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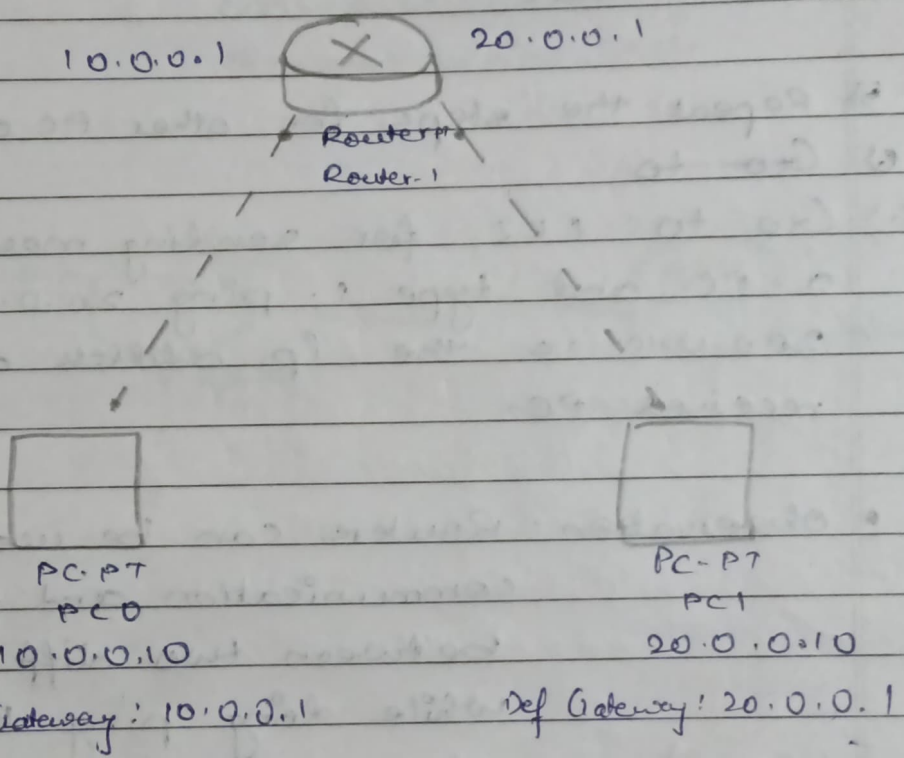
Exp-2

- Objective : To create simple network consisting of 2 PC's connected to the router facilitating communication between the two PC's through router

- Topology : 2 PC's are connected to the router using copper cross-over



- Procedure:

1) Connect the 2 PC's to the router using copper cross over.

2) Open config in the PC and configure the IP address and the gateway.

3) Do the same for other PC

4) Open CLI in the router and configure the

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fast ethernet connection by the following commands :-

> enable
> config terminal
> interface fastethernet 0/0
> ip address 10.0.0.1 255.0.0.0
gateway subnet mask
> no shutdown
exit

5) Repeat the steps for other PC connection.
~~6) Go to~~
6) Go to CLI for sending messages from a PC and type : ping 20.0.0.10 where 20.0.0.10 is the ip address of the receiver PC.

