**Packet Tracer – Configuring Basic OSPFv3 in a Single Area**

1. **Topology**

Chart

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1. **Addressing Table**

|  |  |  |  |
| --- | --- | --- | --- |
| **Device** | **Interface** | **IPv6 Address/Prefix** | **Default Gateway** |
| R1 | G0/0 | 2001:db8:cafe:1::1/64 | N/A |
| S0/0/0 | 2001:db8:cafe:a001::1/64 | N/A |
| S0/0/1 | 2001:db8:cafe:a003::1/64 | N/A |
| R2 | G0/0 | 2001:db8:cafe:2::1/64 | N/A |
| S0/0/0 | 2001:db8:cafe:a001::2/64 | N/A |
| S0/0/1 | 2001:db8:cafe:a002::1/64 | N/A |
| R3 | G0/0 | 2001:db8:cafe:3::1/64 | N/A |
| S0/0/0 | 2001:db8:cafe:a003::264 | N/A |
| S0/0/1 | 2001:db8:cafe:a002::2/64 | N/A |
| PC1 | NIC | 2001:db8:cafe:1::10/64 | fe80::1 |
| PC2 | NIC | 2001:db8:cafe:2::10/64 | fe80::2 |
| PC3 | NIC | 2001:db8:cafe:3::10/64 | fe80::3 |

1. **Objectives**

**Part 1: Configure OSPFv3 Routing**

**Part 2: Verify Connectivity**

1. **Background**

In this activity, the IPv6 addressing is already configured. You are responsible for configuring the three router topology with basic single area OSPFv3 and then verifying connectivity between end devices.

1. **Configure OSPFv3 Routing**
   1. **Configure OSPFv3 on R1, R2 and R3.**

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

1. Enable IPv6 routing
2. Process ID 10

Graphical user interface, text, application

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1. Router ID for each router: R1 = 1.1.1.1; R2 = 2.2.2.2; R3 = 3.3.3.3

-       Enable OSPFv3 on each interface

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-       Adjust the default reference bandwidth to support gigabit links using the **auto-cost reference-bandwidth** command.

-       Prevent the LAN interfaces from sending out OSPF routing messages.

1. **Verify OSPF routing is operational.**

Verify each router has established adjacency with the other two routers. Verify the routing table has a route to every network in the topology.

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1. **Verify Connectivity**

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

**Note:** This activity is graded using only connectivity tests. The instructions window will not show your score. To see your score, click **Check Results** > **Assessment Items**. To see the results of a specific connectivity test, click **Check Results** > **Connectivity Tests**.