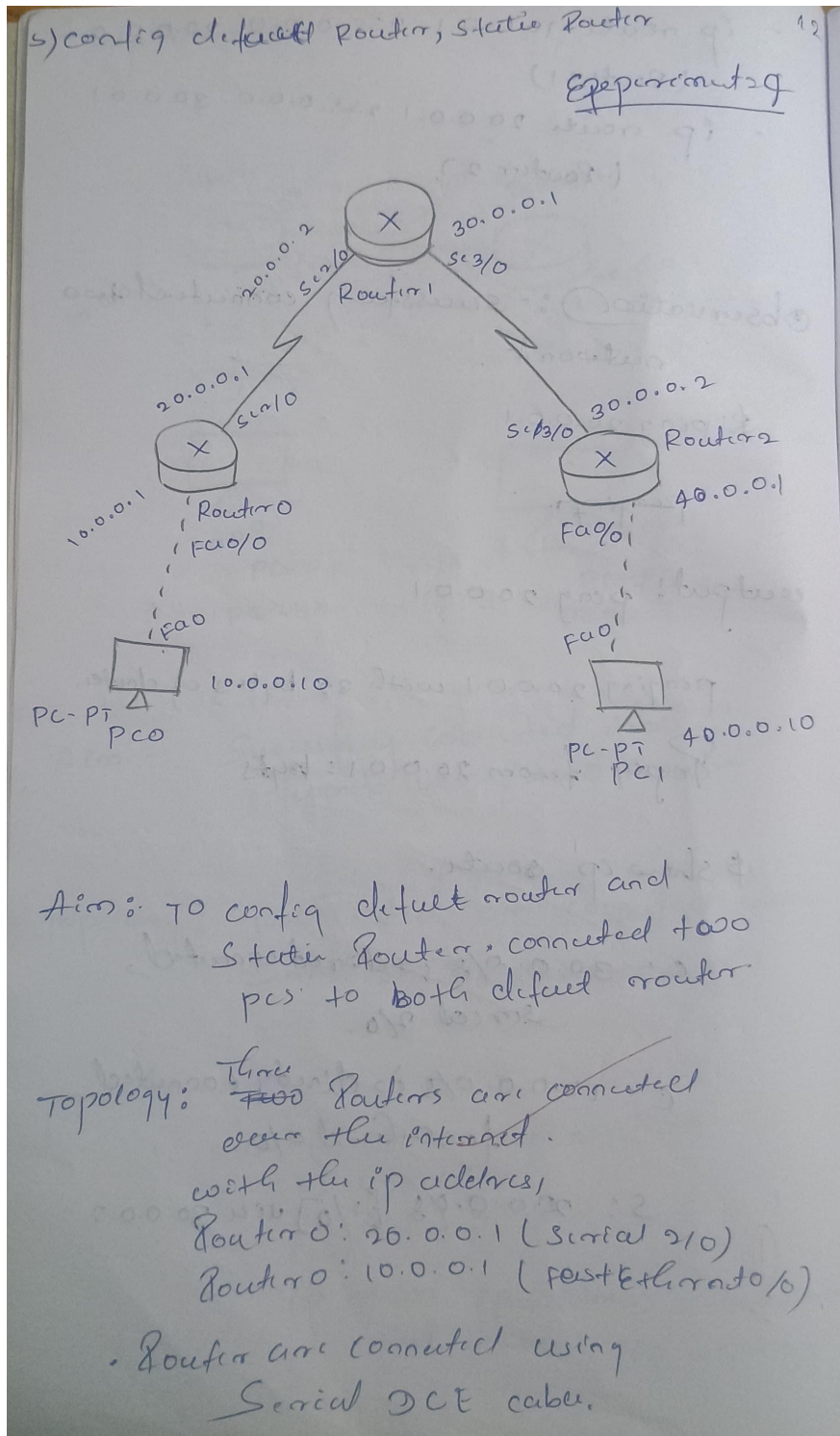


23/10/2024

# Week-4(Experiment 3b)

Observation Book:



procedure:

→ select three Routers and set the ip address,

Router0: 20.0.0.1 (Serial 2/0)

Router0: 10.0.0.1 (Fast Ethernet 0/0),

Router1: 20.0.0.2 (Serial 2/0)

Router1: 30.0.0.1 (Serial 3/0)

Router2: 30.0.0.2 (Serial 3/0)

Router2: 40.0.0.1 (Fast Ethernet 0/0),

→ select PCs and ~~set~~ config the ip address,

PC0: 10.0.0.10 (ip address)

: 255.0.0.0 (subnet mask)

10.0.0.1 (gateway),

PC1: 40.0.0.40 (ip address)

255.0.0.0 (subnet mask)

40.0.0.1 (gateway),

→ Router0 and Router2 are connected to  
~~two~~ PCs PC0 and PC1,

\* click on PC0 and set the ip  
address and set gateway address,  
as Router0 ip address,

∴ 10.0.0.1

\* click on PC1 and set the gateway

40.0.0.1 (ip address of Router2).