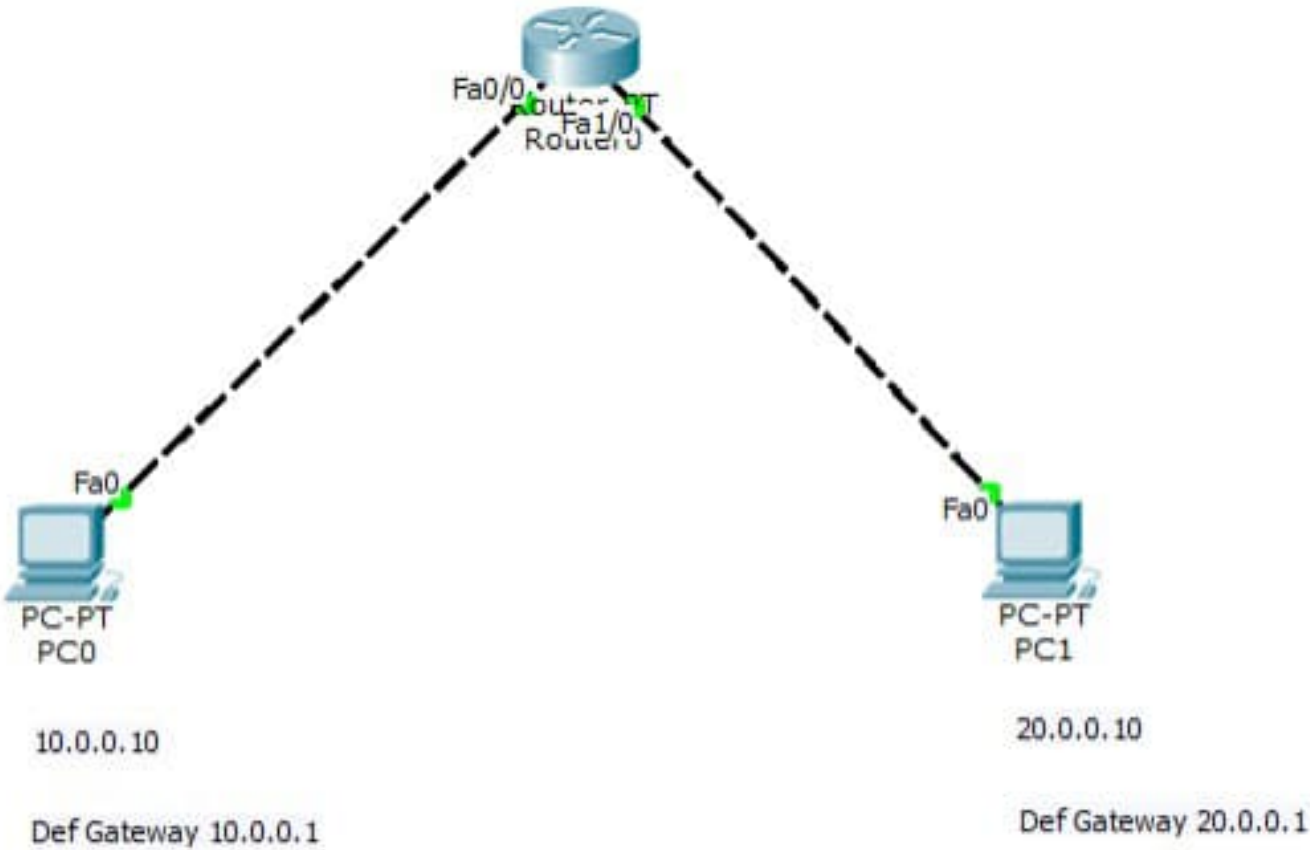
- Observation : Routers can be used to manage communication and data transfer between two different networks. While doing ping test we can observe that chances of losing one packet are high because the router will be busy in establishing the connection.

- Output :

Router> show ip route
Gateway of last resort is not set

C 10.0.0.0/0 is directly connected to fastethernet
C 20.0.0.0/0 is directly connected to fastethernet

Ping statistics
Packets :
Sent : 4, Received : 4, Lost : 0


Fa0/0
Fa1/0
Fa0
Fa0
PC-PT
PC0
PC-PT
PC1
10.0.0.10
Def Gateway 10.0.0.1
20.0.0.10
Def Gateway 20.0.0.1

