Abhaya V
1BM18CS001

28/09/2020

CN Lab 2

Procedure:

1. Two generic computers are placed alongside a router. They are connected with copper cross over wires as the devices are on the same level.
2. IP addresses (fast ethernet) and default gateway addresses are configured specifically, for each computer.
3. The router's terminal is accessed and an interface for each connection and With the specified gateway addresses the no shut command is used to establish a connection.
4. Using the terminals on the computers, we can ping the other computers using their IP Address.

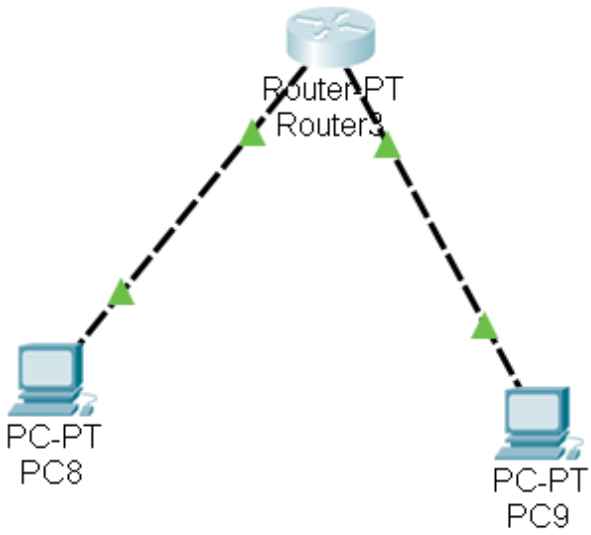
Observation:

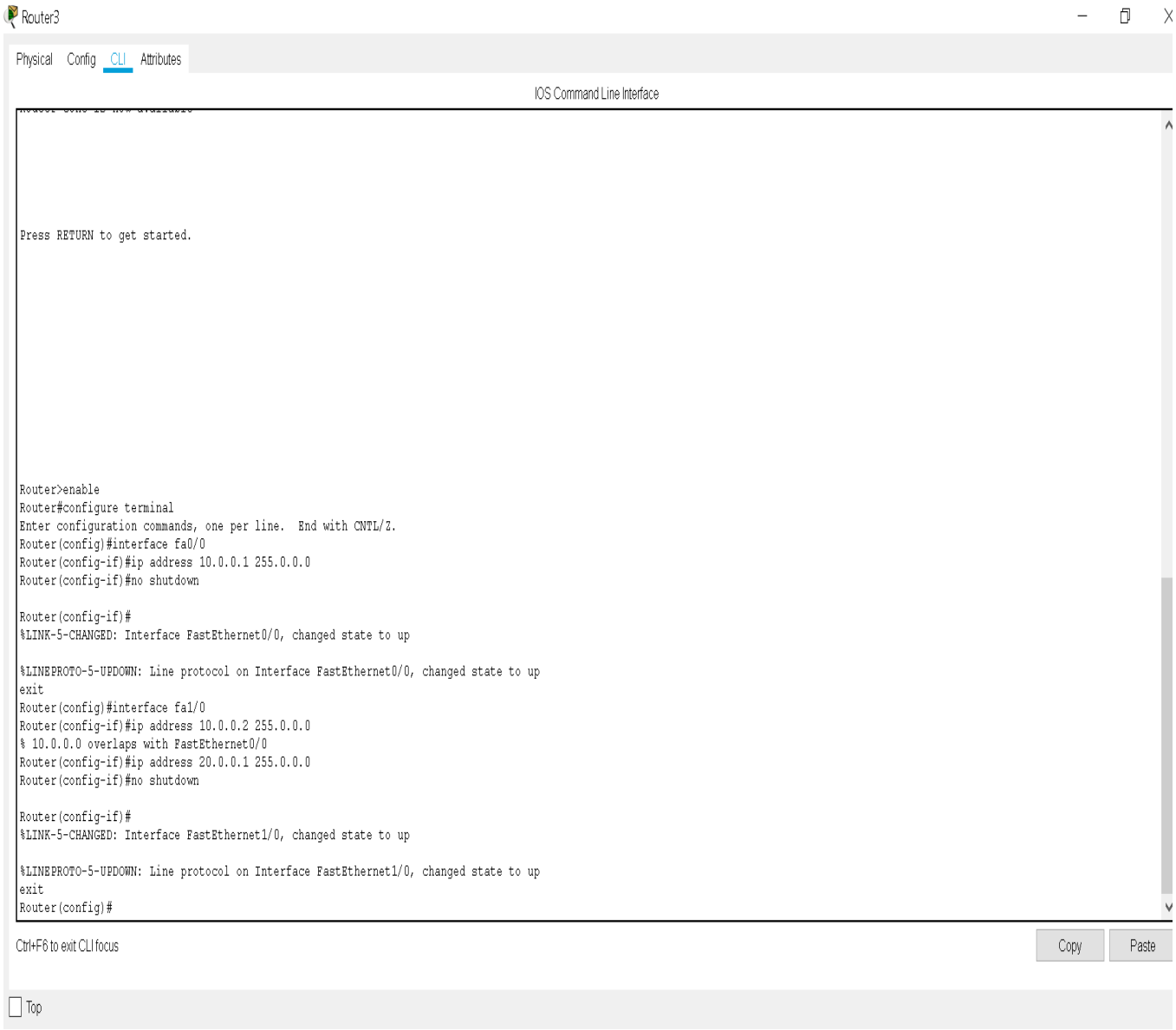
After configuring the devices, a connection is established from the router's Side using the command line interface. The show ip route command shows that the computers are connected. Opening up the terminal on the computer, we can ping another connected computer's IP address to see whether there is a response from the sent packet. The initial attempt will be a time out but on future attempts packets would be successfully retrieved since the computer will be found on the network.

