University of Engineering & Management, Kolkata

Subject Name: Computer Networks Laboratory

Subject Code: PCCCSE692

ASSIGNMENT – 3

a. Make a communication in between two computers utilizing Cisco Packet Tracer software.
b. Make a communication in between two computers through a Switch and a Router utilizing Cisco Packet Tracer software.
c. Configure different network topologies (Ring, Star, Bus, Mesh) utilizing Cisco Packet Tracer software.

3.1. ASSIGNMENT – 3a: Make a communication in between two computers utilizing Cisco Packet Tracer software.

3.1.1. Aim: To make a communication in between two computers utilizing Cisco Packet Tracer software.

3.1.2. Aparatus (software): Cisco Packet Tracer software.

3.1.3. Procedure:

a. Take two end devices (personal computer).
b. Connect ethernet ports of these PCs utilizing cross over cable.
c. Assign IP addresses to these PCs (click on the computer, go to the dekstop option, click on the IP configuration, provide IP addresses to these PCs).
d. Both the PCs should have same network IP adress.
e. Go to the command promt of one PC and PING other PC by utilizing the ‘PING (Packet InterNet Groper)’ command.
f. Try to make communication between two PCs by sending ICMP (Internet Control Message Protocol) packets.
g. Figure 3.1. contains the cisco packet tracer window for this configuration.

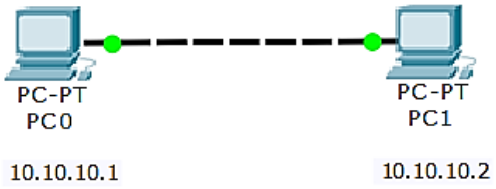

Figure 3.1. The cisco packet tracer window.

3.2. ASSIGNMENT – 3b: Make a communication in between two computers through a Switch and a Router utilizing Cisco Packet Tracer software.

3.2.1. Aim: To make a communication in between two computers through a Switch and a Router utilizing Cisco Packet Tracer software.

3.2.2. Aparatus (software): Cisco Packet Tracer software.

3.2.3. Procedure:

a. Take two end devices (personal computer) and one switch (2950-24).
b. Connect ethernet ports of both the PCs to the switch utilizing automatic connection mode/straight through wires.
c. Assign IP addresses to these PCs (click on the computer, go to the dekstop option, click on the IP configuration, provide IP addresses to these PCs).
d. Both the PCs should have same network IP adress.
e. Go to the command promt of one PC and PING other PC by utilizing the ‘PING (Packet InterNet Groper)’ command.
f. Try to make communication between two PCs by sending ICMP (Internet Control Message Protocol) packets.
g. Figure 3.2. contains the cisco packet tracer window for this configuration.

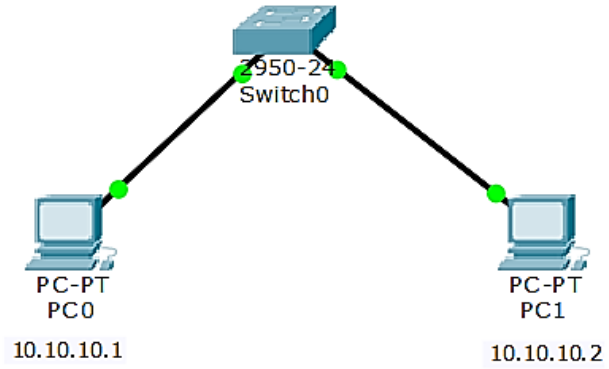

Figure 3.2. The cisco packet tracer window.

a. Take two end devices (personal computer) and one router (1841).
b. Connect ethernet ports of both the PCs to the router utilizing automatic connection mode/cross over wires.
c. Assign IP addresses to these PCs (click on the computer, go to the dekstop option, click on the IP configuration, provide IP addresses to these PCs).
d. PCs should have different network IP adresses.
e. Configure all fastethernet ports of the router with IP adress which has similar network IP as the end device to which it is connected.
f. Provide the default gateway for all the end devices.
g. Go to the command promt of one PC and PING other PC by utilizing the 'PING (Packet InterNet Groper)' command.
h. Try to make communication between two PCs by sending ICMP (Internet Control Message Protocol) packets.
i. Figure 3.3. contains the cisco packet tracer window for this configuration.

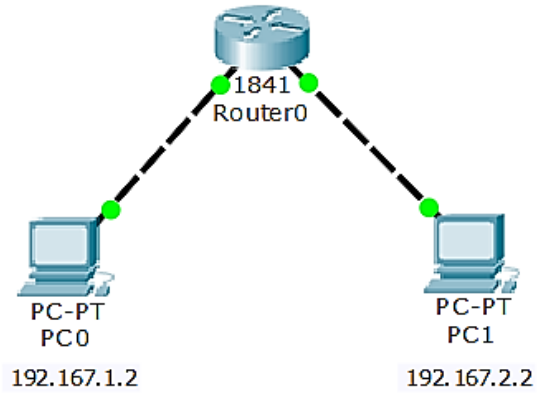

Figure 3.3. The cisco packet tracer window.

3.3. ASSIGNMENT – 3c: Configure different network topologies (Ring, Star, Bus, Mesh) utilizing Cisco Packet Tracer software.

3.3.1. Aim: To configure different network topologies (Ring, Star, Bus, Mesh) utilizing Cisco Packet Tracer software.

3.3.2. Aparatus (software): Cisco Packet Tracer software.

3.3.3. Procedure:

a. Configure different network topologies (Ring, Star, Bus, Mesh).
b. Figure 3.4, 3.5, 3.6 and 3.7 contain the cisco packet tracer window for ring, star, bus and mesh topologies respectively.
c. Assign IP addresses to all PCs.
d. Go to the command promt of one PC and PING other PC by utilizing the 'PING (Packet InterNet Groper)' command.
e. Try to make communication between two PCs by sending ICMP (Internet Control Message Protocol) packets.

