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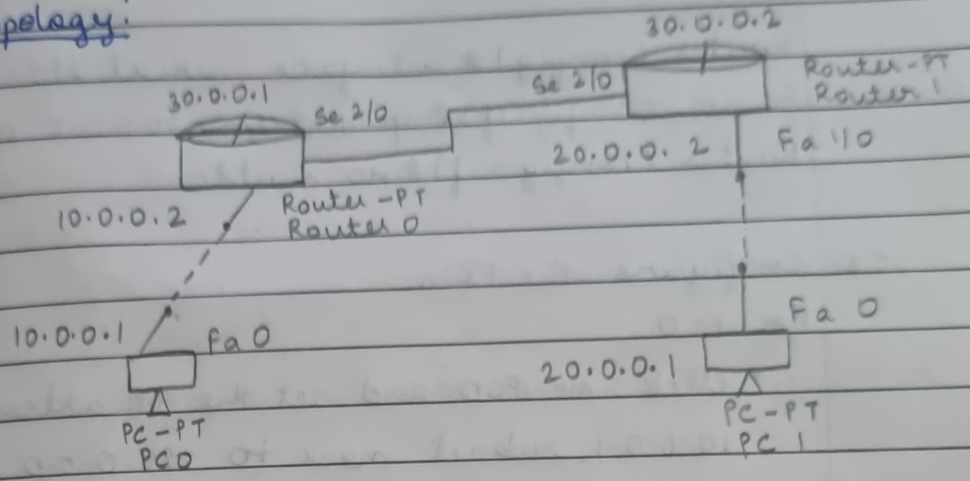
Exp-2b:

Aim: To connect two PC's on two networks via two routers

Topology:



1. PC 0 - Connected to router's interface Fa 0/0 using a cross-over cable
   IP address : 10.0.0.1
   Default Gateway : 10.0.0.2

2. PC 1 - Connected to router's (Router 1) interface Fa 1/0 using a cross-over cable
   IP address : 20.0.0.1
   Default Gateway : 20.0.0.2

3. Router 0
   * Interface Fa 0/0 connected to PC-0
   * Interface Se 2/0 connected to Router-1
   * IP address of Fa 0/0 : 10.0.0.2
   * IP address of Se 2/0 : 30.0.0.1

4. Configure Router 1 similarly.

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```
Router > enable
Router # configure terminal
Router (config) # interface fast ethernet 1/0
Router (config-if) # ip address 20.0.0.2 255.0.0.0
Router (config-if) # exit

Router (config) # interface serial 2/0
Router (config-if) # ip address 30.0.0.2 255.0.0.0
Router (config-if) # no shutdown
```

5. Configure the PC's

For PC0:

- click on PC0 and set the IP address to 10.0.0.1, subnet mask to 255.0.0.0 and default gateway to 10.0.0.2

For PC1:

- click on PC1 and set the IP address to 20.0.0.1, subnet mask to 255.0.0.0 and default gateway to 20.0.0.2

- Test connectivity by ~~going~~ opening command prompt on PC0.

Use the ping command to check connectivity. From PC0, ping PC1's IP address (20.0.0.1)

Observation:

- If the configuration and cabling are correct, you will receive successful ping replies b/w the two PC's

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4. Router 1:
- Interface Fa 1/0 connected to PC-1
- Interface Se 2/0 connected to Router 0
- IP address of Fa 1/0 : 20.0.0.2
- IP address of Se 2/0 : 30.0.0.2

Procedure:
- Open Cisco packet tracer and drag the following components onto workspace:
Router: Place two routers in the middle
PC: Place two PC's on either side of the routers.

- Use cross-over cables to connect the devices as follows:
PC0 → Router's (0) Fa 0/0 interface
PC1 → Router's (1) Fa 1/0 interface

- Configure Router 0 by clicking on the router & enter CLI
Assign IP addresses to the router interfaces:
Router > enable
Router # configure terminal
Router (config)# interface fast ethernet 0/0
Router (config-if)# ip address 10.0.0.2 255.0.0.0
Router (config-if)# exit

Router (config)# interface serial 2/0
Router (config-if)# ip address 30.0.0.1 255.0.0.0
Router (config-if)# no shutdown

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The ping results are as follows:

Pc> ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data
Request timed out
Request timed out
Request timed out
Request timed out

Ping statistics for 20.0.0.1:
Packet sent = 4, Received = 0, Loss = 4 (100% loss)

Pc> ping 20.0.0.1

Pinging 20.0.0.1 with 32 bytes of data
Reply from 10.0.0.2: Destination host unreachable
Reply from 10.0.0.2: Destination host unreachable
Reply from 10.0.0.2: Destination host unreachable
Request timed out

Ping statistics for 20.0.0.1:
Packet: sent = 4, received = 0, lost = 4
(100% loss)