Department of Computer Science and Engineering

Experiment Name: Routing Through Hub and Switch and Verification of Some Fundamental command of Network Connections

Experiment No: 1

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1 Objective

The goal is to see how information moves through a hub and a switch, and to check if basic network commands like ping and traceroute are working. We also want to fix any problems we find by using these commands, and make sure data is sent smoothly between different parts of the network.

2 Network Diagram

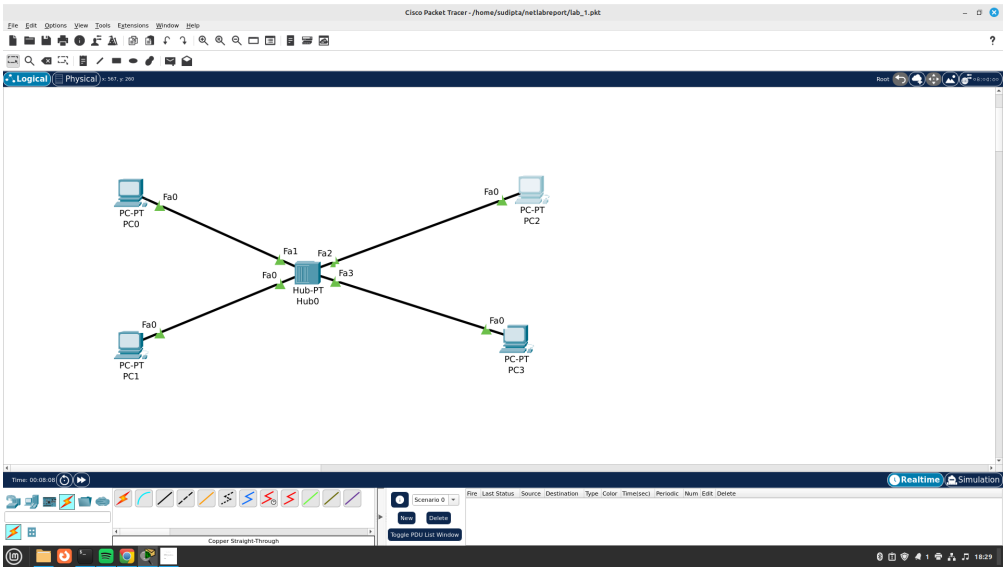

Figure 1: Network Diagram for Routing Through Hub

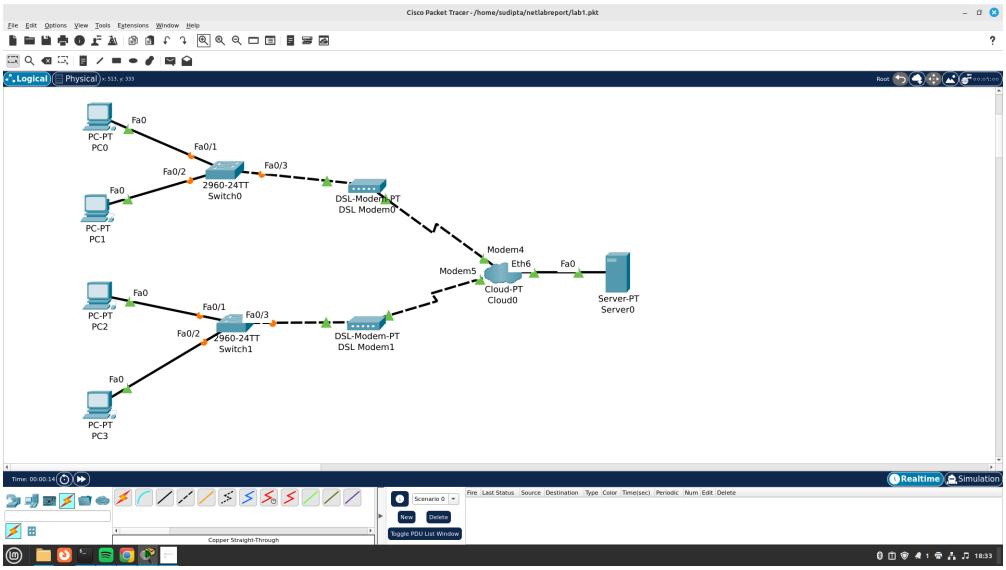

Figure 2: Network Diagram for DSL Model in WAN

3 Procedure

The above network diagram is created using Cisco Packet Tracer software. The computers, switch, and hub are all taken from built-in devices in Cisco Packet Tracer. For testing ping and tracert we use those commands

```
$ ping www.google.com
$ traceroute www.google.com
```

