



# OSPF Single Area Network Topology and Configuration

## 1. Network Topology Overview

- ❖ Mumbai Team A (192.10.1.0/24):
  - Devices: PCs, Printer, and Laptop.
  - Switch: 2960-24TT.
  - IP Address Scheme:
    - PCs: 192.10.1.10, 192.10.1.20, 192.10.1.30, 192.10.1.40
    - Printer: 192.10.1.60
    - Laptop: 192.10.1.50
  - Router0: Connected to network 192.10.1.0/24 and other networks using OSPF.
- ❖ Pune Team B (192.10.2.0/24):
  - Devices: PCs, Printer, and Laptop.
  - Switch: 2960-24TT.
  - IP Address Scheme:
    - PCs: 192.10.2.10, 192.10.2.20, 192.10.2.30, 192.10.2.40
    - Printer: 192.10.2.60
    - Laptop: 192.10.2.50
  - Router3: Connected to network 192.10.2.0/24 and other networks using OSPF.

## 2. OSPF Configuration on Routers

- ❖ Router0: Commands used:

```
Router(config)#router ospf 1
Router(config-router)#network 192.10.1.0 0.0.0.255 area 0
Router(config-router)#network 192.10.3.0 0.0.0.255 area 0
Router(config-router)#exit
```

```
Router#show ip route ospf
O 192.10.2.0 [110/3] via 192.10.3.2, 00:03:23, FastEthernet0/1
O 192.10.4.0 [110/2] via 192.10.3.2, 00:04:38, FastEthernet0/1
Networks included in OSPF: 192.10.1.0/24 and 192.10.3.0/24.
```

❖ **Router1: Commands used:**

```
Router(config)#router ospf 1  
Router(config-router)#network 192.10.3.0 0.0.0.255 area 0  
Router(config-router)#network 192.10.4.0 0.0.0.255 area 0  
Router(config-router)#exit
```

Networks included in OSPF: 192.10.3.0/24 and 192.10.5.0/24.

❖ **Router3: Commands used:**

```
Router(config)#router ospf 1  
Router(config-router)#network 192.10.4.0 0.0.0.255 area 0  
Router(config-router)#network 192.10.2.0 0.0.0.255 area 0  
Router(config-router)#exit
```

Networks included in OSPF: 192.10.4.0/24 and 192.10.2.0/24.

### 3. Summary of Subnetting

Subnetting Information:

- 192.10.1.0/24: Assigned to Mumbai Team A.
- 192.10.2.0/24: Assigned to Pune Team B.
- 192.10.3.0/24: Link between Router0 and Router1.
- 192.10.4.0/24: Link between Router1 and Router3.