Mon | Tue | Wed | Thu | Fri | Sat

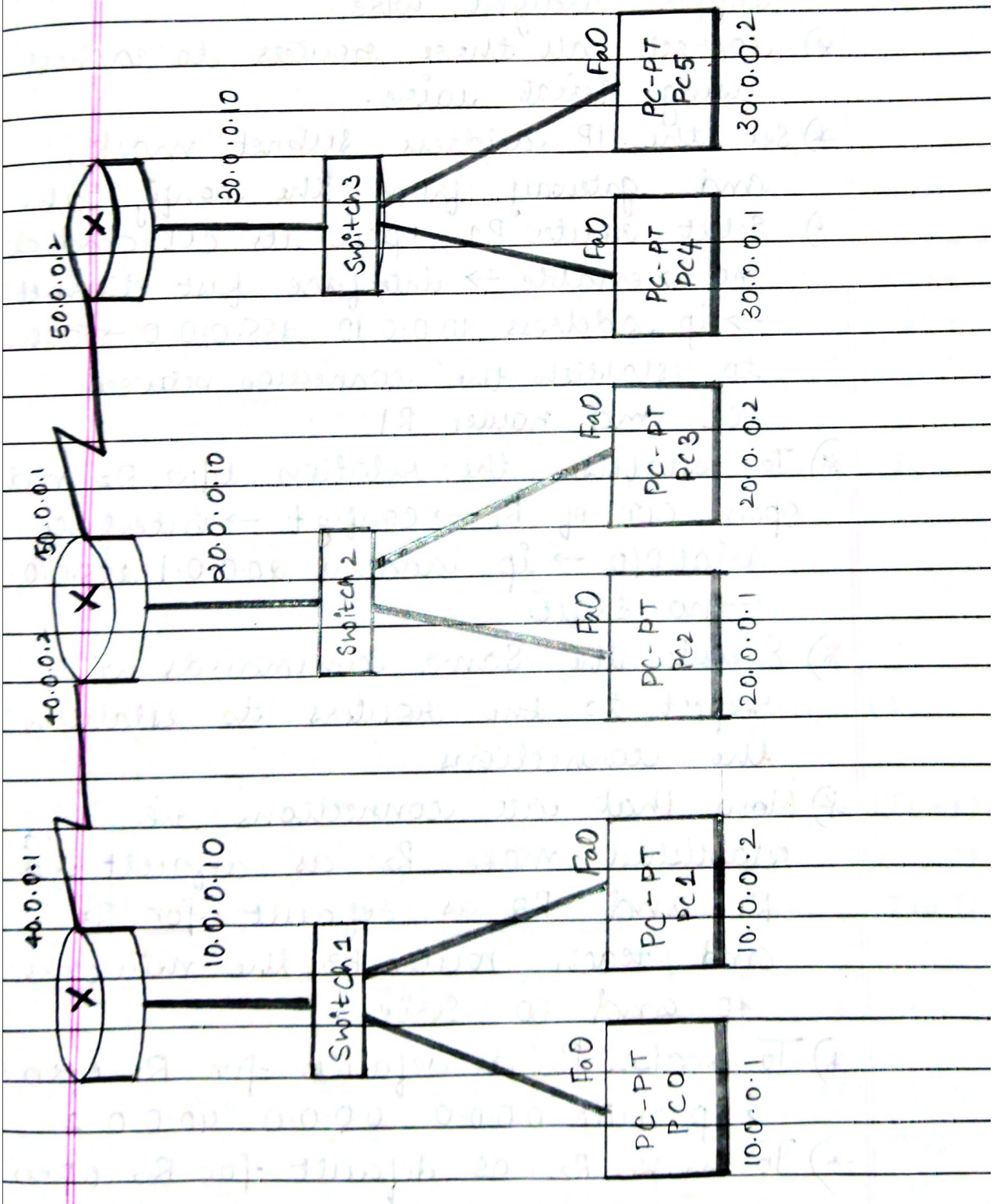
Date: 24/11/2022 Mangal

Page No:

LAB-1

AIM:- Configuring default route to the routers.

TOPOLOGY:-



PROCEDURE:-

*) Place 3 routers, 3 switches and 6 PCs into the workstation.
*) Connect 2 PCs to each switch and each switch to each router using copper straight wire.
*) connect all three routers to eachother using Serial wire.
*) Set the IP address, subnet mask, and gateway from the config tab.
*) Select router R1, open its CLI and do⇒ no → enable → interface fast ethernet 0/0 → ip address 10.0.0.10 255.0.0.0 → no shut to establish the connection between PC1 and router R1
*) To establish the relation b/w R2 and R1 open CLI of R_1 → config t → interface Serial 0/0 → ip address 20.0.0.1 255.0.0.0 → no shut.
*) Execute the same commands with respect to the routers to establish the connections
*) Now that all connections are established make R2 as default for R1 and R3 as default for R3 and teach router R3 the networks 10 and 50 series.
*) To make R2 as default for R1 ~~open~~ CLI → ip route 0.0.0.0 0.0.0.0 40.0.0.2
*) To make R2 as default for R3 open

CLI of R3 → ip route 0.0.0.0 0.0.0.0 50.0.0.1

*) To teach about 10 and 30 network to R2
→ open CLI of router R2 → config t →
ip route 10.0.0.0 255.0.0.0 40.0.0.1
ip route 30.0.0.0 255.0.0.0 50.0.0.2.