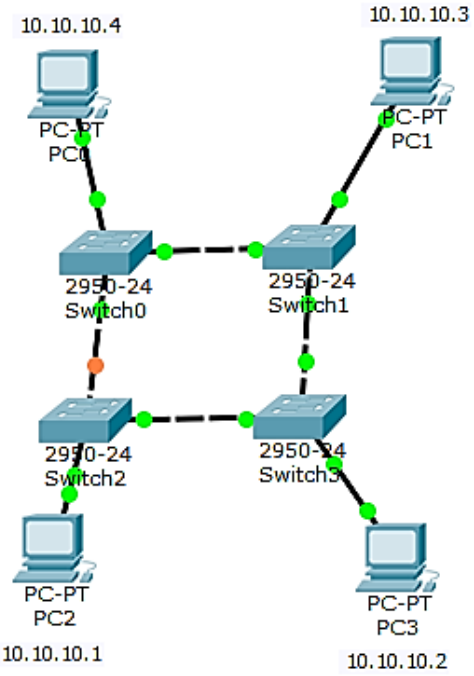

Figure 3.4. The cisco packet tracer window for ring topology.

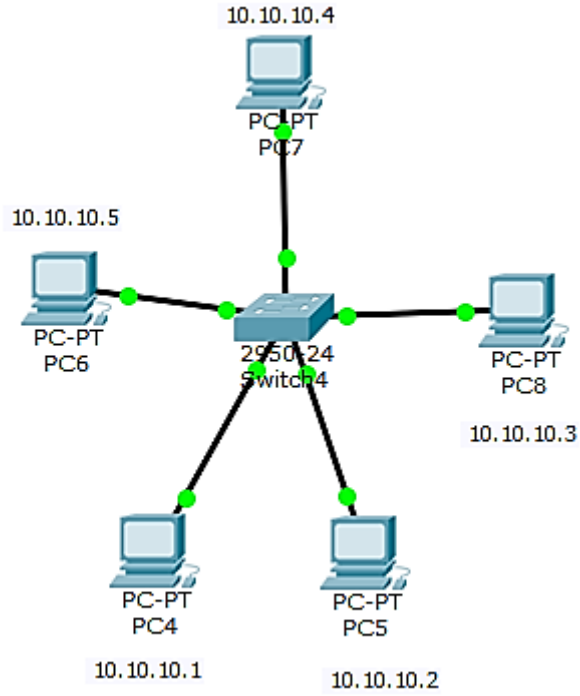

Figure 3.5. The cisco packet tracer window for star topology.

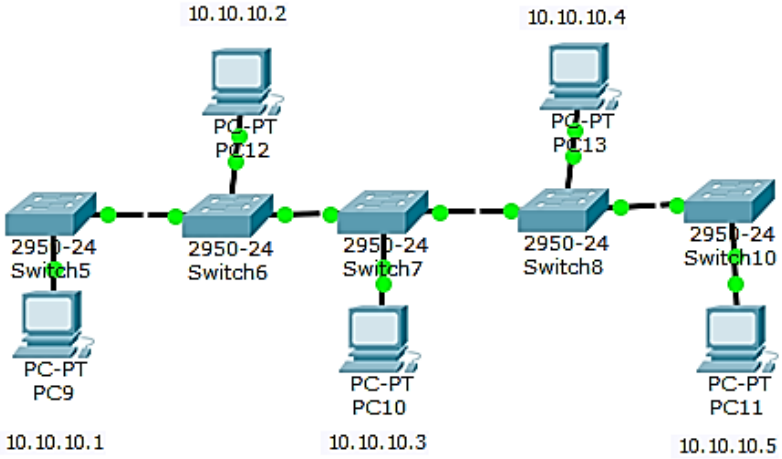

Figure 3.6. The cisco packet tracer window for bus topology.

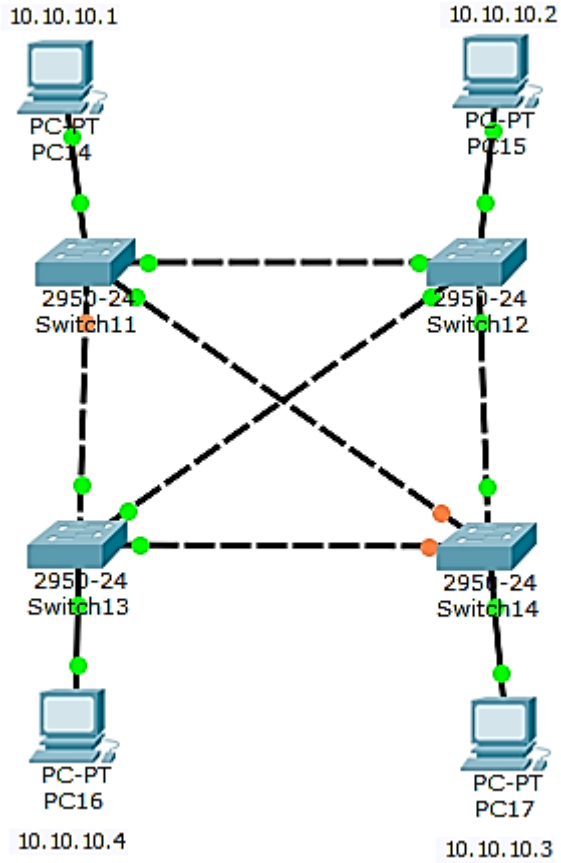

Figure 3.7. The cisco packet tracer window for mesh topology.

3.4. Result:

3.5. Conclusion: