



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 RIP.
- ❖ 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 RIP.

2. RIP 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 RIP: 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 RIP: 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 Router2.