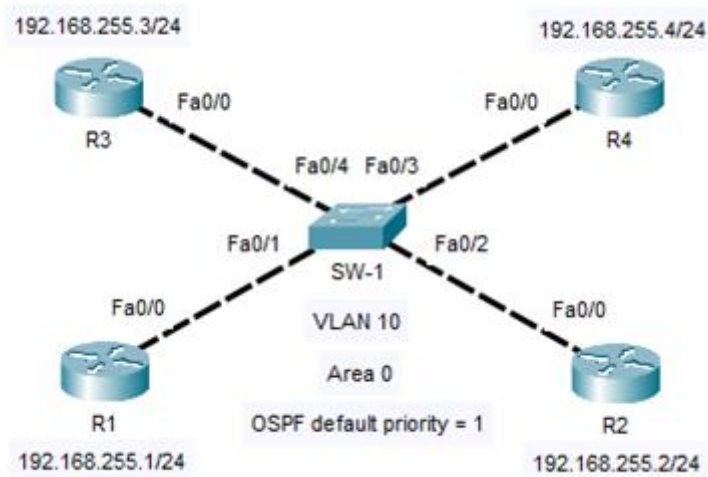


OSPF DR Election

Lab Summary

Change the OSPF priority on R2 to elect it as Designated Router (DR).

Figure 1 Lab Topology



Lab Configuration

Start Packet Tracer File: **ospf dr.pkt**

Click on *R1* icon and select *CLI* folder.

Step 1: Enter global configuration mode

```
R1> enable
```

Step 2: Verify that R4 is the currently elected Designated Router (DR) with the following command from R1 (or any other router).

```
R1# show ip ospf neighbor
```

| Neighbor ID | Pri | State | Dead Time | Address | Interface |
|----------------------|-----|----------------|-----------|-------------|-----------------|
| 192.168.255.4 | 1 | FULL/DR | 00:00:31 | 192.168.1.4 | FastEthernet0/0 |
| 192.168.255.3 | 1 | FULL/BDR | 00:00:31 | 192.168.1.3 | FastEthernet0/0 |
| 192.168.255.2 | 1 | 2WAY/DROTHER | 00:00:31 | 192.168.1.2 | FastEthernet0/0 |

Click on *R2* icon and select *CLI* folder.

Step 3: Enter global configuration mode

```
R2> enable
R2# configure terminal
```

Step 4: Change OSPF priority on R2 interface Fa0/0 from the default 1 to 100.

```
R2(config)# interface fastethernet0/0
R2(config-router)# ip ospf priority 100
R2(config-router)# end
R2# copy running-config startup-config
```

Step 5: Verify Lab

Restart or power cycle all network devices starting with R2 to simulate new DR election from Packet Tracer. As an alternative, you could issue **clear ip ospf process** command from R4.

Verify R2 is now the elected Designated Router (DR) for all routers connected to area 0. Go to R4 and confirm it is no longer the Designated Router.

R1# **show ip ospf neighbor**

| Neighbor ID | Pri | State | Dead Time | Address | Interface |
|----------------------|------------|----------------|-----------|-------------|-----------------|
| 192.168.255.3 | 1 | 2WAY/DROTHER | 00:00:33 | 192.168.1.3 | FastEthernet0/0 |
| 192.168.255.2 | 100 | FULL/DR | 00:00:33 | 192.168.1.2 | FastEthernet0/0 |
| 192.168.255.4 | 1 | FULL/BDR | 00:00:33 | 192.168.1.4 | FastEthernet0/0 |

R2# **show ip ospf interface Fa0/0**

FastEthernet0/0 is up, line protocol is up
Internet address is **192.168.1.2/24**, Area 0
Process ID 1, Router ID 192.168.255.2, Network Type BROADCAST, Cost: 1
Transmit Delay is 1 sec, **State DR, Priority 100**
Designated Router (ID) 192.168.255.2, Interface address 192.168.1.2
Backup Designated Router (ID) 192.168.255.4, Interface address 192.168.1.4
Timer intervals configured, Hello 10, Dead 40, Wait 40, Retransmit 5