

Computer Networking: Concepts

(CSE 3751)

Experiment 4

Aim:

Implementation and analysis of inter-network communication in single router and dual router-based network configurations using Cisco Packet Tracer.

Objectives:

1. An overview on inter-network communication between multiple LANs using routers.
2. Configuration of multiple LANs using proper IPv4 addressing and establishment of communication between PCs in different networks through a single router.
3. Configuration of multiple LANs using proper IPv4 addressing and establishment of communication between PCs in different networks using two routers.
4. Verification of network connectivity using basic network diagnostic commands such as ***ping*** and ***tracert***.

Exercises:

1. Explain how the router facilitates communication between two different LANs.
2. Write the purpose of the ***ip route*** command used in static routing.
3. What happens if the serial link between two routers fails? How can redundancy be implemented?
4. How can you verify whether routing is working properly using Packet Tracer commands?