

NPS -LAB EXPERIMENT-8

Configuration of RIP and OSPF using Cisco network switch and verify the connectivity.

- Access to Cisco device CLI.
- IP addressing plan for all interfaces.

1. Configure RIP

Step 1: Access the device in global configuration mode.

```
enable  
configure terminal
```

Step 2: Enable RIP (use version 2).

```
router rip  
version 2
```

Step 3: Define networks to advertise.

```
network [network_address]
```

Example:

```
network 192.168.1.0  
network 10.0.0.0
```

Step 4: Exit configuration mode.

```
exit  
exit
```

2. Configure OSPF

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

```
router ospf [process_id]
```

Step 2: Define network(s) and areas.

```
network [network_address] [wildcard_mask] area [area_id]
```

Example:

```
network 192.168.2.0 0.0.0.255 area 0
```

```
network 10.0.1.0 0.0.0.255 area 0
```

Step 3: Exit configuration mode.

```
exit
```

```
exit
```

3. Verify Connectivity

- **Check Routing Table:**

```
show ip route
```

- **Check RIP Status:**

```
show ip rip database
```

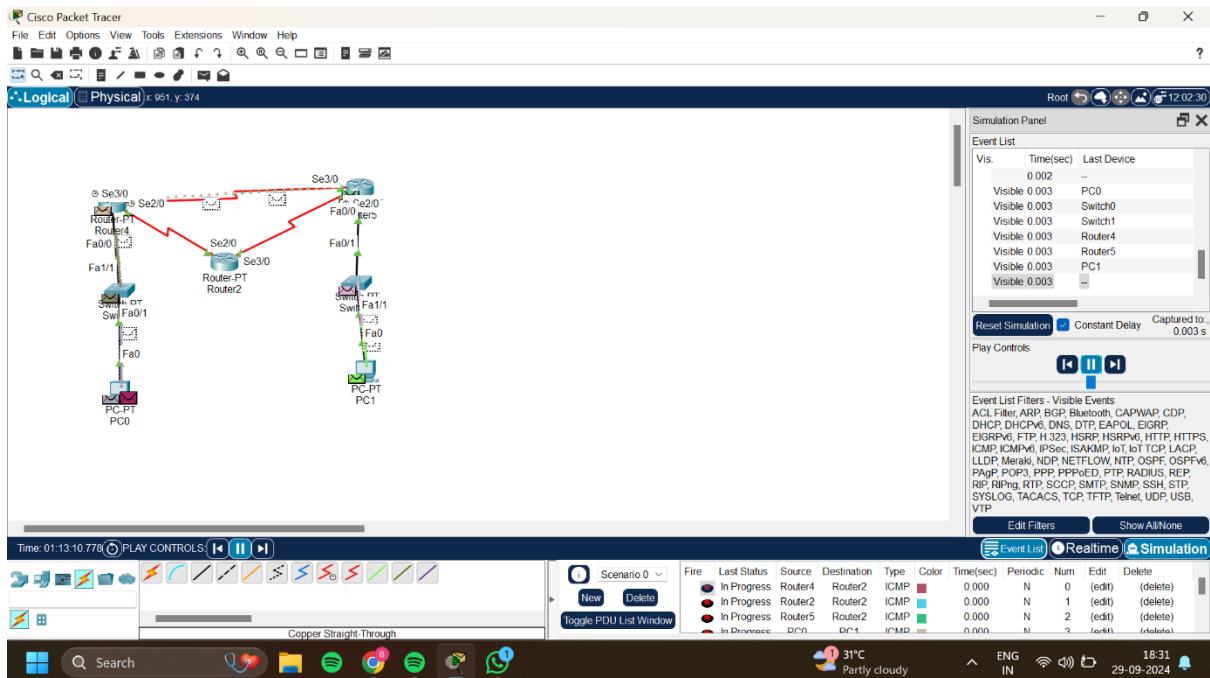
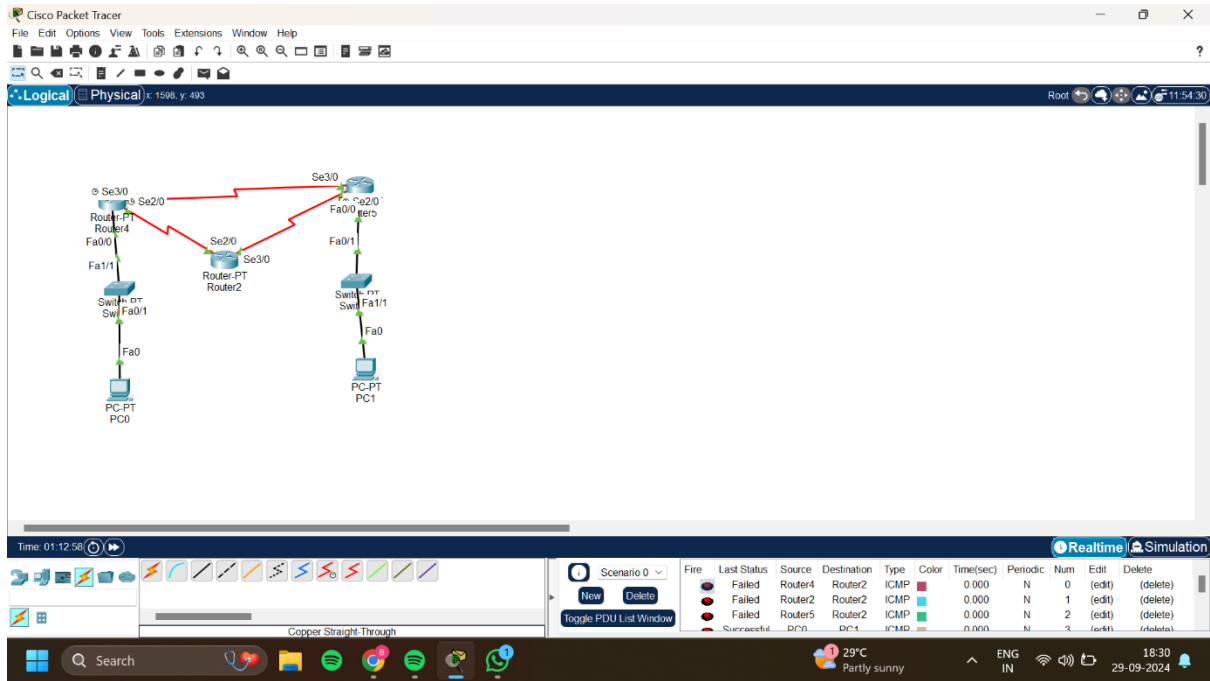
- **Check OSPF Neighbors:**

```
show ip ospf neighbor
```