*) Ping one PC of a network from another PC of different network.

OBSERVATION:-

Learning:- In this network router R2 doesnot have a default router, because R1 and R3 cannot become a default router simultaneously and if any one of R1 and R2 is default then the packets that are supposed to enter router R2 ~~one~~ com go to R3 | R1 as they are default.

RESULT:- Command prompt of PC0

>ping 20.0.0.2

pinging 20.0.0.2 with 32 bytes of data:

request timed out

reply from 20.0.0.2 : bytes=32 time=5ms TTL=126

reply from 20.0.0.2 : bytes=32 time=5ms TTL=126

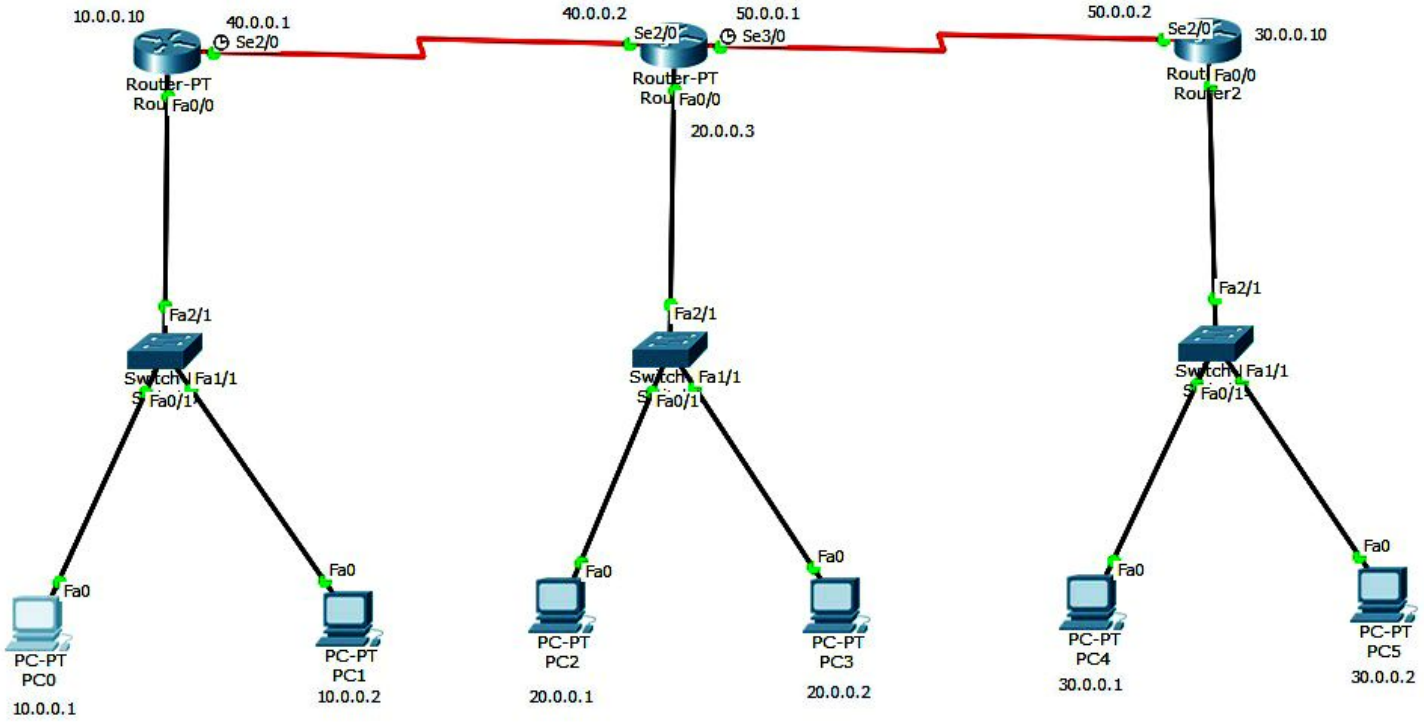
reply from 20.0.0.2 : bytes=32 time=5ms TTL=126

