LAB ASSIGNMENT-7



NAME: M Gyanada Chowdary

REG.NO: 21bce7727

COURSE: Computer Networks

SLOT: L21+22

TASK:

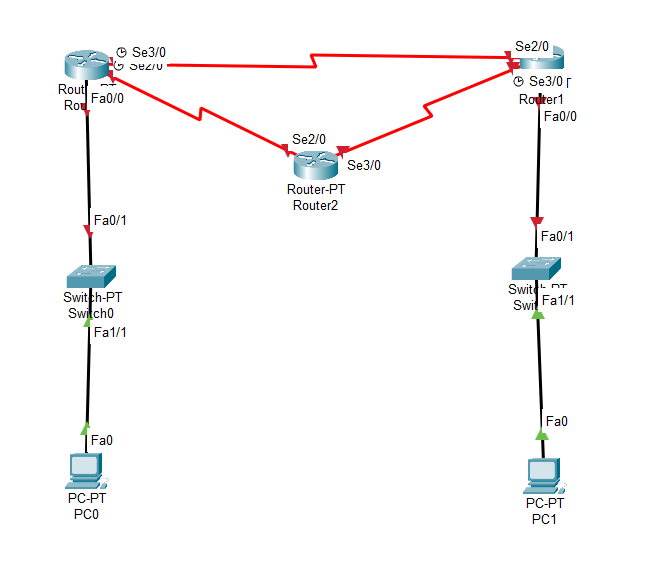
configure a network and implement OSPF and RIP protocols in that network

and check for simulation after and before protocol implementation.

**OSPF (Open Shortest path First):**

Step 1:

Take 2 PCs, 2 Switches and 3 Routers and arrange them as Shown below:



Step 2:

Give IP Adresses for the PCs

Network A – 192.168.1.0

Network B \_ 165.155.1.0

PC0

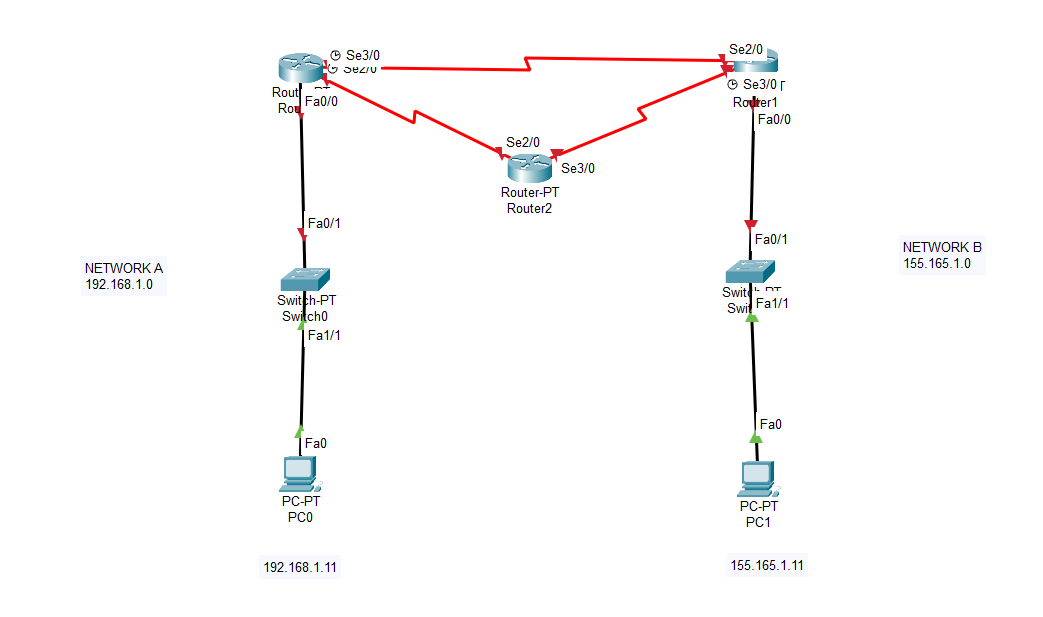
IPV4 = 192.168.1.11

Default Gateway = 192.168.1.1

PC1

IPV4 = 155.165.1.11

Default Gateway = 155.165.1.1



Step 2:

