CSE3003

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Lab 5

Experiment : Configure three networks using two switches and two routers

Software required : Cisco Packet Tracer.

Switches : A switch, in the context of networking, is a high-speed device that receives incoming data packets and redirects them to their destination on a local area network (LAN).Switches are networking devices operating at layer 2 or a data link layer of the OSI model. They connect devices in a network and use packet switching to send, receive or forward data packets or data frames over the network.
A switch has many ports, to which computers are plugged in.

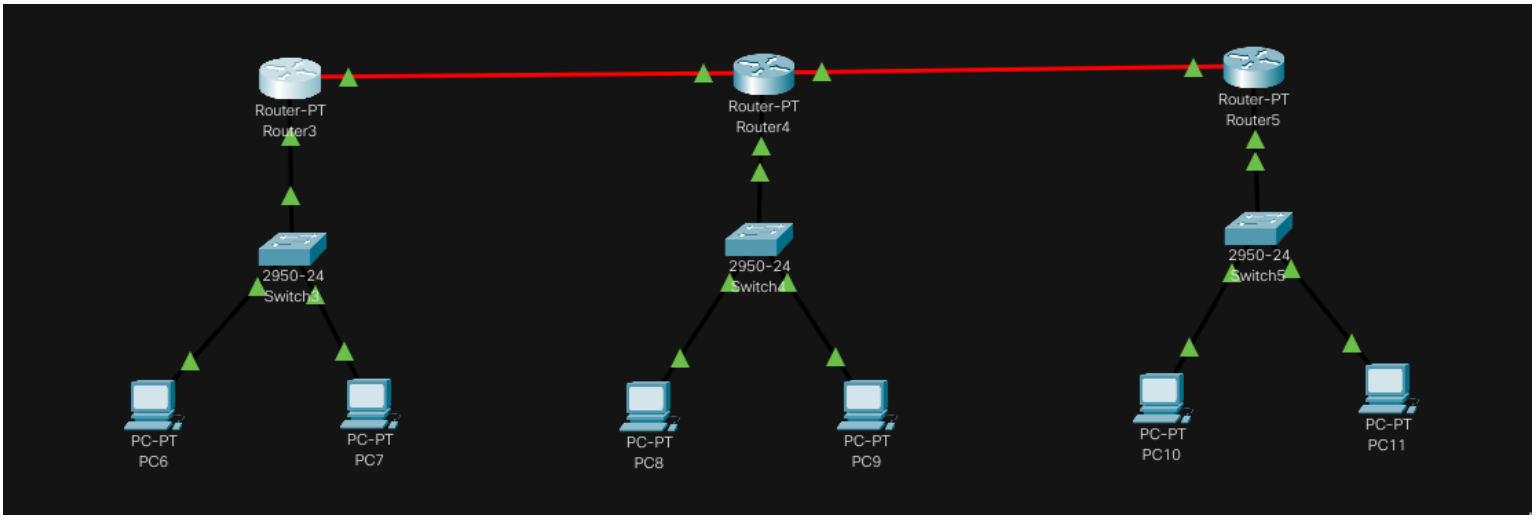
Routers : Routers are networking devices which are responsible for receiving, analysing, and forwarding data packets among the connected computer networks. When a data packet arrives, the router inspects the destination address, consults its routing tables to decide the optimal route and then transfers the packet along this route. The router reads this layer, prioritizes the data, and chooses the best route to use for each transmission.

Steps :

1. Take 3 routers and 3 switches.
2. Connect switch to the router using a copper straight through cable.
3. Double click on router 0.
4. Click on the config tab.
5. Then click to the interface through which the router is connected with the switch. Enter the IP address and check port status on.
6. Double click on router 1.
7. Click on the config tab.
8. Then click to the interface through which the router is connected with the switch. Enter the IP address and check port status on.
9. Double click on router 2.
10. Click on the config tab.
11. Then click to the interface through which the router is connected with the switch. Enter the IP address and check port status on.
12. Connect two PCs with each router through copper straight through cable.
13. Double click first PC.
14. Click on the Desktop tab and navigate to IP configuration

15. Insert IP of PC, but make sure it is of the same class as its router. Insert the default gateway (IP of router).
16. Double click second PC.
17. Click on the Desktop tab and navigate to IP configuration
18. Insert IP of PC, but make sure it is of the same class as its router. Insert the default gateway (IP of router).
19. Insert IP of the third PC.
20. Insert IP of fourth PC.
21. Insert IP of the fifth PC.
22. Insert IP of sixth PC.
23. Connect Router 0 with Router 1 using Fiber cable (fast ethernet 4/0 - fast ethernet 4/0).
24. Connect Router 1 with Router 2 using Fiber cable (fast ethernet 5/0 - fast ethernet 5/0).
25. Click on Router 0 and navigate to FastEthernet 4/0
26. Insert IP and check Port Status.
27. Navigate to RIP and enter the RIP addresses of the networks connected with this router.
28. Click on Router 1 and navigate to FastEthernet 4/0
29. Insert IP and check Port Status.
30. Navigate to RIP and enter the RIP addresses of the networks connected with this router.
31. Click on Router 1 and navigate to FastEthernet 5/0
32. Insert IP and check Port Status.
33. Navigate to RIP and enter the RIP addresses of the networks connected with this router.
34. Click on Router 2 and navigate to FastEthernet 5/0
35. Insert IP and check Port Status.
36. Navigate to RIP and enter the RIP addresses of the networks connected with this router.

OUTPUT:


Router-PT
Router3
Router-PT
Router4
Router-PT
Router5
2950-24
Switch3
2950-24
Switch4
2950-24
Switch5
PC-PT
PC6
PC-PT
PC7
PC-PT
PC8
PC-PT
PC9
PC-PT
PC10
PC-PT
PC11