CSE3003 Lab 8

- Job Fernandez 19BCD7154

Experiment : Connect three networks using CLI

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. Setup three networks of three computers each.
2. Place a PT-Switch for the network connecting each of the computers.
3. Connect each of the switches to a PT-Router.
4. Connect the three routers.
5. Select the Router0 and go to its CLI and type the following commands:
    a. enable
    b. configure terminal
    c. interface fastEthernet 0/0
    d. ip address 192.168.1.1 255.255.255.0
    e. no shutdown
6. Select the Router1 and go to its CLI and type the following commands:
    a. enable
    b. configure terminal
    c. interface fastEthernet 0/0
    d. ip address 192.168.2.1 255.255.255.0
    e. no shutdown
7. Select the Router1 and go to its CLI and type the following commands:
    a. enable
    b. configure terminal
    c. interface fastEthernet 0/0

  d. ip address 192.168.2.1 255.255.255.0

  e. no shutdown

8. Select PC0 and change its IPv4 address to 192.168.1.2 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.1.1

9. Select PC1 and change its IPv4 address to 192.168.1.3 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.1.1

10. Select PC2 and change its IPv4 address to 192.168.1.4 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.1.1

11. Select PC3 and change its IPv4 address to 192.168.2.2 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.2.1

12. Select PC4 and change its IPv4 address to 192.168.2.3 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.2.1

13. Select PC5 and change its IPv4 address to 192.168.2.4 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.2.1

14. Select PC6 and change its IPv4 address to 192.168.3.2 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.3.1

15. Select PC7 and change its IPv4 address to 192.168.3.3 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.3.1

16. Select PC8 and change its IPv4 address to 192.168.3.4 and its Subnet Mask to 255.255.255.0 and its Default Gateway to 192.168.3.1

17. Open the command prompt in PC0 and type the following command:

  a. ipconfig

  b. ping 192.168.2.2

18. Open the command prompt in PC4 and enter the following commands:

  a. ipconfig

  b. ping 192.168.1.2

OUTPUT: