DATE : 9-OCTOBER-2024

LAB- 2

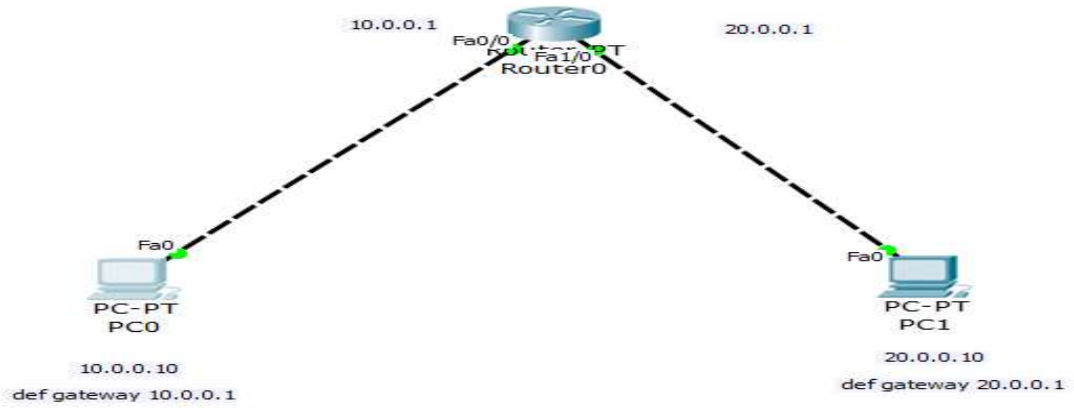
Question:

Configure IP address to routers in packet tracer. Explore the following messages: ping responses, destination unreachable, request timed out, reply

Aim:

To connect Two PC's on different networks using a router

Topology:



Topology Description:

In the network topology shown in the image, we have:

- **Router (Router0)** with two interfaces:
  - Interface **Fa0/0**: IP address 10.0.0.1
  - Interface **Fa1/0**: IP address 20.0.0.1
- **PC0** connected to **Fa0/0** of the router:
  - IP address 10.0.0.10
  - Default gateway: 10.0.0.1
- **PC1** connected to **Fa1/0** of the router:
  - IP address 20.0.0.10
  - Default gateway: 20.0.0.1

The two PCs are on different networks:

- PC0 is on the 10.0.0.0 network.
- PC1 is on the 20.0.0.0 network.

The router is used to route traffic between the two networks.

Configuration Procedure:

Step 1: Configure Router Interfaces

1. Open the router configuration.
2. Configure the interfaces:

For **Fa0/0** (connected to PC0's network):

```
Router>enable
Router#config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fastethernet0/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

For **Fa1/0** (connected to PC1's network):

