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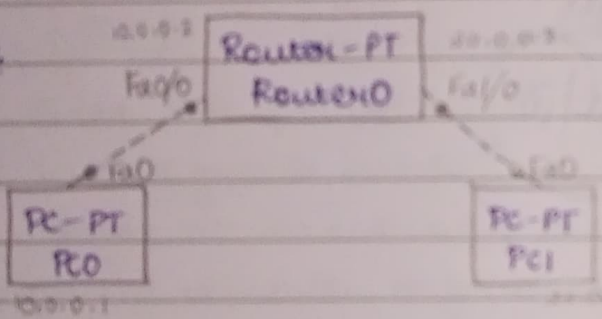
LAB-02 ROUTERS

Commands to configure router in CLI:

```
Router> enable
Router# config t
Router(config)# interface FastEthernet 0/0
Router(config-if)# ip address 10.0.0.2 255.0.0.0
                 # no shutdown
                 # exit
Router(config)# interface FastEthernet 1/0
                 # ip address 20.0.0.2 255.0.0.0
                 # no shutdown
```

Topology:



Steps: 1. Select 2 generic PC end-devices.
2. Select 1 generic router.
3. Connect the routers to the end-devices using copper cross-over.
(Initially the network is down)

Configuration:

1. Click on each PC end-devices → config tab → INTERFACE → FastEthernet() → Static IP configuration → IP-Address: PC0 : 10.0.0.1 } 2 different networks
PC1 : 20.0.0.1 }
2. To configure the router, open CLI tab in Router0 and put in the above commands.

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Gateway:

1. For the router to switch between 2 networks in network layer, we need to specify the gateway.
2. Click on PC devices → config tab → Gateway/DNS → Gateway: PC0 : 10.0.0.2 } respective networks
PC1 : 20.0.0.2 } with different end addresses.
3. Now, in PC device PC0, click on desktop, → command prompt :

PC > ping 20.0.0.1

Outputs possible:

① Request timed out ⇒ gateway not set up.
② 0% loss statistics ⇒ gateway set-up successful.

Procedure:

1. Send simple PDU from PC0 to PC1 (destination).

Observation:

1. PDU is sent from PC0 to router, exited through the gateway formed.
2. The PDU is sent again from router to PC1 by switching to its network.

Ex-2 Aim: To demonstrate configuration of IP Addresses to the routers and explore ping command.

Experiment - 3

Aim: To demonstrate the configuration of default routes to the router.