Configure the routers corresponding to the switches

Router0

Fa0/0 🡪

IPV4 = 192.168.1.1

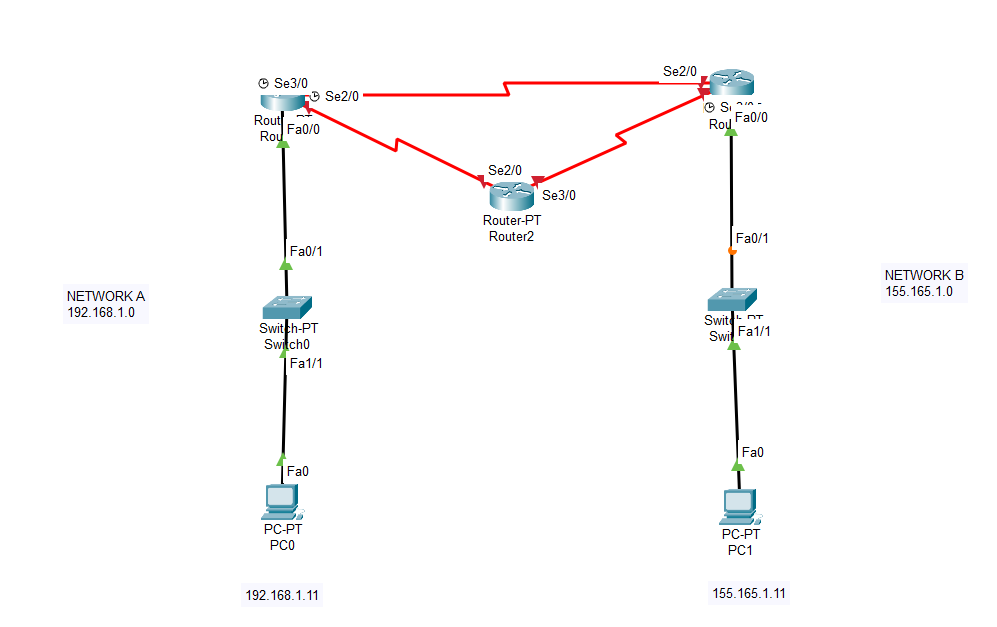
Port status on

For Router1

Fa0/0🡪

IPV4 = 155.165.1.1

Port status on



Step 3:

Configure the routers of the network.