4 Result

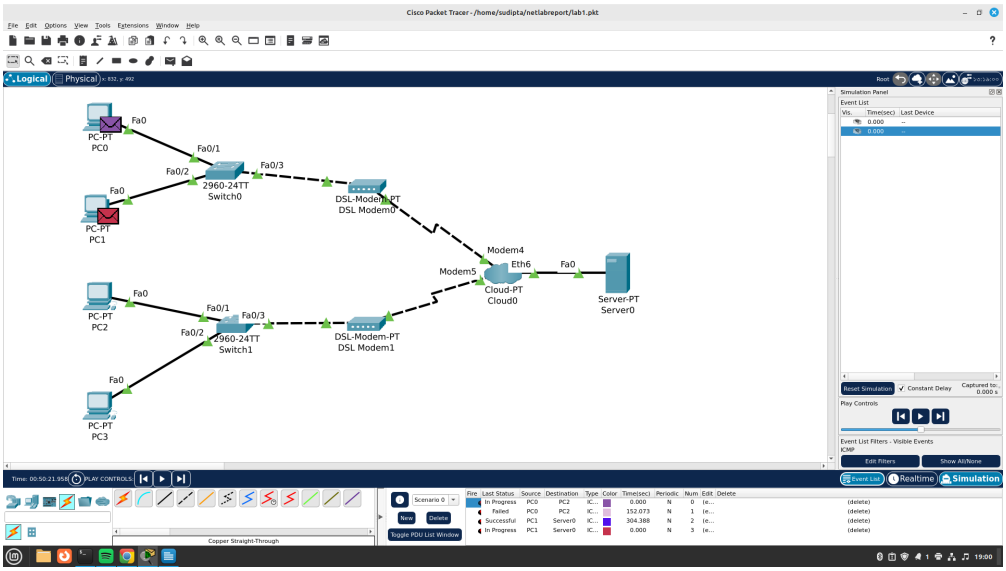

Figure 3: The Packet is leaving the source computer

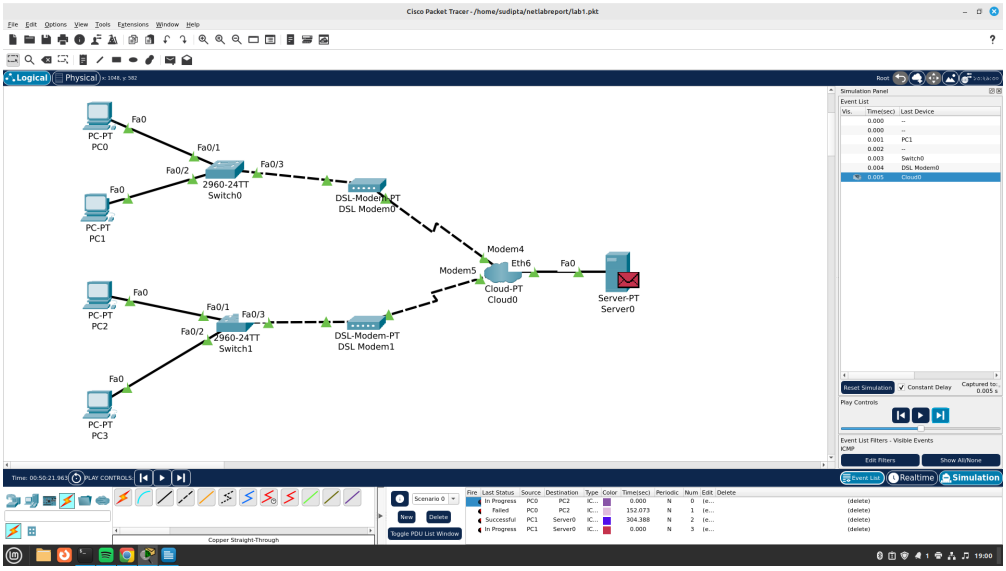

Figure 4: The Packet reached the Server

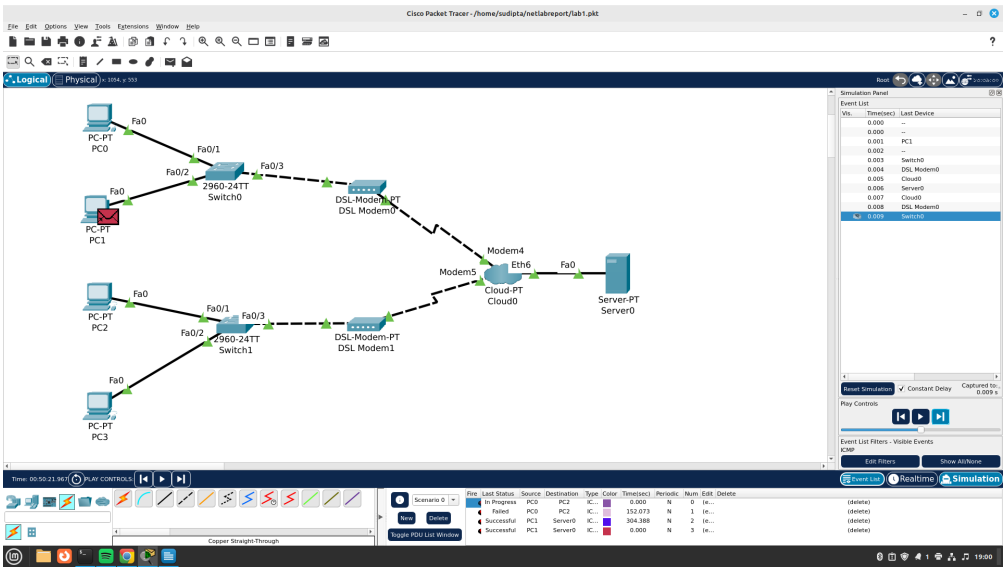

