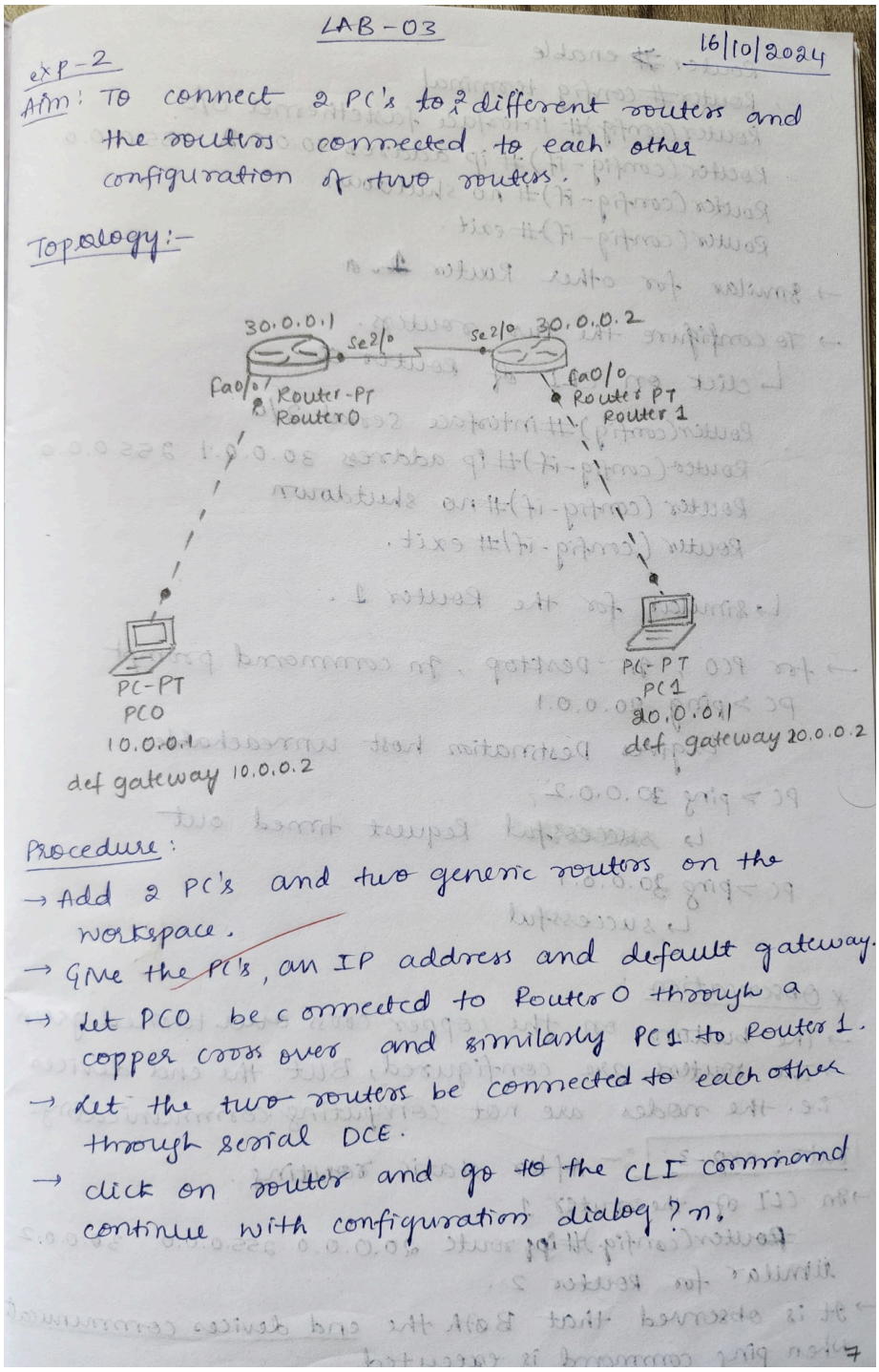
16|10|2024 Week-3(Experiment 2b and 3a)

Observation Book:



LAB-03

16/10/2024

exp-2

Aim: To connect 2 PC's to 2 different routers and the routers connected to each other configuration of two routers.

Topology:-

Procedure:

→ Add 2 PC's and two generic routers on the workspace.

→ Give the PC's, an IP address and default gateway.

→ Let PC0 be connected to Router 0 through a copper cross over and similarly PC1 to Router 1.

→ Let the two routers be connected to each other through serial DCE.

→ click on router and go to the CLI command continue with configuration dialog? n.

Router # enable
Router # config terminal
Router (config) # interface fastethernet 0/0
Router (config-if) # ip address 10.0.0.2 255.0.0.0
Router (config-if) # no shutdown.
Router (config-if) # exit.

→ Similar for other Router 2.

→ To configure the two routers.
  ↳ click on CLI of Router 0:-

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

  ↳ similar for the Router 1.

→ for PC0, in Desktop, in command prompt
PC > ping 20.0.0.1
  ↳ gives Destination host unreachable.

PC > ping 30.0.0.2
  ↳ ~~successful~~ Request timed out

PC > ping 30.0.0.1
  ↳ successful

* Observation :
→ The buttons on the copper cross over turned green
→ The routers are configured, But the end devices i.e. the nodes are not ~~computing~~ communicating.

Exp -03 16/10/2024

Aim: Configure default route, static route to router configure static connection to route.

