**NPS Lab Experiment 8**

**Configuration of RIP and OSPF using Cisco Network Switch and Connectivity Verification**

**Objective:**

* **Configure RIP and OSPF on Cisco devices.**
* **Verify network connectivity.**

**Part 1: Configure RIP**

**Step-by-Step Configuration:**

1. **Access the device in global configuration mode:**

**enable**

**configure terminal**

1. **Enable RIP (use version 2):**

**router rip**

**version 2**

1. **Define networks to advertise:  
   Replace [network\_address] with the appropriate network.  
   Example:**

**network 192.168.1.0**

**network 10.0.0.0**

1. **Exit configuration mode:**

**exit**

**exit**

**Part 2: Configure OSPF**

**Step-by-Step Configuration:**

1. **Enter OSPF configuration mode with a process ID:**

**router ospf [process\_id]**

**Replace [process\_id] with the desired OSPF process ID, e.g., 1.**

1. **Define network(s) and areas:  
   Replace [network\_address], [wildcard\_mask], and [area\_id] with appropriate values.  
   Example:**

**network 192.168.2.0 0.0.0.255 area 0**

**network 10.0.1.0 0.0.0.255 area 0**

1. **Exit configuration mode:**

**exit**

**exit**

**Part 3: Verify Connectivity**

1. **Check the Routing Table:**

**show ip route**

1. **Check RIP Status:**

**show ip rip database**

1. **Check OSPF Neighbors:**

**show ip ospf neighbor**

1. **Ping to verify reachability between devices:**

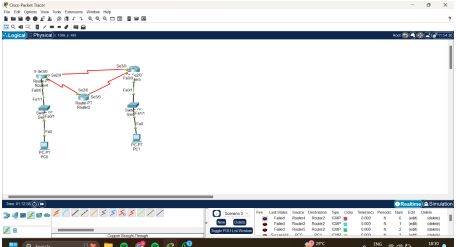
**ping [destination\_ip]**

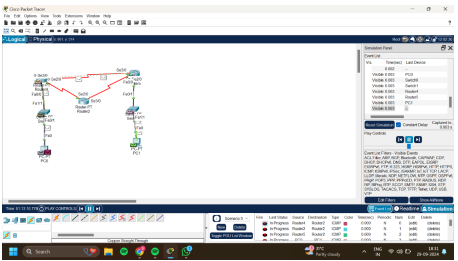
**Replace [destination\_ip] with the IP address of the destination device.**

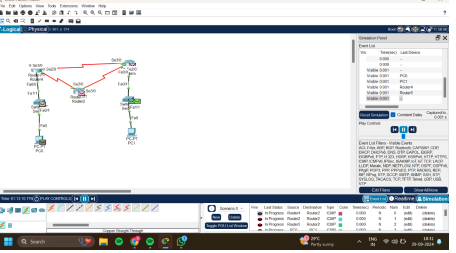
**Expected Results:**

* **Routing Table: Connected networks should appear under RIP or OSPF.**
* **RIP Status: Shows advertised networks in the RIP database.**
* **OSPF Neighbors: Displays neighbor relationships for OSPF.**
* **Ping: Confirms end-to-end connectivity between devices.**

**This guide provides a clear process for configuring and verifying RIP and OSPF on Cisco devices.**

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