Program 4

Aim: Configure default route, static route to the Router(Part 2).

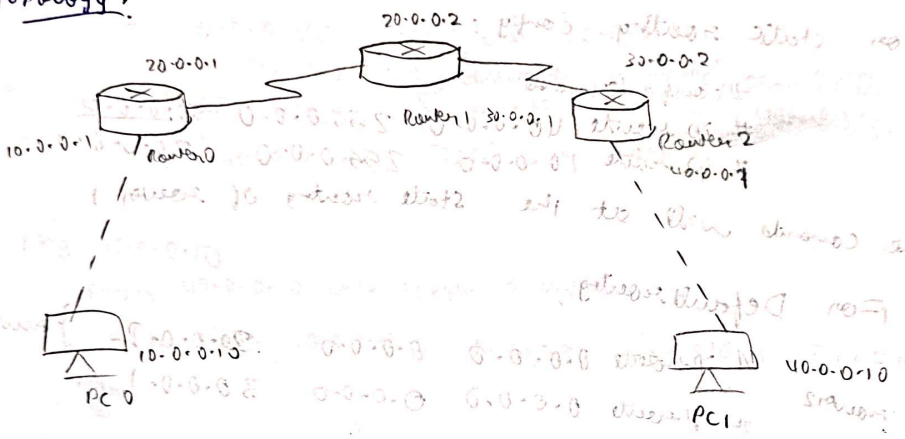
Topology , Procedure and Observation:

23.10.24.

LAB 4

AIM: To configure a default route & static route to a router in a network & verify connectivity.

Topology:



Procedure:

1. Take 3 generic routers and 2 PC's
2. connect the routers through serial DCE and PC to routers through copper crossover
3. For each PC set gateway address and IP address acc for each router, set the IP address.

   For PC0 → ip address 10.0.0.10 and gateway 10.0.0.1
   For PC1 → ip address 40.0.0.10 & gateway 40.0.0.1
   For Router0 → ip address 20.0.0.1 (serial) & 10.0.0.1 (fast Ethernet)
   For router1 → ip address 20.0.0.2 (serial)
   For router 2 → ip address 30.0.0.2 (serial) & 40.0.0.1 (fast ethernet)

4. For router config in CLI,

PTO.

> enable
config terminal
interface fastEthernet 0/0
ip address 10.0.0.10 255.0.0.0
no shut
exit.

This configures connection b/w PC and router

5. For static routing config:

#config terminal
ip route 40.0.0.0 255.0.0.0 30.0.0.2
ip route 10.0.0.0 255.0.0.0 20.0.0.1

These cmnds will set the static routing of router 1.

6. For Default routing,

in router2 { # ip route 0.0.0.0 0.0.0.0 20.0.0.2 } router0
ip route 0.0.0.0 0.0.0.0 30.0.0.1.

0.0.0.0 means any ip address will be sent to next hop address.

Observation:

After config. the default state, PC0 could communicate with external nw, including PC1.
The static route ensured that packets followed the specified path as given in static routing.

OP:

Router 0: #show ip route

C 10.0.0.0/8 is directly connected, FastEthernet 0/2
C 20.0.0.0/8 is directly connected, Serial 2/0
S* 0.0.0.0/8 [1/0] via 20.0.0.2

Router2: # show ip route

C 40.0.0.0/8 is directly connected, FastEthernet 0/0.

C 30.0.0.0/8 is directly connected, Serial 3/0

S* 0.0.0.0/8 [1/0] via 30.0.0.1

Router1: # show ip route

S 10.0.0.0/8 [1/0] via 20.0.0.1

C 20.0.0.0/8 is directly connected, Serial 2/0.

C 30.0.0.0/8 is directly connected, Serial 3/0.

S 40.0.0.0/8 [1/0] via 30.0.0.2.

Ping 40.0.0.10

pinging 40.0.0.10 with 32 bytes of data.

Reply from 40.0.0.10 : bytes = 32 time = 10ms TTL = 125

"

"

"

Packets Sent = 4, Received = 4, Lost = 0 (0% loss)

23/10

Screen Shots: