COMPUTER NETWORK

LAB 1

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Computer Networks Lab Exam

Objective

Create and configure a suitable topology for both LAN and WAN using 10-15 computers, routers, and switches. Simulate the transmission of a message from one network to a computer in another network.

Steps taken to set up the network

Step 1:

Design anetwork topology using Cisco Packet Tracer that includes:

1. LANConfiguration: At least 10 computers connected to switches.

2. WANConfiguration: Connect the LAN network to another network using routers.

Step 2:

Network Setup in Cisco Packet Tracer:

o AddDevices:

1. Place and connect 10-15 computers.

2. Add necessary switches (at least 2 for the LAN setup).

3. Add at least 2 routers for WAN setup

Step 3:

Configure IP Addresses:

1. Assign IP addresses to all computers within the LAN.

2. Configure router interfaces with appropriate IP addresses.

3. Set up routing protocols or static routes as needed for WAN communication

Step 4:

Configuration Steps:

o LANConfiguration:

1. Connect computers to the switches.

2. Configure IP addresses on each computer.

3. Connect switches with each other as needed.

○ WANConfiguration:

 1. Connect routers to each other.

2. Configure router interfaces with IP addresses.

3. Set up routing (static or dynamic) to ensure connectivity between the LANs.

Step 5:

Simulation:

○ SendaMessage:

1. Use the simulation mode in Cisco Packet Tracer.

 2. Configure and send a message from a computer in one network to a computer in another network.

3. Capture and verify the message transmission