Figure 5: The ackowledgement reached the source pc

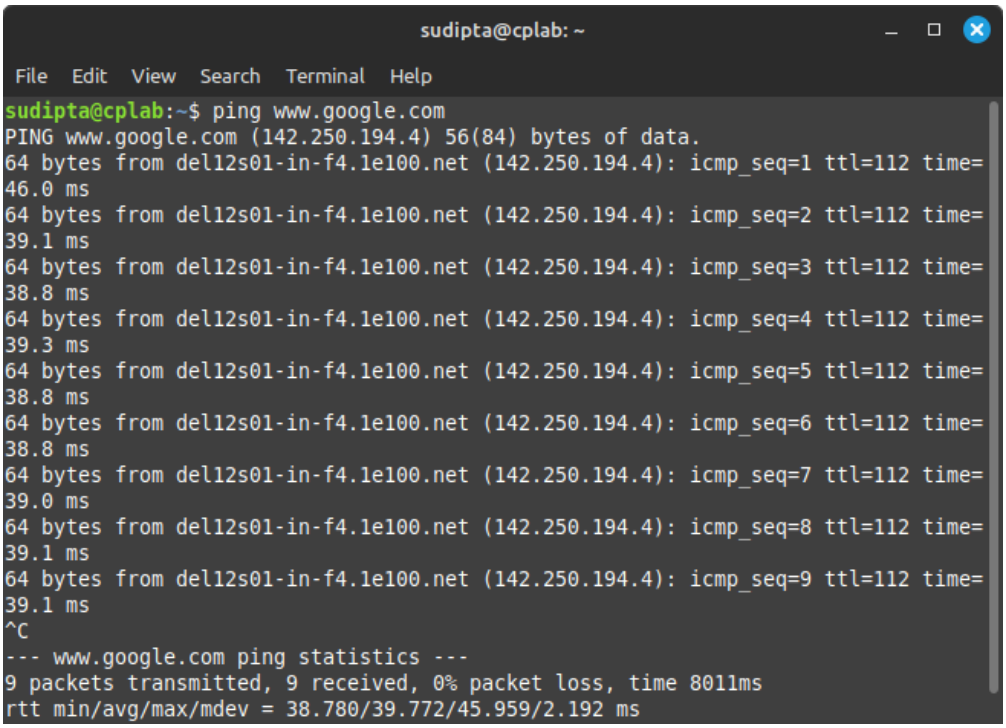

Figure 6: Ping result for ping www.google.com

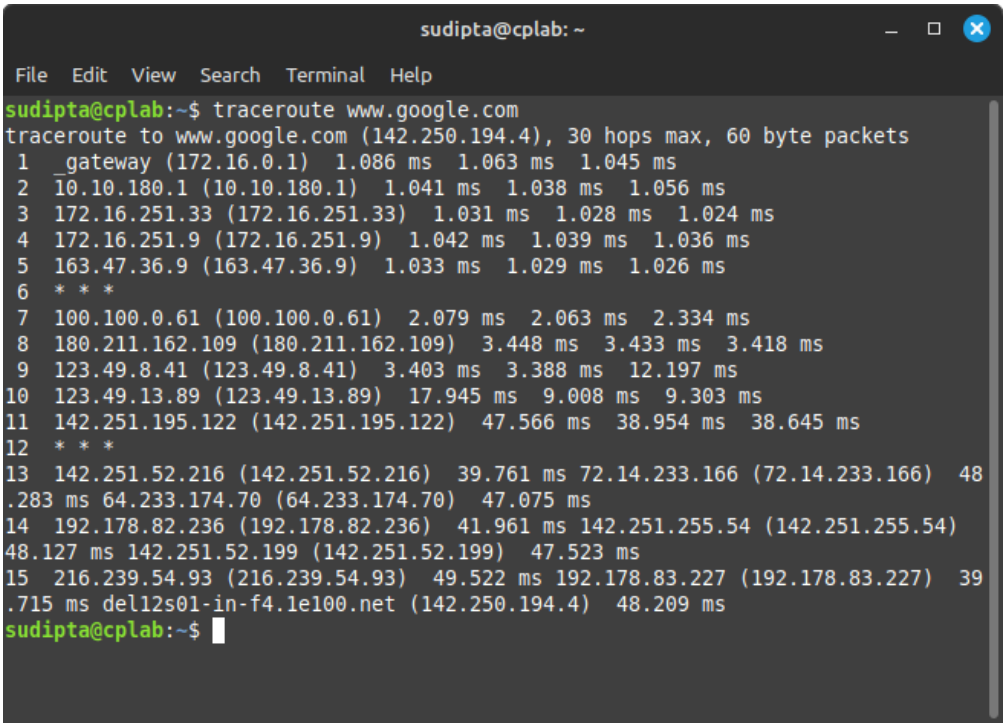

Figure 7: Traceroute result for traceroute www.google.com