

23/10/24

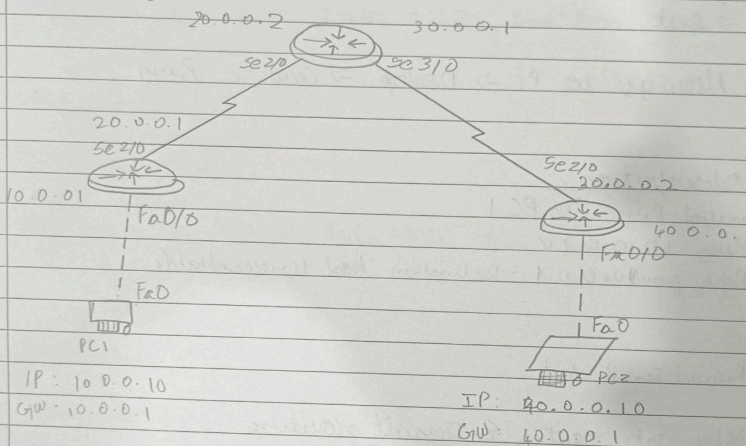
Lab-3

a) Configure default route, static route to the Router.

Aim: To demonstrate static routing & Default routing using 3 routers & 2 PC's.

o/p seen

Topology:



Procedure

- 1) Open Cisco Packet Tracer
- 2) Drag & drop all devices (3 routers & two PC's)
- 3) Use copper crossover cable for router to PC & Serial DCE for router to router.
- 4) Enter IP addresses & gateways to the PC's.
- 5) Go to router → CLI → No → Enable → Config Terminal → interface fastethernet 0/0 → IP address subnet → No shut → exit. (For PC connection)
- 6) CLI → Config Terminal → interface Serial 2/0 → IP address Subnet → No shut → exit. (For all routers)
- 7) Select a device → Postop → cmd Prompt → Ping the other device

8) For middle router → Cli → Config →
 IP Route 10.0.0.0 255.0.0.0 20.0.0.1
 → IP Route 10.0.0.0 255.0.0.0 30.0.0.2
 → exit (Static routing)

9) For left & right routers → Cli → Config →
 IP route 0.0.0.0 0.0.0.0 20.0.0.2 (For left)
 → IP route 0.0.0.0 0.0.0.0 30.0.0.1 (For right)
 → exit

10) Now go to PC → Desktop → Cmd → Ping.

Observation.

Initial Ping On PC 1

Ping 10.0.0.10

Reply from 10.0.0.1: Destination host Unreachable.

"

Request timed out.

After Static routing & Default routing.

Show IP route (for Router 2)

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

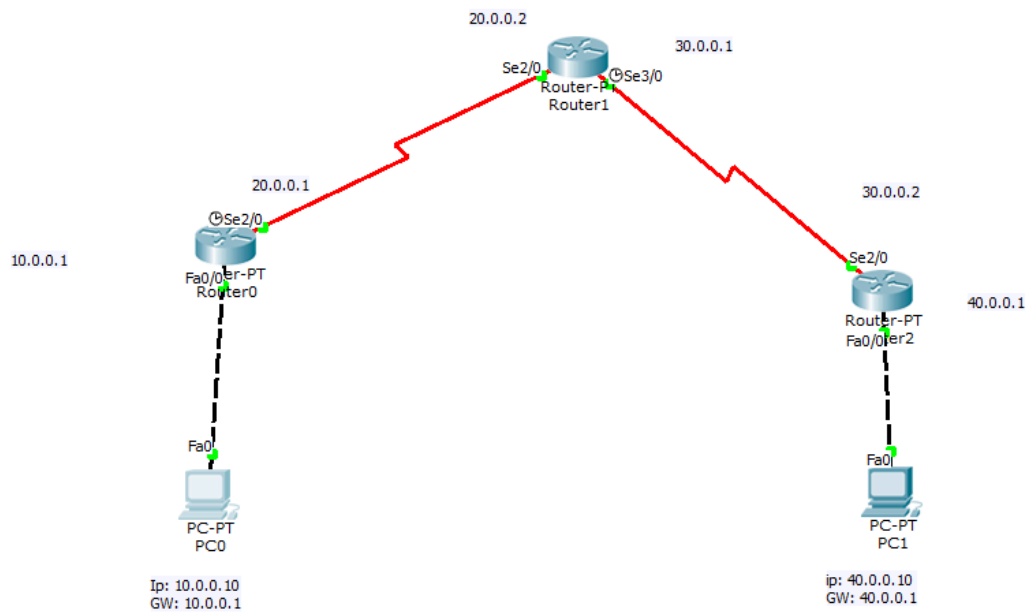
(for Router 1)

C 10.0.0.0/8 is directly connected, FastEthernet 0/0

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

S* 0.0.0.0/0 [1/0] via 20.0.0.2

→



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PC0
Physical Config Desktop Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Request timed out.

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>ping 40.0.0.10

Pinging 40.0.0.10 with 32 bytes of data:

Reply from 10.0.0.1: Destination host unreachable.
Reply from 10.0.0.1: Destination host unreachable.
Request timed out.
Reply from 10.0.0.1: Destination host unreachable.

Ping statistics for 40.0.0.10:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>
```

```

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    20.0.0.0/8 is directly connected, Serial2/0
C    30.0.0.0/8 is directly connected, Serial3/0

```

```

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

S    10.0.0.0/8 [1/0] via 20.0.0.1
C    20.0.0.0/8 is directly connected, Serial2/0
C    30.0.0.0/8 is directly connected, Serial3/0
S    40.0.0.0/8 [1/0] via 30.0.0.2
Router#

```

