Packet Tracer – Configuring OSPFv2 in a Single Area (Instructor Version)

**Instructor Note**: Red font color or Gray highlights indicate text that appears in the instructor copy only.

1. Topology



1. Addressing Table

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device | Interface | IP Address | Subnet Mask | Default Gateway |
| R1 | G0/0 | 172.16.1.1 | 255.255.255.0 | N/A |
| S0/0/0 | 172.16.3.1 | 255.255.255.252 | N/A |
| S0/0/1 | 192.168.10.5 | 255.255.255.252 | N/A |
| R2 | G0/0 | 172.16.2.1 | 255.255.255.0 | N/A |
| S0/0/0 | 172.16.3.2 | 255.255.255.252 | N/A |
| S0/0/1 | 192.168.10.9 | 255.255.255.252 | N/A |
| R3 | G0/0 | 192.168.1.1 | 255.255.255.0 | N/A |
| S0/0/0 | 192.168.10.6 | 255.255.255.252 | N/A |
| S0/0/1 | 192.168.10.10 | 255.255.255.252 | N/A |
| PC1 | NIC | 172.16.1.2 | 255.255.255.0 | 172.16.1.1 |
| PC2 | NIC | 172.16.2.2 | 255.255.255.0 | 172.16.2.1 |
| PC3 | NIC | 192.168.1.2 | 255.255.255.0 | 192.168.1.1 |

1. Objectives

Part 1: Configure OSPFv2 Routing

Part 2: Verify the Configurations

1. Background

In this activity, the IP addressing is already configured. You are responsible for configuring the three router topology with basic single area OSPFv2 and then verifying connectivity between end devices.

**Note:** The topology is the same one used in the chapter examples. In addition, the student practiced the configuration of this topology in the Syntax Checker activities. Therefore, the student should be able to complete this activity with minimal assistance.

1. Configure OSPFv2 Routing
   1. Configure OSPF on the R1, R2 and R3.

Use the following requirements to configure OSPF routing on all three routers:

* 1. Process ID 10
  2. Router ID for each router: R1 = 1.1.1.1; R2 = 2.2.2.2; R3 = 3.3.3.3
  3. Network address for each interface
  4. LAN interface set to passive (do not use the **default** keyword)
  5. Verify OSPF routing is operational.

On each router, the routing table should now have a route to every network in the topology.

1. Verify the Configurations

Each PC should be able to ping the other two PCs. If not, check your configurations.

!--------------------------

!R1

!--------------------------

ena

conf t

!

router ospf 10

router-id 1.1.1.1

network 172.16.1.0 0.0.0.255 area 0

network 172.16.3.0 0.0.0.3 area 0

network 192.168.10.4 0.0.0.3 area 0

passive-interface GigabitEthernet0/0

!

end

!--------------------------

!R2

!--------------------------

ena

conf t

!

router ospf 10

router-id 2.2.2.2

network 172.16.2.0 0.0.0.255 area 0

network 172.16.3.0 0.0.0.3 area 0

network 192.168.10.8 0.0.0.3 area 0

passive-interface GigabitEthernet0/0

!

end

!--------------------------

!R3

!--------------------------

ena

conf t

!

router ospf 10

router-id 3.3.3.3

network 192.168.1.0 0.0.0.255 area 0

network 192.168.10.4 0.0.0.3 area 0

network 192.168.10.8 0.0.0.3 area 0

passive-interface GigabitEthernet0/0

!

end