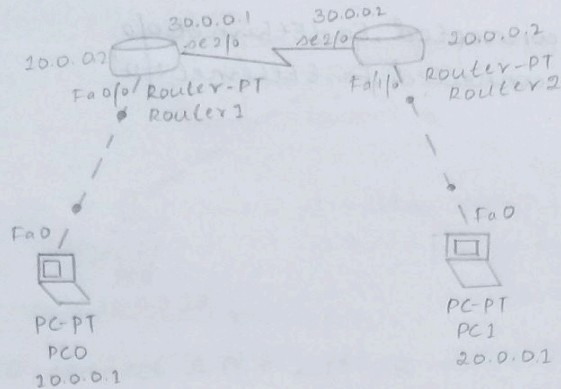


LAB-3

LAB: 03 EXPERIMENT 02

16/10/24



Aim: configuration of 2 routers.

Topology: Connect 2 routers and 1 PC to each of the 2 routers

Procedure:

1. Add 2 routers and 2 PC's, one connecting to 1 router and the other PC to the other routers using a copper cross-over cable.
2. Connect both the routers using a serial DTE.
3. Configure the IP addresses, Subnet mask and Gateway for both the PC's
4. Configure the IP addresses and connection with PC by clicking on the router → CLI and manually type the following commands

```
Router>enable
Router#config terminal
Router(config)#interface fastethernet/serial
[fastethernet → PC, serial → router]
Router(config-if)#ip address 10.0.0.2 255.0.0.0
Router(config-if)#no shutdown
exit
```

5. This completes the connection between 2 routers and router to PC.

6.

Observation: The PC's are not communicating even when they are connected through the routers.

- On pinging PC0 to Fa0/0 part of the router the message is pinged
- On pinging PC0 to the other network, the message is not reachable.

EXPERIMENT: 03 (a)

Aim: To connect the default static route to the router

Procedure:

1. By continuing the previous procedure, to connect the PC's so they can communicate with each other, go to router, CLI and continue with the following commands.

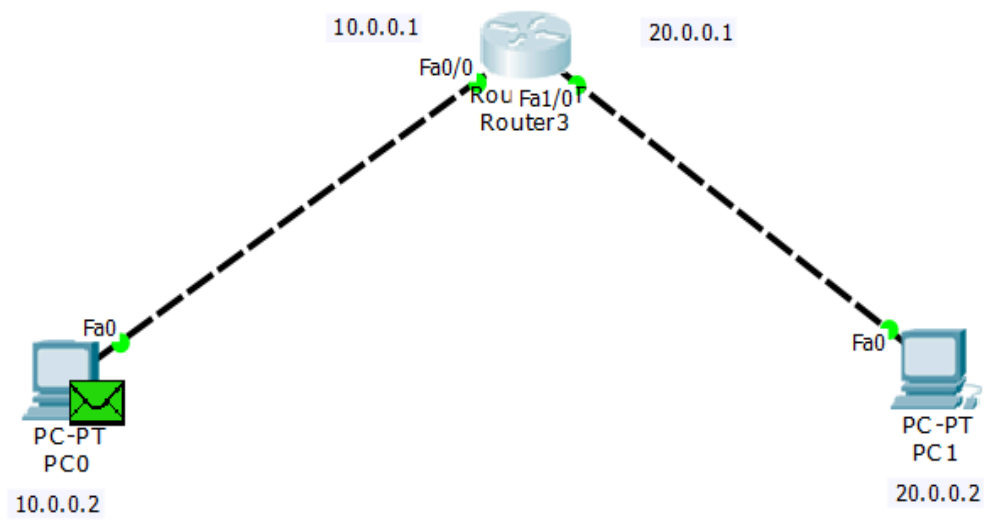
ip route 20.0.0.0 255.0.0.0 30.0.0.2

↑
ip address of neighbour
network (router)

2. This should be repeated for the other router, which completes the static routing.

Observation: The PC's are now communicated with each other.
On pinging.

TOPOLOGY:



IOS Command Line Interface

```
Router(config-if)#exit
Router(config)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to
up
show rout ip address
      ^
% Invalid input detected at '^' marker.

Router(config)#show ip rout
      ^
% Invalid input detected at '^' marker.

Router(config)#exit
Router#show ip rout
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is directly connected, FastEthernet1/0
Router#
```

Packet Tracer PC Command Line 1.0

PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=4ms TTL=127

Reply from 10.0.0.2: bytes=32 time=4ms TTL=127

Reply from 10.0.0.2: bytes=32 time=4ms TTL=127

Reply from 10.0.0.2: bytes=32 time=4ms TTL=127

Ping statistics for 10.0.0.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 4ms, Maximum = 4ms, Average = 4ms

PC> |