With a clock

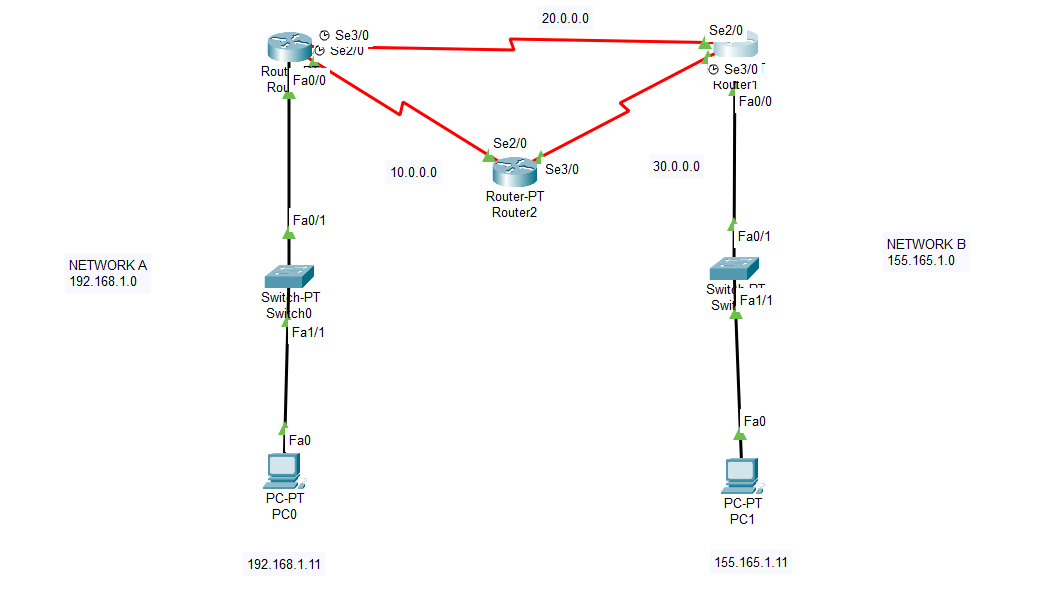
Clock rate – 64000

Without a clock

Clock rate \_ not set

For every router with their particular interfaces

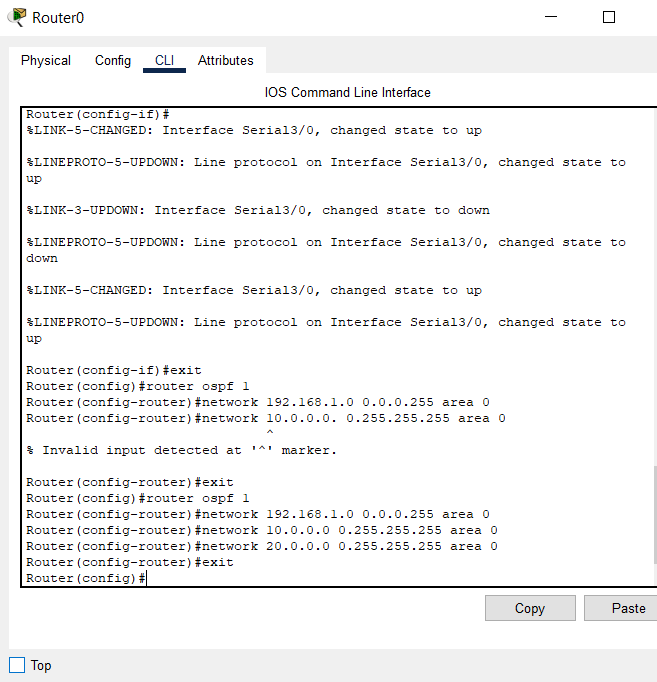
Configure them and switch the port status on.



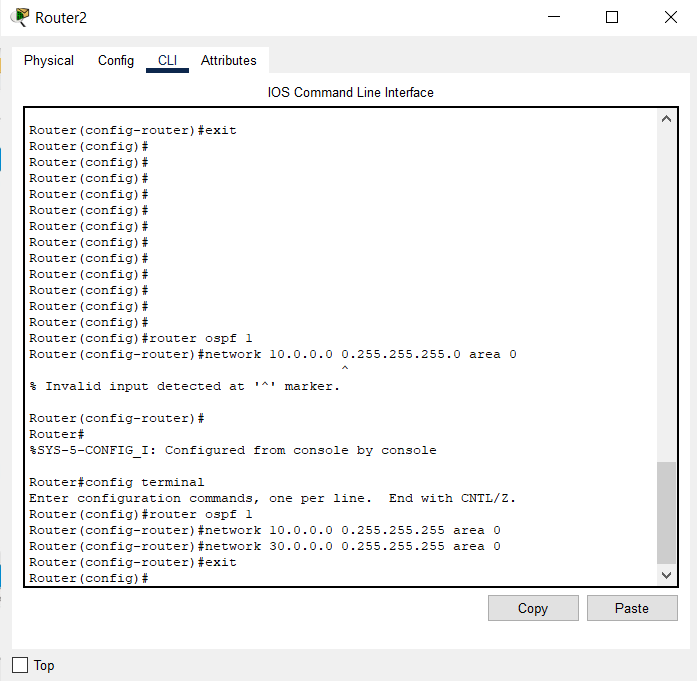
Step 4:

Implementing OSPF

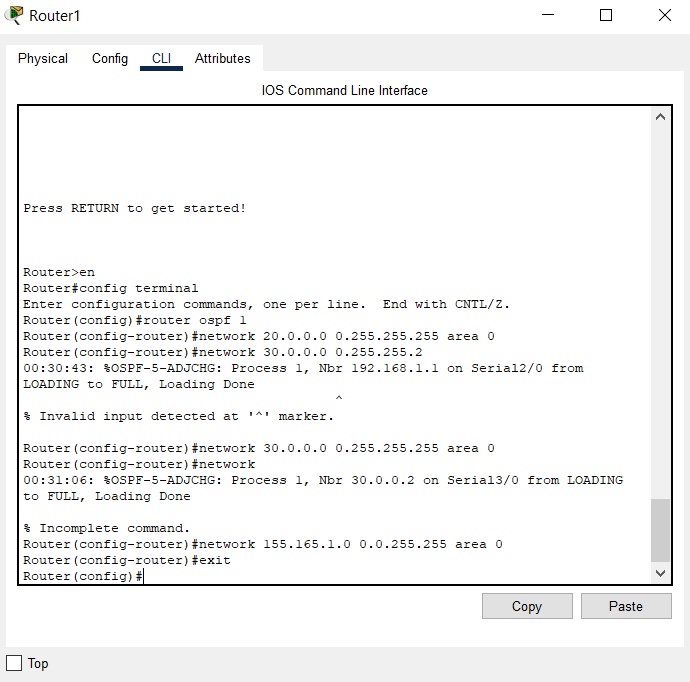
For Router 0:



For Router 2:



For Router 1:

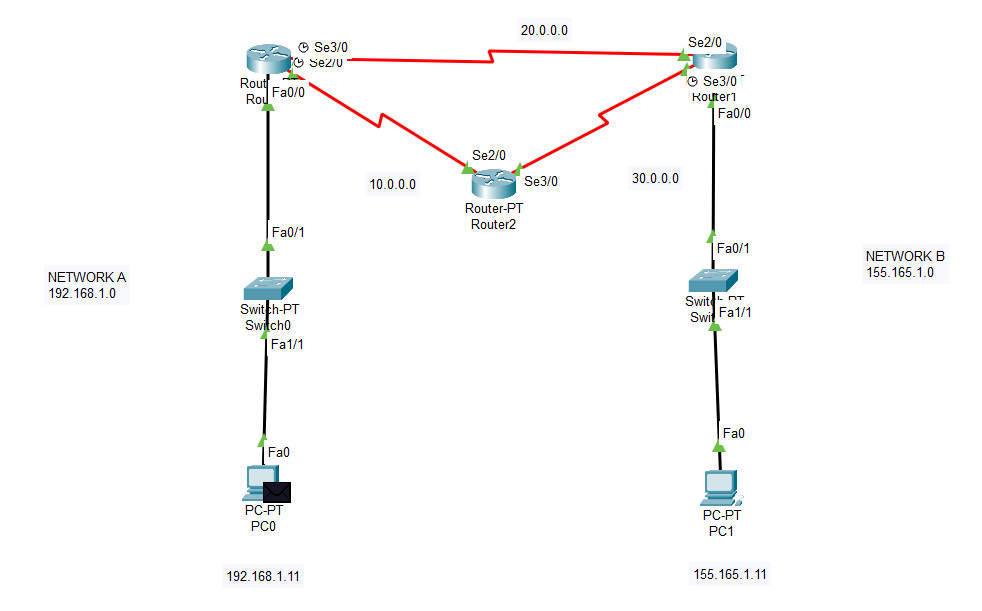


Step 5:

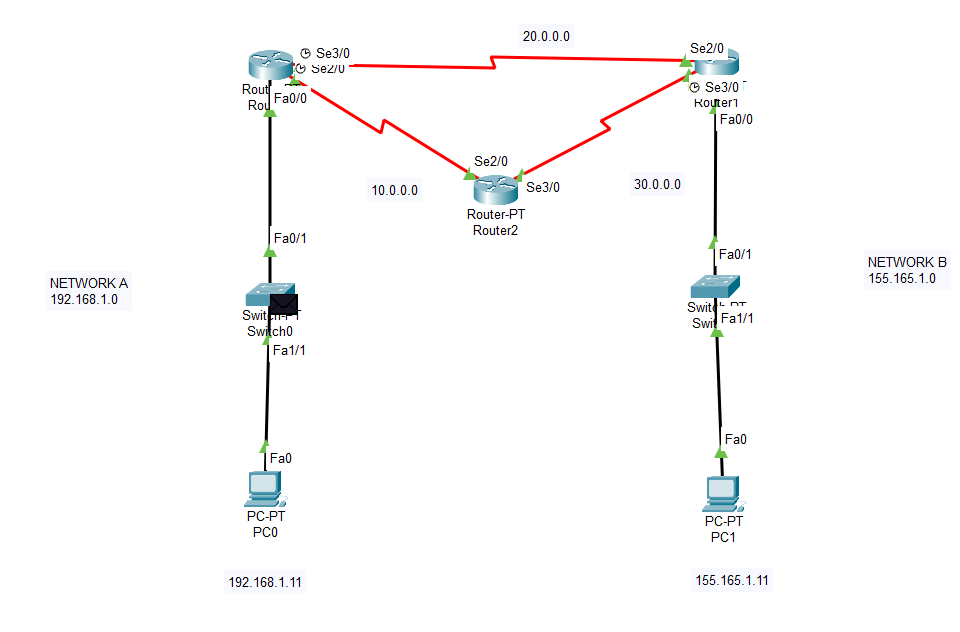
Take a simple PDU and check if the OSPF protocol is working

