LAB-6

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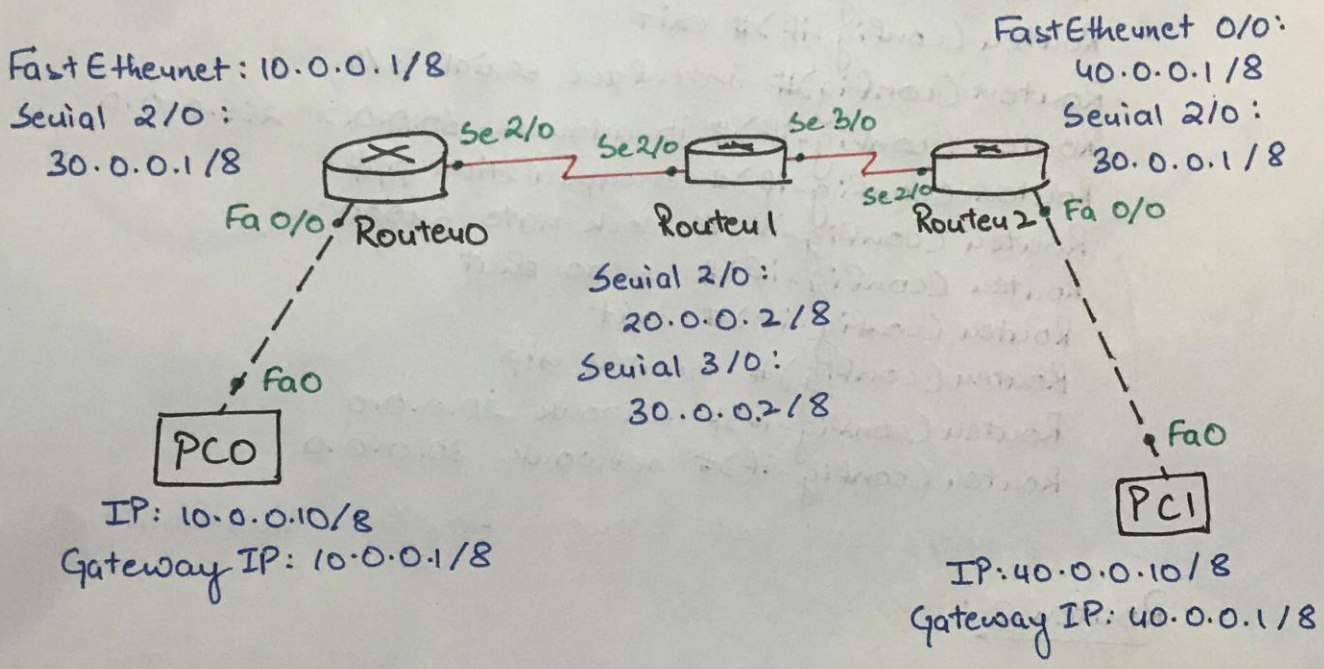
ppp → Point to Point Protocal.
↳ Datalink layer protocal.

rip → routing information protocol
Version - 1



Router 0 :

```
Router(config)# interface serial 2/0
Router(config-if)# ip address 20.0.0.1 255.0.0.0
Router(config-if)# encapsulation ppp
Router(config-if)# clock rate 64000
Router(config-if)# no shut
Router(config-if)# exit
Router(config)# ~~router~~ router rip
Router(config-if)# network 10.0.0.0
Router(config-if)# network 20.0.0.0
```

→ clock rate needs to be set only one of the two routers.

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Router 1:

→ No clock rate required as Router 0 already had clock rate set.

```
Router(config)# interface serial 2/0
Router(config-if)# ip address 20.0.0.2 255.0.0.0
Router(config-if)# encapsulation ppp
Router(config-if)# noshut.
Router(config-if)# exit
Router(config)# interface serial 3/0
Router(config-if)# ip address 30.0.0.2 255.0.0.0
Router(config-if)# encapsulation ppp
Router(config-if)# clock rate 64000
Router(config-if)# no shut
Router(config-if)# exit
Router(config)# router rip
Router(config-if)# network 20.0.0.0
Router(config-if)# network 30.0.0.0
```

→ clock rate set between Router1 and Router2.

Router 2:

```
Router(config)# interface serial 2/0
Router(config-if)# ip address 30.0.0.1 255.0.0.0
Router(config-if)# encapsulation ppp
Router(config-if)# no shut
Router(config-if)# exit
Router(config)# router rip
Router(config-router)# network 30.0.0.0
Router(config-router)# network 40.0.0.0
```

→ No clock set needed.

Classless interdomain routing requires version 2 of rip.