- **Ping** (Verify reachability between devices):

```
ping [destination_ip]
```

Each configuration should show connected networks if successful.
The ping command can help confirm end-to-end connectivity.



Cisco Packet Tracer

File Edit Options View Tools Extensions Window Help

Logical Physical x: 951, y: 374

Simulation Panel

Event List

Vis.	Time(sec)	Last Device
Visible 0.000	0.000	--
Visible 0.001	0.000	--
Visible 0.001	0.000	PC0
Visible 0.001	0.000	PC1
Visible 0.001	0.000	Router4
Visible 0.001	0.000	Router5
Visible 0.001	0.000	--

Reset Simulation Constant Delay Captured to: 0.001 s

Play Controls

Event List Filters - Visible Events

ACL, Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, Meraki, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 01:13:10.776 PLAY CONTROLS

Scenario 0

New Delete

Toggle PIDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
In Progress	In Progress	Router4	Router2	ICMP		0.000	N	0	(edit)	(delete)
In Progress	In Progress	Router2	Router2	ICMP		0.000	N	1	(edit)	(delete)
In Progress	In Progress	Router5	Router2	ICMP		0.000	N	2	(edit)	(delete)
In Progress	In Progress	PC0	PC1	ICMP		0.000	N	3	(edit)	(delete)

29°C Partly sunny

ENG IN

18:31 29-09-2024