Steps

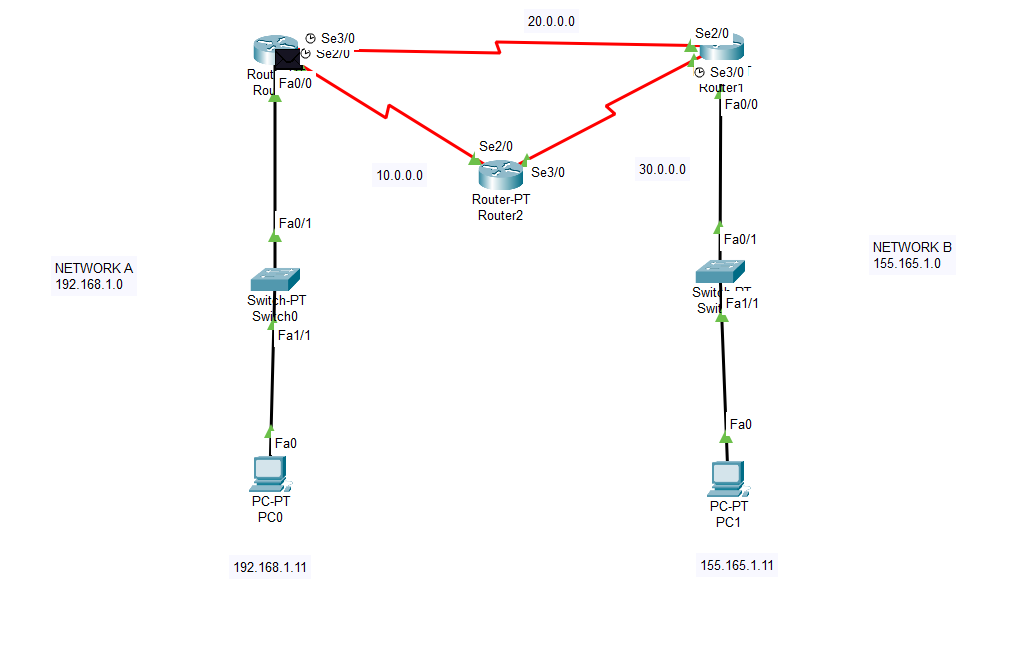
1)



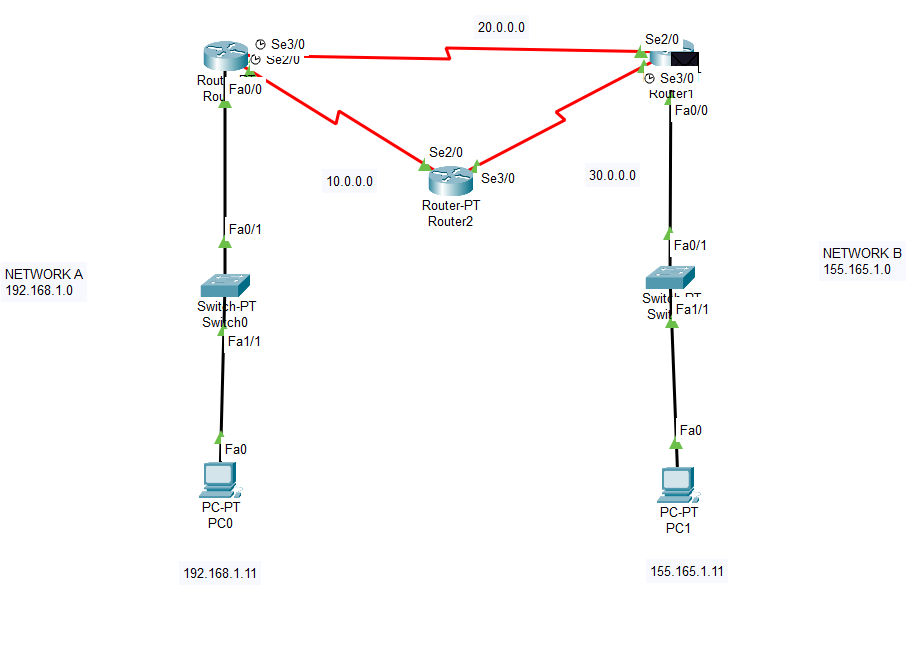
2)