Topology: same as experiment-02

Procedure: * go to CLI of router0 and in CLI enter

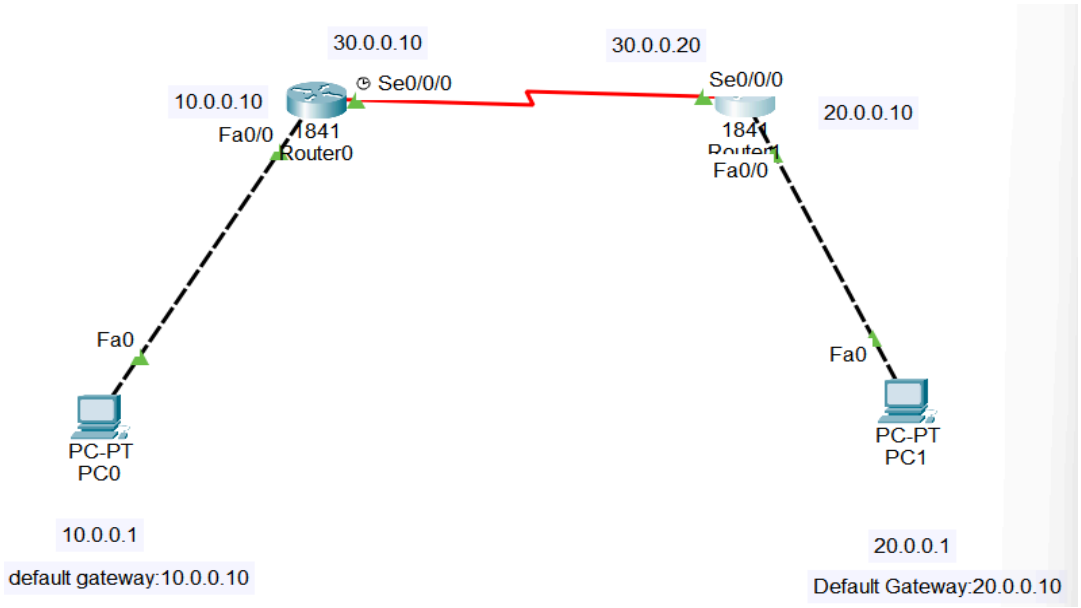
Router>enable
Router# config terminal
Router(config) # ip route 20.0.0.0 255.0.0.0 30.0.0.2
Router(config)#exit.

* Repeat the same for router 0 by changing 20 to 10 and 30.0.0.2 to 30.0.0.1.

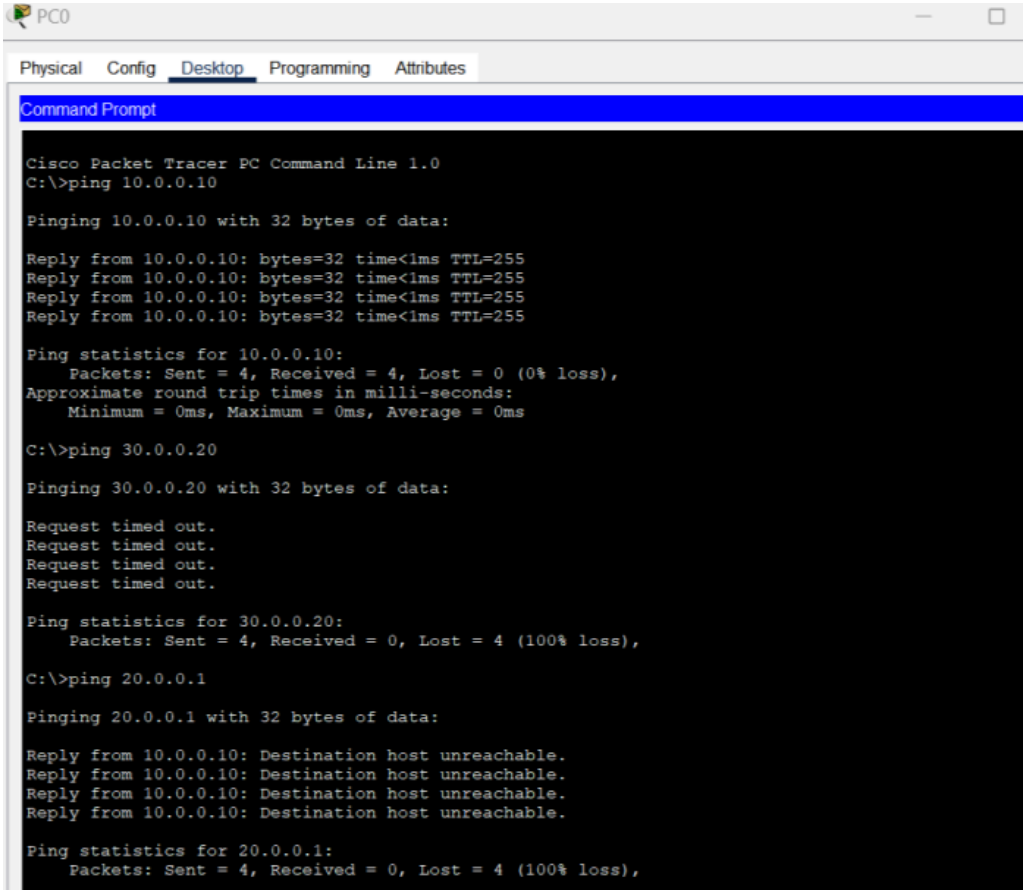
Observation:- in CLI
#show ip route
(for router 2)
S 10.0.0.0/8 [1/0] via 30.0.0.1
C 20.0.0.0/8 is directly connected, Fast ethernet 0/0
C 30.0.0.0/8 is directly connected, serial 0/0/0.

OUTPUT: on pinging end devices, the message sent is sent, also router are as well.

Topology:



Output:(Before Static Routing):



(After Static Routing):