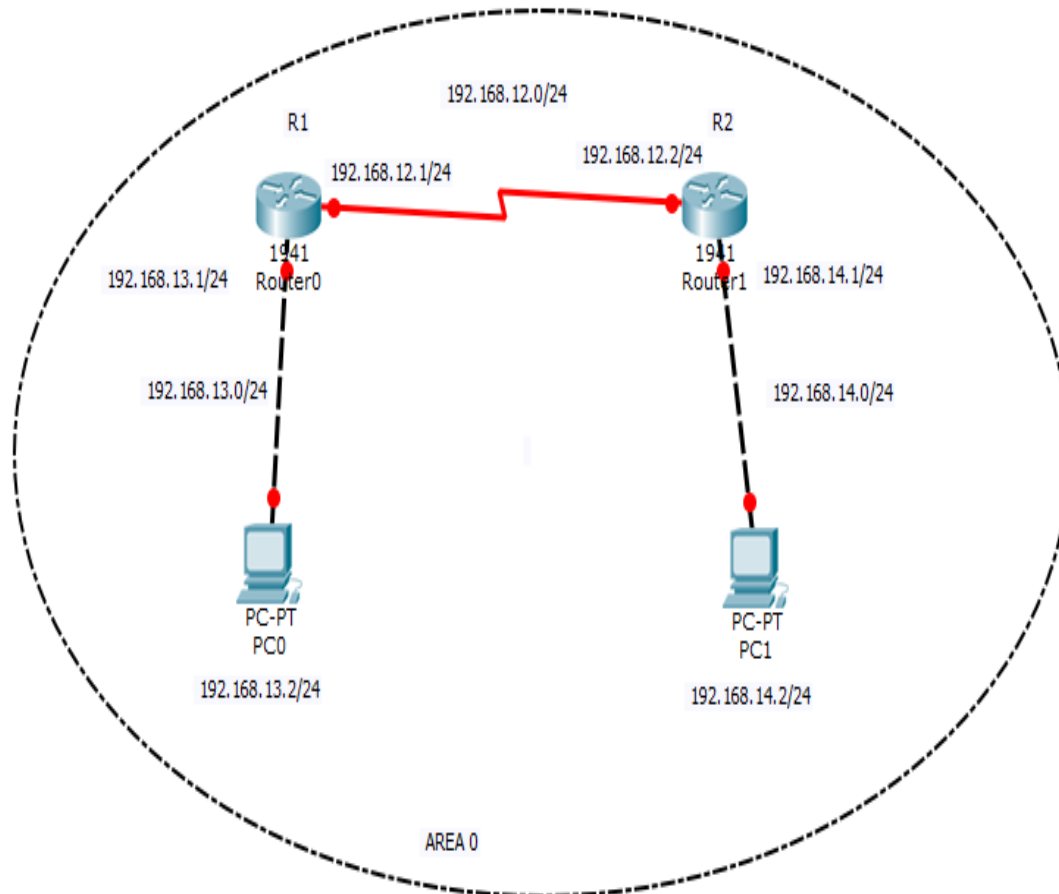


## Exercise: 10 – Single Area OSPF

### Topology



### Part 1: Build the Network and Verify Connectivity

In Part 1, you will set up the network topology and configure basic settings, such as the interface IP addresses.

**Step 1: Cable the network as shown in the topology.**

**Step 2: Configure PC hosts.**

**Step 3: Initialize and reload the routers as necessary.**

**Step 4: Configure basic settings for each router.**

- Configure IP addresses for the routers, as shown in topology diagram.
- Configure device name as shown in the topology.

- c. Copy the running configuration to the startup configuration.

## **Part 2: Configure OSPF Routing**

**Step 1: Enable OSPF routing on R1. Use process id as 1.**

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

**Step 2: Advertise the directly connected networks on R1 using the wildcard mask.**

```
R1 (config-router) # network 192.168.12.0 0.0.0.255 area 0
```

```
R1 (config-router) # network 192.168.13.0 0.0.0.255 area 0
```

```
R1 (config-router) # Exit
```

**Step 3: Enable OSPF routing on R2. Use process id as 1.**

```
R2 (config) # router ospf 1
```

**Step 4: Advertise the directly connected networks on R2 using the wildcard mask.**

```
R2 (config-router) # network 192.168.12.0 0.0.0.255 area 0
```

```
R2 (config-router) # network 192.168.14.0 0.0.0.255 area 0
```

```
R2 (config-router) # Exit
```

## **Part 3: Verify OSPF Routing**

```
R1# show ip route ospf
```

Similarly in R2,

```
R2# show ip route ospf
```

## **Part 4: Examine the OSPF topology table.**

```
R1# show ip ospf topology
```

Similarly in R2,

```
R2# show ip ospf topology
```