```
Router(config)#interface fastethernet1/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
```

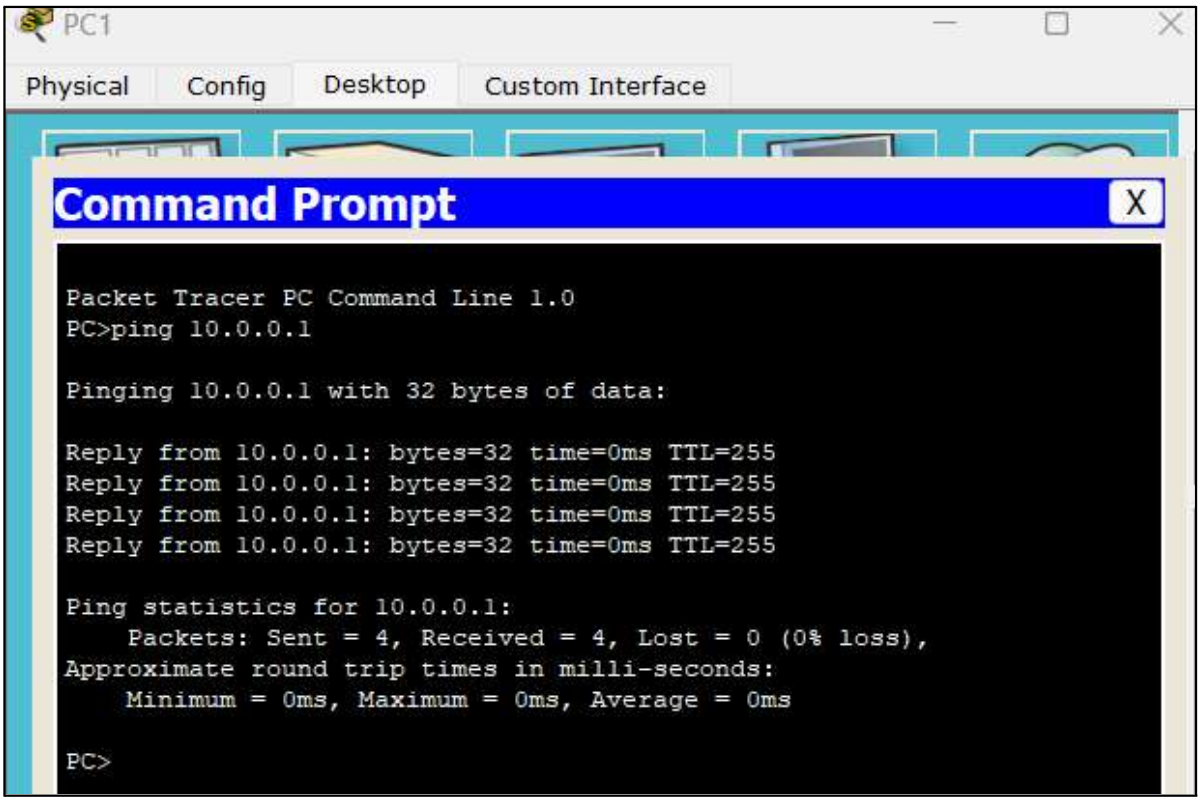
Step 3: Test Connectivity

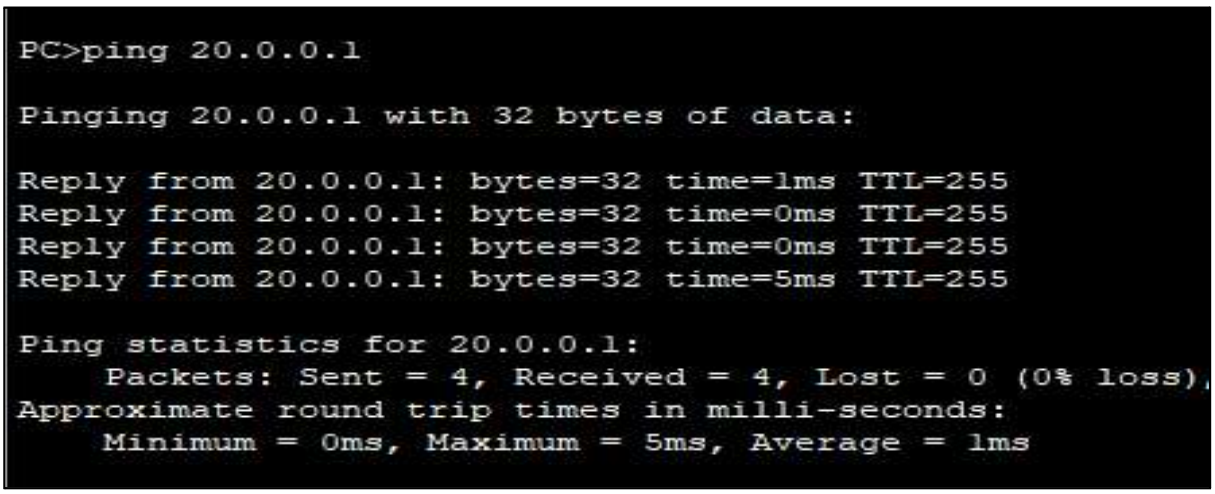
On **PC0**, open the command prompt and ping **PC1**: ping 20.0.0.1

1. You should receive replies if the routing is configured correctly.

On **PC1**, open the command prompt and ping **PC0**: ping 10.0.0.1

2. Similarly, you should receive replies.





Observation:

- **Ping Test**: The ping command should result in successful replies, indicating that both PCs are able to communicate with each other through the router.
- **Routing Function**: The router is functioning properly, routing packets between the 10.0.0.0 and 20.0.0.0 networks.