
R2(config-router)#redistribute ospf 1 metric 10
R2(config-router)#exit
```

6. Check the routing tables of router R1 and router R3:

R1#show ip route
172.16.0.0/16 is variably subnetted, 3 subnets, 2 masks
C 172.16.255.0/30 is directly connected, Serial1/1

```
C 172.16.1.0/24 is directly connected, Loopback0
C 172.16.2.0/24 is directly connected, Loopback1
192.168.255.0/30 is subnetted, 1 subnets
O E2 192.168.255.0 [110/200] via 172.16.255.2, 00:02:47, Serial1/1
O E2 192.168.1.0/24 [110/200] via 172.16.255.2, 00:02:53, Serial1/1
O E2 192.168.2.0/24 [110/200] via 172.16.255.2, 00:02:53, Serial1/1
```

```
R3#show ip router
R 172.16.0.0/16 [120/10] via 192.168.255.2, 00:00:24, Serial1/0
C 192.168.255.0/24 is directly connected, Serial1/0
C 192.168.1.0/24 is directly connected, Loopback0
C 192.168.2.0/24 is directly connected, Loopback1
```

7. To confirm the validity of the routing:

```
R1#ping 192.168.1.1
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 112/137/144 ms
```

```
R3#ping 172.16.1.1
```

```
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 172.16.1.1, timeout is 2 seconds:
!!!!
Success rate is 100 percent (5/5), round-trip min/avg/max = 120/148/192 ms
```

8. Lab completed.

Hope to helpful for you!