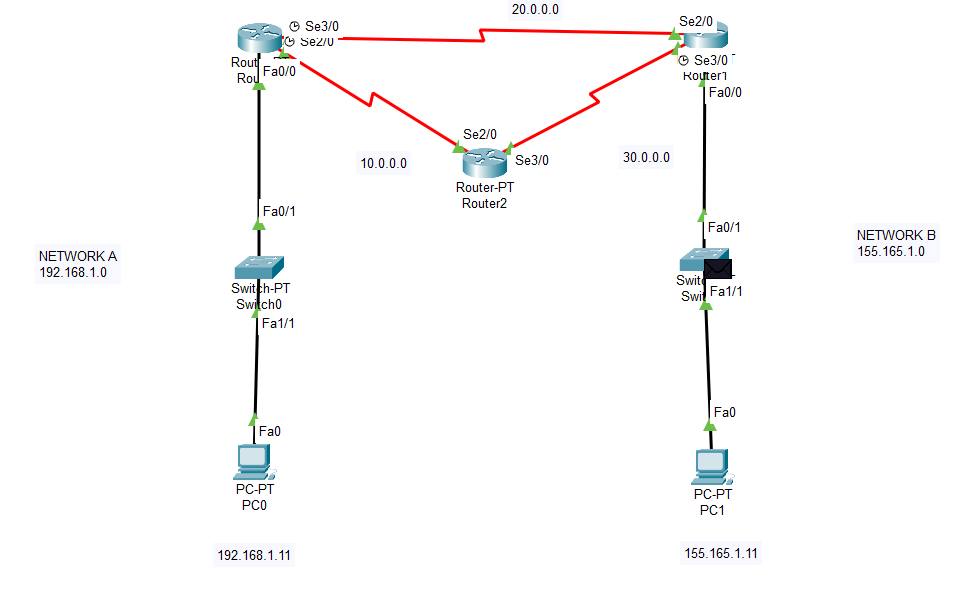
3)



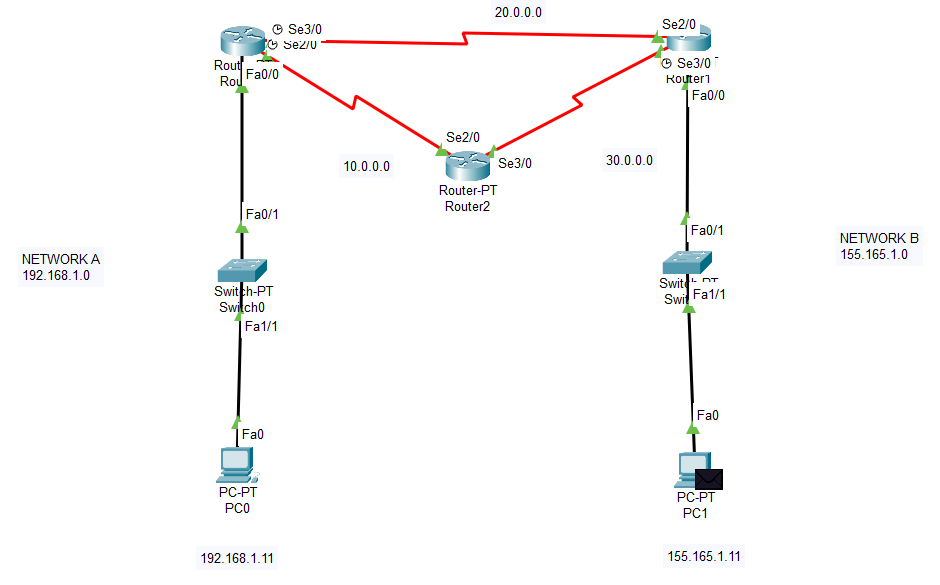
4)