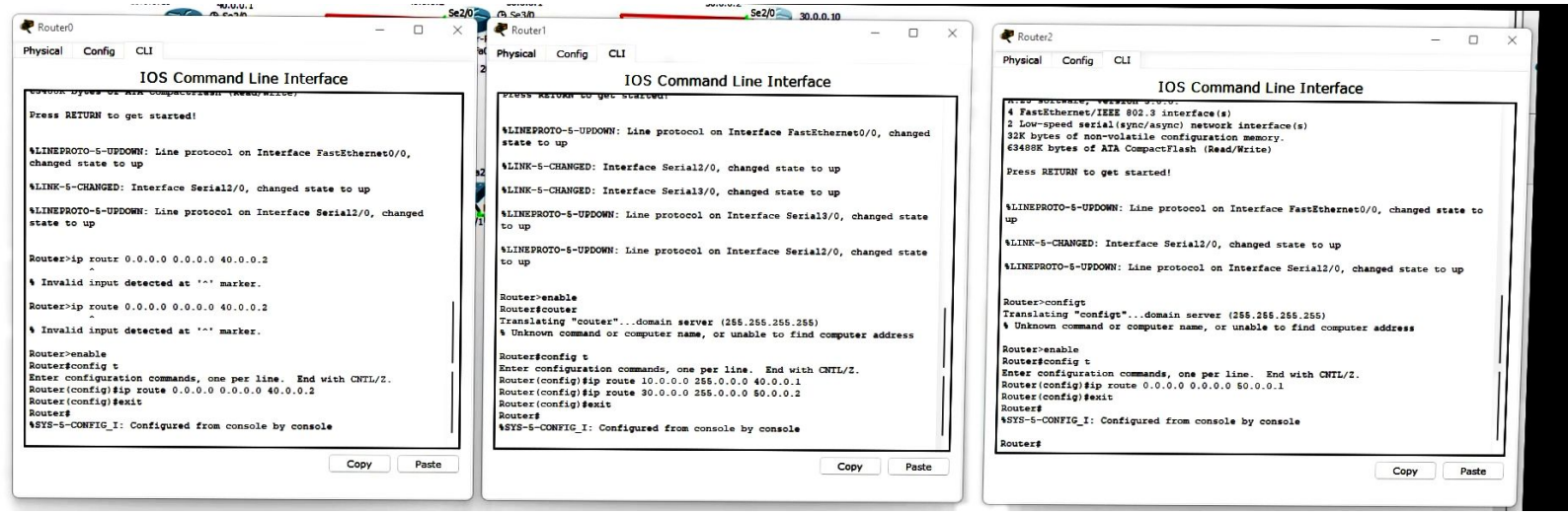
ping Statistics for 20.0.0.2:

packets: sent = 4, Received = 3, lost (25% loss),

Aprox round trip time in milli second

minimum = 0ms, maximum = 11ms Average = 7ms.


10.0.0.10
40.0.0.1
Se2/0
Router-PT
Fa0/0
40.0.0.2
Se2/0
50.0.0.1
Se3/0
Router-PT
Fa0/0
20.0.0.3
50.0.0.2
Se2/0
30.0.0.10
Fa0/0
Router2
Fa2/1
Fa1/1
Fa0/1
Fa2/1
Fa1/1
Fa0/1
Fa2/1
Fa1/1
Fa0/1
Fa0
PC-PT
PC0
10.0.0.1
Fa0
PC-PT
PC1
10.0.0.2
Fa0
PC-PT
PC2
20.0.0.1
Fa0
PC-PT
PC3
20.0.0.2
Fa0
PC-PT
PC4
30.0.0.1
Fa0
PC-PT
PC5
30.0.0.2


Router0
Physical
Config
CLI
IOS Command Line Interface
Press RETURN to get started!
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
Router>ip routr 0.0.0.0 0.0.0.0 40.0.0.2
% Invalid input detected at '^' marker.
Router>ip route 0.0.0.0 0.0.0.0 40.0.0.2
% Invalid input detected at '^' marker.
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 0.0.0.0 0.0.0.0 40.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Copy
Paste
Router1
Physical
Config
CLI
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINK-5-CHANGED: Interface Serial3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
Router>enable
Router#couter
Translating "couter"...domain server (255.255.255.255)
% Unknown command or computer name, or unable to find computer address
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 10.0.0.0 255.0.0.0 40.0.0.1
Router(config)#ip route 30.0.0.0 255.0.0.0 50.0.0.2
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Copy
Paste
Router2
Physical
Config
CLI
IOS Command Line Interface
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)
Press RETURN to get started!
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
Router>configt
Translating "configt"...domain server (255.255.255.255)
% Unknown command or computer name, or unable to find computer address
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 0.0.0.0 0.0.0.0 50.0.0.1
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#
Copy
Paste

Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.2

Pinging 20.0.0.2 with 32 bytes of data:

Request timed out.
Reply from 20.0.0.2: bytes=32 time=6ms TTL=126
Reply from 20.0.0.2: bytes=32 time=3ms TTL=126
Reply from 20.0.0.2: bytes=32 time=6ms TTL=126

Ping statistics for 20.0.0.2:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 6ms, Average = 4ms

PC>ping 30.0.0.1

Pinging 30.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 30.0.0.1: bytes=32 time=2ms TTL=125
Reply from 30.0.0.1: bytes=32 time=10ms TTL=125
Reply from 30.0.0.1: bytes=32 time=11ms TTL=125

Ping statistics for 30.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 11ms, Average = 7ms
```