

PASS4SURE

Composite Exam

Cisco CCNP – Composite CCNP study Package

642-892 LAB FASTRACK

Preparation Labs provide lab instructions, scenarios and tutorials, all technical support will be provided by Cisco.

LAB 30

NOTE: This lab manual is a joint fruit of Pass4sure and ciscosim. If you have any questions or suggestions, or want to exchange experience, please go to <http://www.ciscosim.net>

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CCNP - Composite Exam

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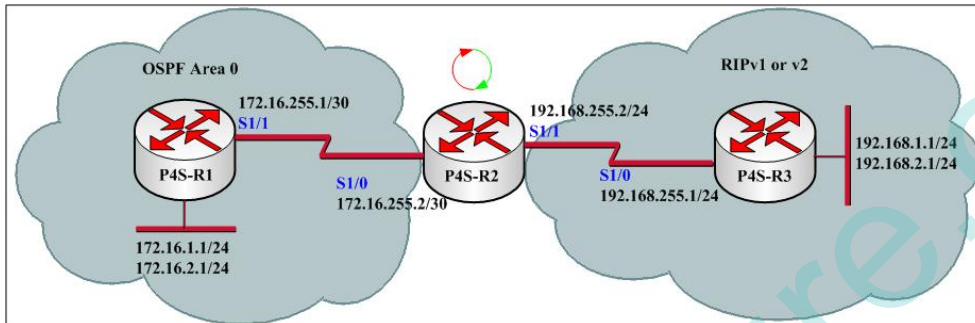
CCNP-COMPOSITE Lab14

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 Process and Requirements】

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 P4S-R1 and P4S-R2, and RIP route protocols of P4S-R2 and P4S-R3.
3. Check the routing table of P4S-R1、 P4S-R2 and P4S-R3.

```
P4S-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
```

```
P4S-R1#
```

```
P4S-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
P4S-R2#

```

Comment [k1]: OSPF network route learned from P4S-R1.

Comment [k2]: RIP network route learned from P4S-R3.

```

P4S-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
P4S-R3#

```

4. According to the show ip route command can be seen only route P4S-R2 can learn to the complete entire network route. Because, Route P4S-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 P4S-R1 and P4S-R2 to learn the entire network route, to configure the route re-release on P4S-R2. The configuration is as follows:

```

P4S-R2(config)#router ospf 1
P4S-R2(config-router)#redistribute rip metric 200 subnets
P4S-R2(config-router)#exit
P4S-R2(config)#router rip
P4S-R2(config-router)#redistribute ospf 1 metric 10
P4S-R2(config-router)#exit

```

Comment [k3]: Will rip the network Re-released rip network route to the OSPF network. And designate the measure as 200. Command Subnets can ensure that the non-type subnets in RIP network to be released correctly. The re-released route defaults the route type as type E2. For the detail route explanations for E1 and E2.

Comment [k4]: Re-release the OSPF network route to RIP, and designate the measure of the hop as 10.

6. Check the routing tables of router P4S-R1 and router P4S-R3:

```

P4S-R1#show ip router

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
P4S-R1#

```

Comment [k5]: P4S-R1 has learned the RIP network route through the re-released configuration.

```
P4S-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
P4S-R3#
```

Comment [k6]: OSPF route that P4S-R3 learned. Because P4S-R2 is in the border of the main category, so here the route it learned is the summary route.

7. To confirm the validity of the routing:

```
P4S-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
```

```
P4S-R1#
```

```
P4S-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
```

```
P4S-R3#
```

8. Lab completed.