**OSPFv2 Single-Area**

**Part 2: Configure and Verify OSPF Routing**

1. **Configure OSPF on R1**

Use the **router ospf** command in global configuration mode to enable OSPF on R1.

R1(config)# **router ospf 1**

Configure the **network** statements for the networks on R1. Use an area ID of 0.

R1(config-router)# **network 192.168.1.0 0.0.0.255 area 0**

R1(config-router)# **network 192.168.12.0 0.0.0.3 area 0**

R1(config-router)# **network 192.168.13.0 0.0.0.3 area 0**

1. **Configure OSPF on R2 and R3**

Use the **router ospf** command and add the **network** statements for the networks on R2 and R3. Neighbor adjacency messages display on R1 when OSPF routing is configured on R2 and R3.

1. **Verify OSPF neighbours and routing information**

Issue the **show ip ospf neighbor** command to verify that each router lists the other routers in the network as neighbors.

R1# **show ip ospf neighbor**

1. **Verify OSPF protocol settings**

R1# **show ip protocols**

1. **Verify OSPF process information**

R1# **show ip protocols**

1. **Verify OSPF interface settings**

R1# **show ip ospf interface brief**

R1# **show ip ospf interface**

**Part 3: Change Router ID Assignments**

1. **Change router IDs using loopback addresses**
2. **Change the router ID on R1 using the router-id command**

**Part 4: Configure OSPF Passive Interfaces**

1. **Configure a passive interface**
2. **Set passive interface as the default on a router**