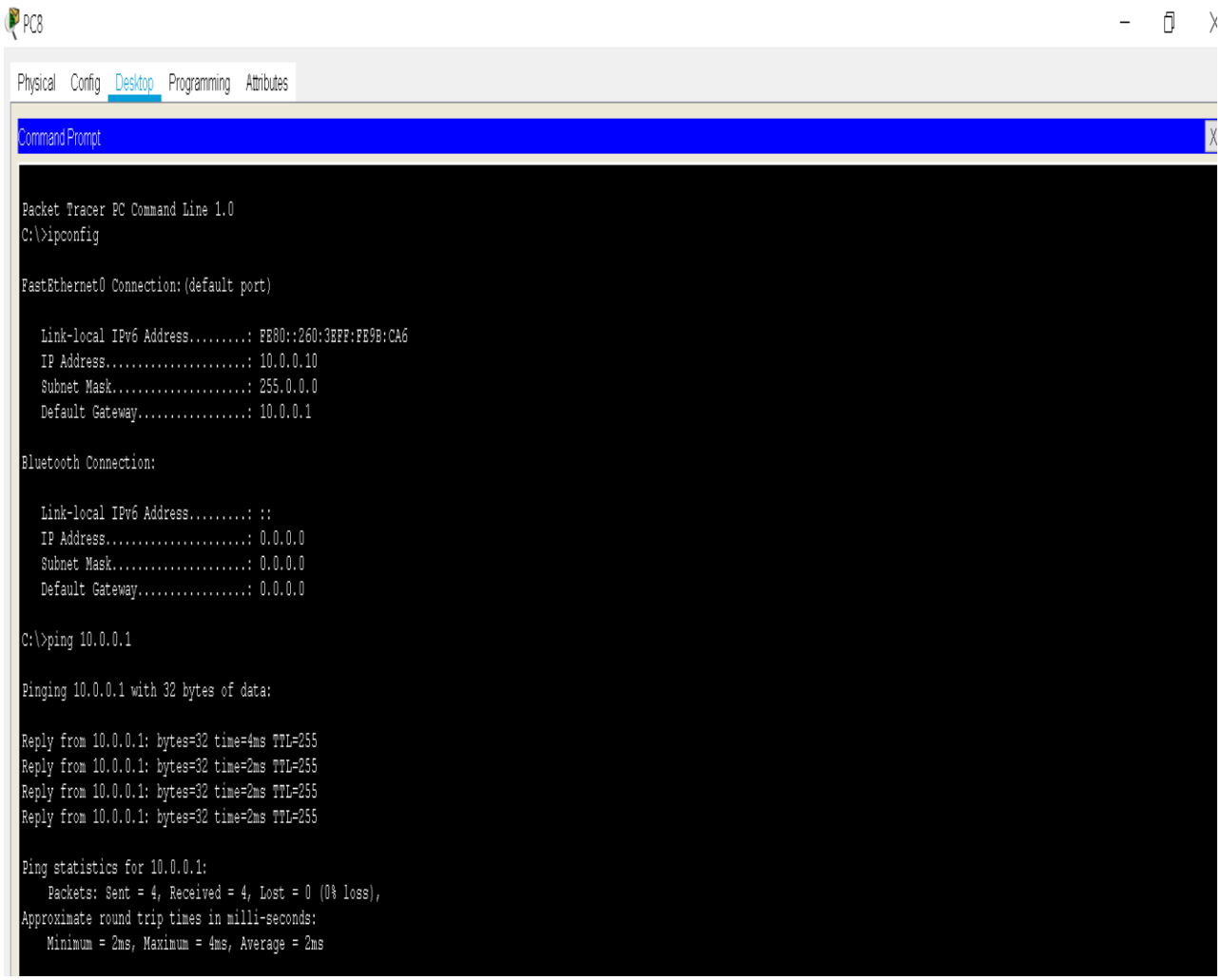
Outcome:

In today's lab, I understood how hubs and switches work along with their differences, and in which setups and environments they are better/worse in. I also understood the working of routers, its configuration and its communication with end network devices and the use of pinging to test connections in a network and make sure all devices are connected properly and can communicate properly.

Screenshots:




Router3
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started.
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fa0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
exit
Router(config)#interface fa1/0
Router(config-if)#ip address 10.0.0.2 255.0.0.0
% 10.0.0.0 overlaps with FastEthernet0/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
exit
Router(config)#
Ctrl+F6 to exit CLI focus
Copy
Paste
Top


PC8
Physical
Config
Desktop
Programming
Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ipconfig
FastEthernet0 Connection:(default port)
Link-local IPv6 Address.....: FE80::260:3EFF:FE9B:CA6
IP Address.....: 10.0.0.10
Subnet Mask.....: 255.0.0.0
Default Gateway.....: 10.0.0.1
Bluetooth Connection:
Link-local IPv6 Address.....: ::
IP Address.....: 0.0.0.0
Subnet Mask.....: 0.0.0.0
Default Gateway.....: 0.0.0.0
C:\>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=4ms TTL=255
Reply from 10.0.0.1: bytes=32 time=2ms TTL=255
Reply from 10.0.0.1: bytes=32 time=2ms TTL=255
Reply from 10.0.0.1: bytes=32 time=2ms TTL=255
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 2ms, Maximum = 4ms, Average = 2ms