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B.TECH CSE - C

III - YEAR

Observation

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.

Procedure:

1. Topology Design:

- The network topology was successfully created in Cisco Packet Tracer, including both LAN and WAN configurations.

- The LAN was configured with 10-15 computers connected to at least two switches.

- The WAN setup was achieved by connecting the LAN networks via two routers.

2. Network Setup:

- Devices were added and connected as per the topology design.

- IP addresses were correctly assigned to all computers within the LAN, ensuring proper communication.

- Router interfaces were configured with appropriate IP addresses to enable WAN communication between networks.

3. LAN Configuration:

- All computers were connected to switches, and each computer was assigned a unique IP address within the specified subnet.

- Switches were connected to each other to ensure full LAN connectivity.

4. **WAN Configuration:**

- Routers were successfully connected to each other, and interfaces were configured with correct IP addresses.

- Static routes were set up on the routers, enabling successful communication between the LANs over the WAN.

5. **Simulation:**

- A message was sent from one computer in one LAN to a computer in another LAN using the simulation mode in Cisco Packet Tracer.

- The message was transmitted successfully across the network, traveling through switches, routers, and the WAN.

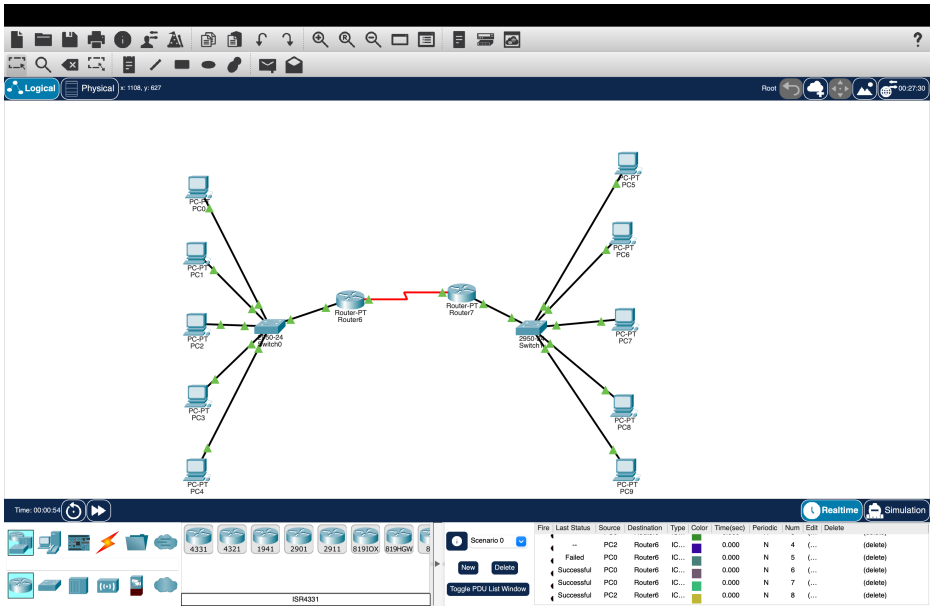
- The path of the message was observed, and the transmission was verified to be correct with no errors.

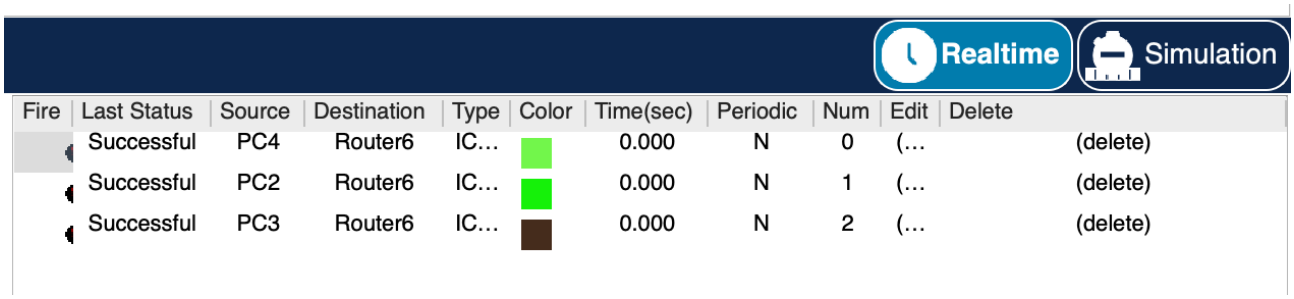
6. **Network Performance:**

- The network operated as expected, with no packet loss or transmission errors observed.

- The successful message transmission confirmed that the network was properly configured for both LAN and WAN communication.

OUTPUT:


Logical
Physical
Root
PC-PT PC0
PC-PT PC1
PC-PT PC2
PC-PT PC3
PC-PT PC4
2960-24 Switch0
Router-PT Router6
Router-PT Router7
2950-24 Switch1
PC-PT PC5
PC-PT PC6
PC-PT PC7
PC-PT PC8
PC-PT PC9
Realtime
Simulation
4331
4321
1941
2901
2911
819IOX
819HGW
ISR4331
Scenario 0
New
Delete
Toggle PDU List Window


Realtime
Simulation
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
Successful PC4 Router6 IC... 0.000 N 0 (... (delete)
Successful PC2 Router6 IC... 0.000 N 1 (... (delete)
Successful PC3 Router6 IC... 0.000 N 2 (... (delete)