#3Router static floating route configuration

Configuration Commands
The following static routing commands are used to configure the routers in the network:

Router 1 Pune

```
pune(config)#ip route 192.10.2.0 255.255.255.0 192.10.6.2
pune(config)#ip route 192.10.2.0 255.255.255.0 192.10.4.1 50

pune(config)#ip route 192.10.3.0 255.255.255.0 192.10.6.2 50
pune(config)#ip route 192.10.3.0 255.255.255.0 192.10.4.1
```

Router 2 Mumbai

```
pune(config)#ip route 192.10.1.0 255.255.255.0 192.10.6.1
pune(config)#ip route 192.10.1.0 255.255.255.0 192.10.5.2 50

pune(config)#ip route 192.10.3.0 255.255.255.0 192.10.6.1 50
pune(config)#ip route 192.10.3.0 255.255.255.0 192.10.5.2
```

Router 2 Delhi

```
pune(config)#ip route 192.10.2.0 255.255.255.0 192.10.5.1
pune(config)#ip route 192.10.2.0 255.255.255.0 192.10.4.2 50

pune(config)#ip route 192.10.1.0 255.255.255.0 192.10.5.1 50
pune(config)#ip route 192.10.1.0 255.255.255.0 192.10.4.2
```

1. **Pune Branch**

   - Devices: PC0, PC1, PC2

   - Switch: 2980-24TT Switch2

   - Router: 1841 Pune

   - Network: 192.10.1.0/24

   - Default Gateway: 192.10.1.5

2. **Mumbai Branch**

   - Devices: PC7, PC8, PC9

   - Switch: 2980-24TT Switch1

   - Router: 1841 Mumbai

   - Network: 192.10.2.0/24

   - Default Gateway: 192.10.2.5

3. **Delhi Branch**

   - Devices: PC3, PC4, PC5

   - Switch: 2960-24TT Switch0

   - Router: 1841 Delhi

   - Network: 192.10.3.0/24

   - Default Gateway: 192.10.3.5

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Static Routing

In the context of networking, routing refers to the process of selecting paths in a network along which to send network traffic. Static routing is a method of manually setting the routes. Unlike dynamic routing, which uses protocols to discover and maintain routes, static routing involves manually configuring the route information on routers.

Pros of Static Routing

- **Simplicity:** Easy to implement for small networks.

- **Security:** Less prone to routing attacks since routes are manually configured and not shared with other routers.

- **Predictability:** Network traffic follows a predictable path, making it easier to troubleshoot.

Cons of Static Routing

- **Scalability:** Not suitable for large networks due to the manual nature of configuration.

- **Fault Tolerance:** If a route becomes unavailable, there is no automatic failover to an alternative path.

- **Maintenance:** Manually updating routes can be time-consuming, especially in dynamic network environments.