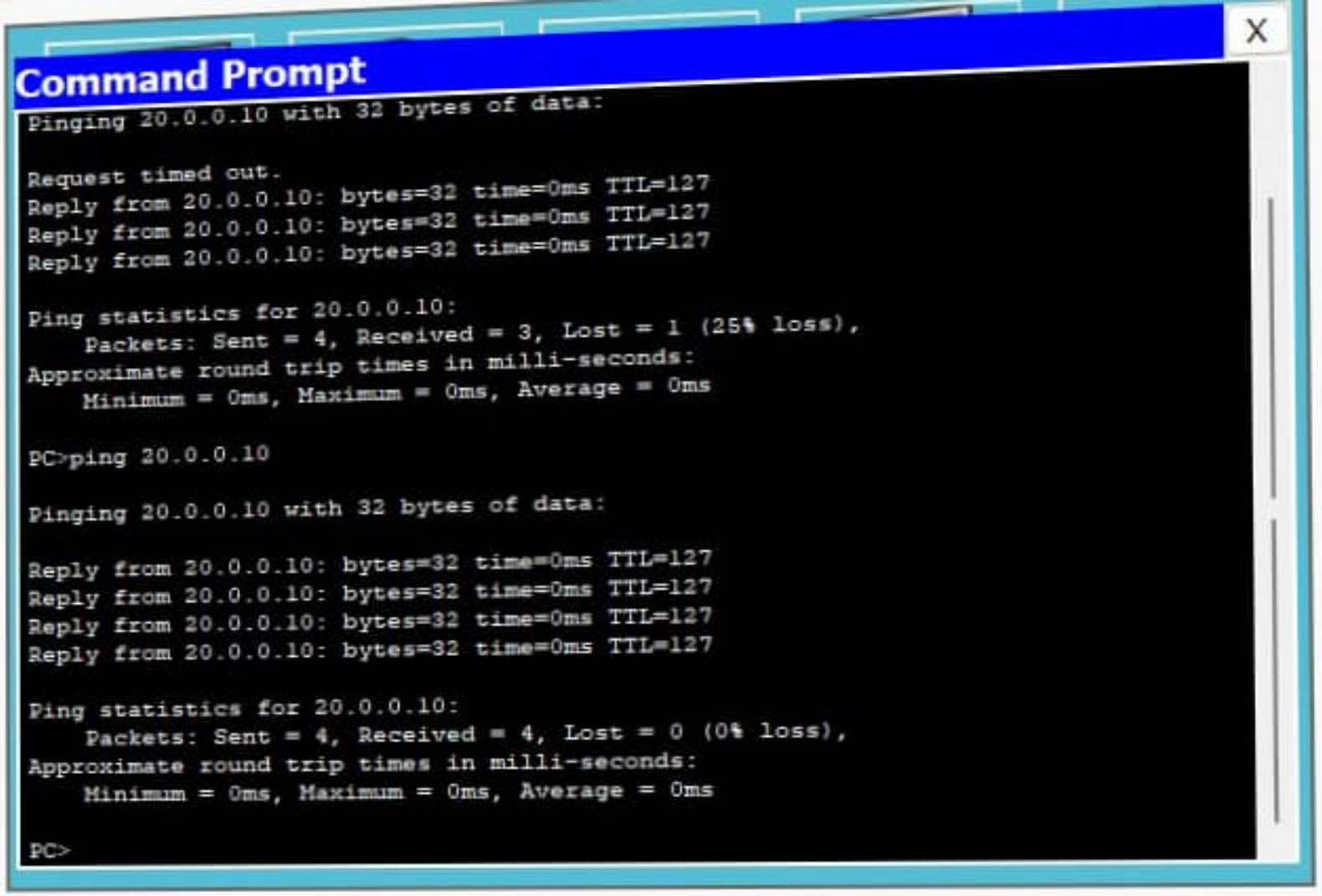
Router0

Physical | Config | CLI

IOS Command Line Interface

```
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 t
o up
exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip route
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#
```

Copy | Paste


Command Prompt
Pinging 20.0.0.10 with 32 bytes of data:
Request timed out.
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Ping statistics for 20.0.0.10:
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>ping 20.0.0.10
Pinging 20.0.0.10 with 32 bytes of data:
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Reply from 20.0.0.10: bytes=32 time=0ms TTL=127
Ping statistics for 20.0.0.10:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
PC>