-> for Router0 set the static route  
0.0.0.0/0 via 20.0.0.2

-> Set the Router1 and set the  
static route of both router  
ip address

\* Router1 to Router0  
10.0.0.0 via 20.0.0.1

\* Router1 to Router2  
40.0.0.0 via 30.0.0.2

-> clone on Router2 and set the  
static route from Router2 to  
Router1

0.0.0.0 via 30.0.0.1

Observation :

\* To configure default router and  
static router's successfully connected  
using Serial DCE cable.

\* packets are send successfully  
from source to destination.



output :

PC0: \$ ping 40.0.0.10

ping 40.0.0.10 with 32 bytes of data

Reply from 40.0.0.10: bytes=32  
+time=2ms TTL=125

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

Reply from 40.0.0.10 bytes=32  
+time=18ms TTL=125

Reply from 40.0.0.10 bytes=32

+time=2ms TTL=125

packets: sent 4: , received = 4,

loss = 0 (0% loss).

Router0:

\$ show ip route.

C 10.0.0/8 is directly connected FastEthernet  
0/0

C 20.0.0/8 is directly & directly connected

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

Router 1: ~~ip~~ 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

Router 2:

show ip route

~~C: 30.0.0.0/8~~

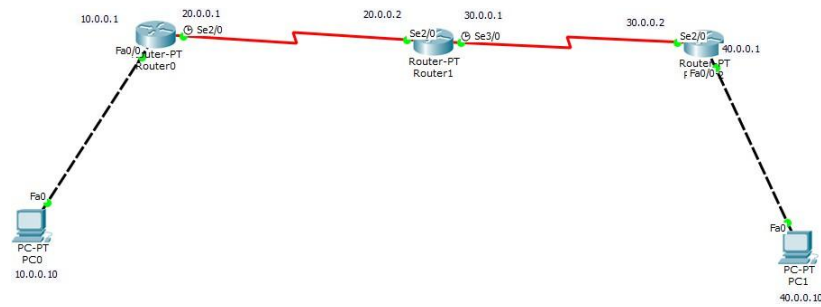
~~C: 30.0.0.0/8 is directly connected,  
Serial 3/0~~

~~C: 40.0.0.0/8 is directly connected,  
FastEthernet 0/0~~

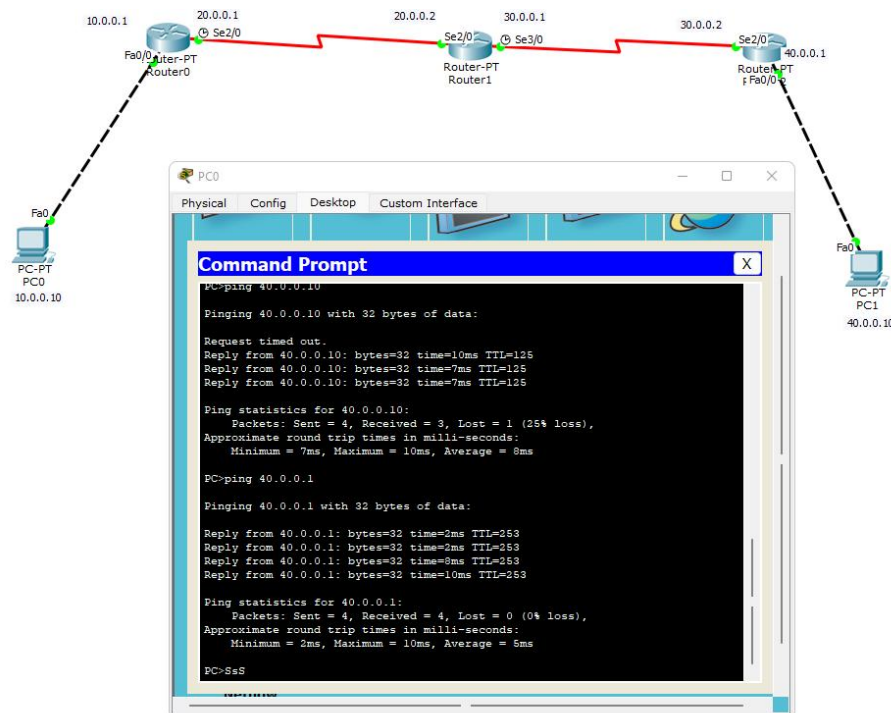
~~S: 0.0.0.0/0 [1/0] via 30.0.0.1~~

A ✓

## Topology:



## Output:



```

Router0
Physical Config CLI
IOS Command Line Interface

Router#enable
Router#show ip route
Codes: C - connected, S - static, I - IGMP, 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 20.0.0.2 to network 0.0.0.0

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is directly connected, Serial2/0
S*   0.0.0.0/0 [1/0] via 20.0.0.2
Router#
  
```

```

Router1
Physical Config CLI
IOS Command Line Interface

*LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 10.0.0.0 255.0.0.0 20.0.0.1
Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.2
Router(config)#show ip route

% Invalid input detected at '^' marker.

Router(config)#exit
Router#
#SYS-5-CONFIG_I: Configured from console by console

Router#show ip route
Codes: C - connected, S - static, I - IGMP, 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#
  
```