

Here's a lab report structured according to your specified format for "RIP Routing Between PCs" in Cisco Packet Tracer using the GUI:

Lab Report: RIP Routing Between PCs in Cisco Packet Tracer

Title

RIP Routing Configuration Between PCs in Cisco Packet Tracer

Objective

To configure RIP (Routing Information Protocol) routing between two PCs connected through two routers and verify connectivity.

Equipment

- Cisco Packet Tracer Software
- 2 Routers (Router0, Router1)
- 2 Switches
- 2 PCs (PC0, PC1)
- Copper Straight-Through Ethernet Cables

Theory

RIP is a distance-vector routing protocol used to determine the best path for data packets through a network. It employs a hop count as a routing metric, allowing routers to share routing information and update their routing tables dynamically.

Procedure

1. **Open Cisco Packet Tracer:** Launch the Cisco Packet Tracer application.
2. **Create the Topology:**
 - Drag and drop 2 routers and 2 switches onto the workspace.
 - Add 2 PCs to the workspace.
3. **Connect Devices:**
 - Use Straight-through Ethernet cables to connect:
 - PC0 to Switch0.
 - Switch0 to Router0.
 - PC1 to Switch1.
 - Switch1 to Router1.

- Router0 to Router1.

4. Assign IP Addresses:

- **PC0:**
 - IP: 192.168.1.2
 - Subnet Mask: 255.255.255.0
 - Gateway: 192.168.1.1 (Router0)
- **PC1:**
 - IP: 192.168.2.2
 - Subnet Mask: 255.255.255.0
 - Gateway: 192.168.2.1 (Router1)
- **Router0 Interfaces:**
 - Interface to Switch0: 192.168.1.1 /24
 - Interface to Router1: 10.0.0.1 /30
- **Router1 Interfaces:**
 - Interface to Switch1: 192.168.2.1 /24
 - Interface to Router0: 10.0.0.2 /30

5. Enable RIP on Routers:

- Select Router0, go to the **Config** tab, choose **Routing**, and enable **RIP**:
 - Add networks: 192.168.1.0 and 10.0.0.0.
- Repeat for Router1, adding networks: 192.168.2.0 and 10.0.0.0.

6. Verify Routing:

- Check the routing tables on both routers to ensure the correct networks are listed.

7. Test Connectivity:

- Open the command prompt on PC0 and ping PC1 (192.168.2.2) to verify successful communication.

Results

Successful pings between PC0 and PC1 indicate that the RIP routing configuration is functioning correctly, allowing data packets to traverse between different subnets.

Conclusion

The lab effectively demonstrated the configuration of RIP routing between two PCs in Cisco Packet Tracer. The PCs successfully communicated across routers, validating the implementation of RIP for dynamic routing.

Feel free to adjust any specific details or numbers as necessary for your lab report!