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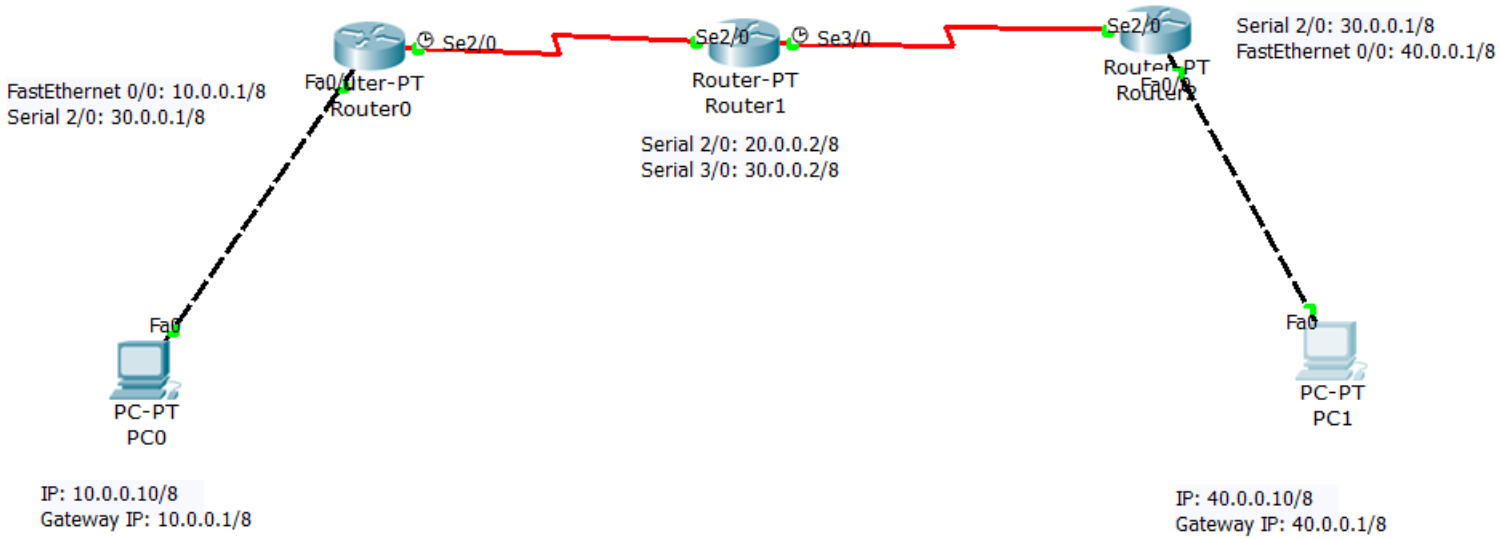
ppp -> Point to Point Protocol
datatlink layer protocol
RIP: routing information protocol

classless interdomain routing requires version 2 of rip



Router 0

Router(config)#config t
Router(config)#interface serial 2/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#no shut

Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 10.0.0.0
Router(config-router)#network 20.0.0.0

Router#show ip route

C 10.0.0.0/8 is directly connected, FastEthernet0/0
20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 20.0.0.0/8 is directly connected, Serial2/0
C 20.0.0.2/32 is directly connected, Serial2/0
R 30.0.0.0/8 [120/1] via 20.0.0.2, 00:00:18, Serial2/0
R 40.0.0.0/8 [120/2] via 20.0.0.2, 00:00:18, Serial2/0

Router 1

Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface serial 2/0
Router(config-if)#ip address 20.0.0.2 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#interface serial 3/0
Router(config-if)#ip address 30.0.0.2 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#clock rate 64000
Router(config-if)#no shut

Router(config)#router rip
Router(config-router)#network 20.0.0.0
Router(config-router)#network 30.0.0.0
Router(config-router)#exit

Router#show ip route

R 10.0.0.0/8 [120/1] via 20.0.0.1, 00:00:13, Serial2/0
20.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 20.0.0.0/8 is directly connected, Serial2/0
C 20.0.0.1/32 is directly connected, Serial2/0
30.0.0.0/8 is variably subnetted, 2 subnets, 2

Router 2

Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface serial 2/0
Router(config-if)#ip address 30.0.0.1 255.0.0.0
Router(config-if)#encapsulation ppp
Router(config-if)#no shut
Router(config-if)#exit
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip address 40.0.0.1 255.0.0.0
Router(config-if)#no shut

Router(config)#router rip
Router(config-router)#network 30.0.0.0
Router(config-router)#network 40.0.0.0
Router(config-router)#exit

Router#show ip route

R 10.0.0.0/8 [120/2] via 30.0.0.2, 00:00:21, Serial2/0

R 20.0.0.0/8 [120/1] via 30.0.0.2, 00:00:21, Serial2/0
30.0.0.0/8 is variably subnetted, 2 subnets, 2 masks
C 30.0.0.0/8 is directly connected, Serial2/0
C 30.0.0.2/32 is directly connected, Serial2/0
C 40.0.0.0/8 is directly connected, FastEthernet0/0