

## CCNA ICND2 Lab 10 - Configure OSPF Protocol in a Single Area

Lab Topology:



**Lab Requirements:** 1. The router names are **P4S1**, **P4S2** and **P4S3**. 2. Three routers are located in one area. 3. Connect the three routers and enable the OSPF routing protocol on the router. **Lab Process:** 1. As shown in the topology, configure the IP addresses of the router interfaces. Run the **no shutdown** command to activate the interface. 2. Run the **clock rate 64000** command to configure the clock rate on S1/1 and S1/2 of P4S2. 3. Run the **ping 3.3.3.3** command on P4S1 to test the connectivity to the S1/1 interface of P4S3. 4. Run the **show ip route** command on each router to view the routing table. 5. Enable the OSPF protocol on every router and notify connected routers to the OSPF process.

Configure P4S1: P4S1#conf t P4S1(config)#int s1/1 P4S1(config-if)#ip add 192.168.12.1 255.255.255.0 P4S1(config-if)#no shut P4S1(config-if)#int lo 0 P4S1(config-if)#ip add 1.1.1.1 255.255.255.0

Configure P4S2: P4S2#conf t P4S2(config)#int s1/1 P4S2(config-if)#ip add 192.168.12.2 255.255.255.0 P4S2(config-if)#clock rate 64000 P4S2(config-if)#no shut P4S2(config-if)#int s1/2 P4S2(config-if)#ip add 192.168.23.2 255.255.255.0 P4S2(config-if)#clock rate 64000 P4S2(config-if)#no shut

Configure P4S3: Router>en Router#conf t Router(config)#host P4S3 P4S3(config)#int s1/1 P4S3(config-if)#ip add 192.168.23.3 255.255.255.0 P4S3(config-if)#no shut

P4S3(config-if)#int lo 0 P4S3(config-if)#ip add 3.3.3.3 255.255.255.0

**Configure the OSPF Protocol**

1.P4S1 P4S1(config)#router ospf 1 P4S1(config-router)#network 192.168.12.0 0.0.0.255 area 0 P4S1(config-router)#network 1.1.1.0 0.0.0.255 area 0

2.P4S2 P4S2(config)#router ospf 1 P4S2(config-router)#network 192.168.12.0 0.0.0.255 area 0 P4S2(config-router)#network 192.168.23.0 0.0.0.255 area 0

3.P4S3 P4S3(config)#router ospf 1 P4S3(config-router)#network 3.3.3.0 0.0.0.255 area 0 P4S3(config-router)#network 192.168.23.0 0.0.0.255 area 0