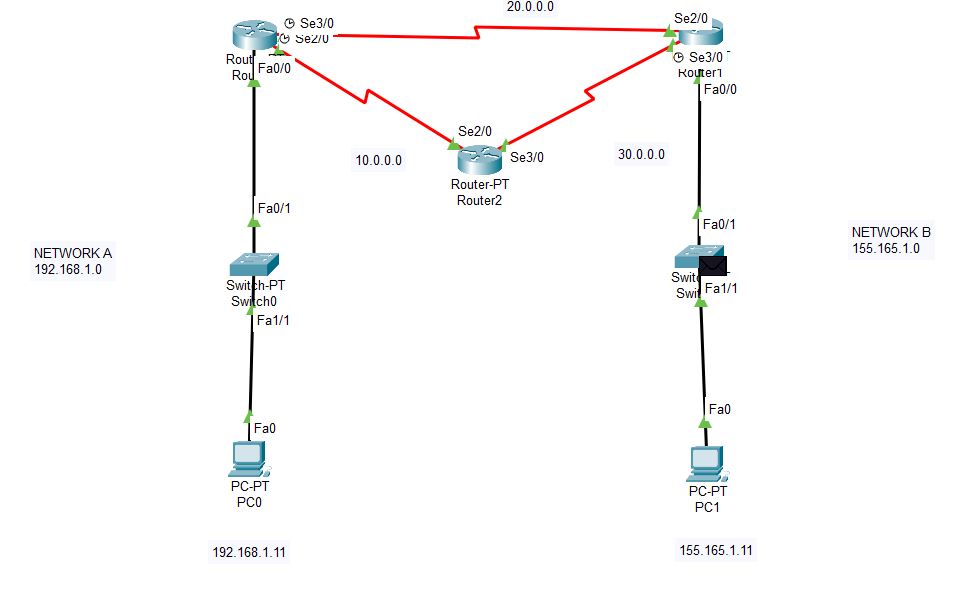
5)



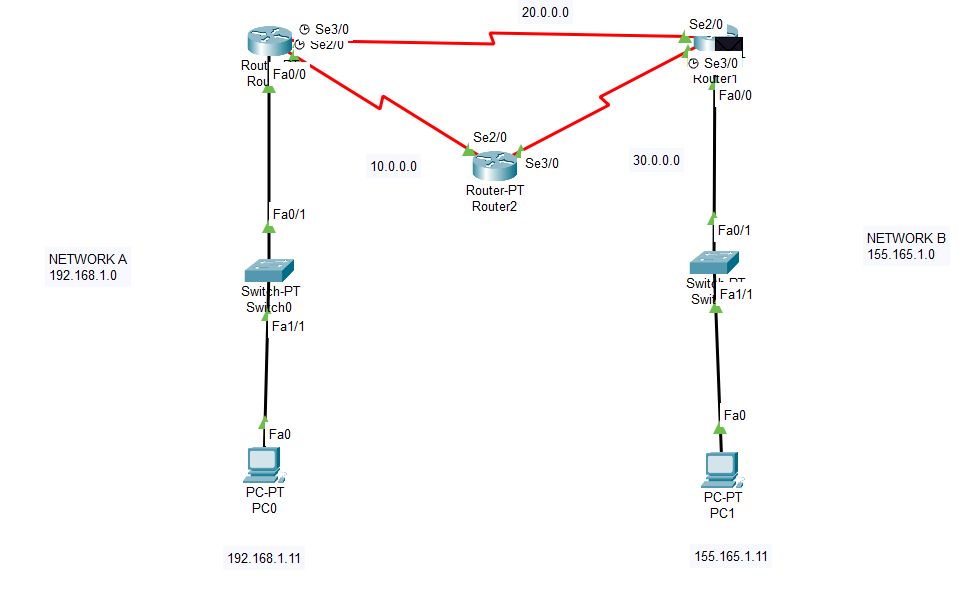
6)



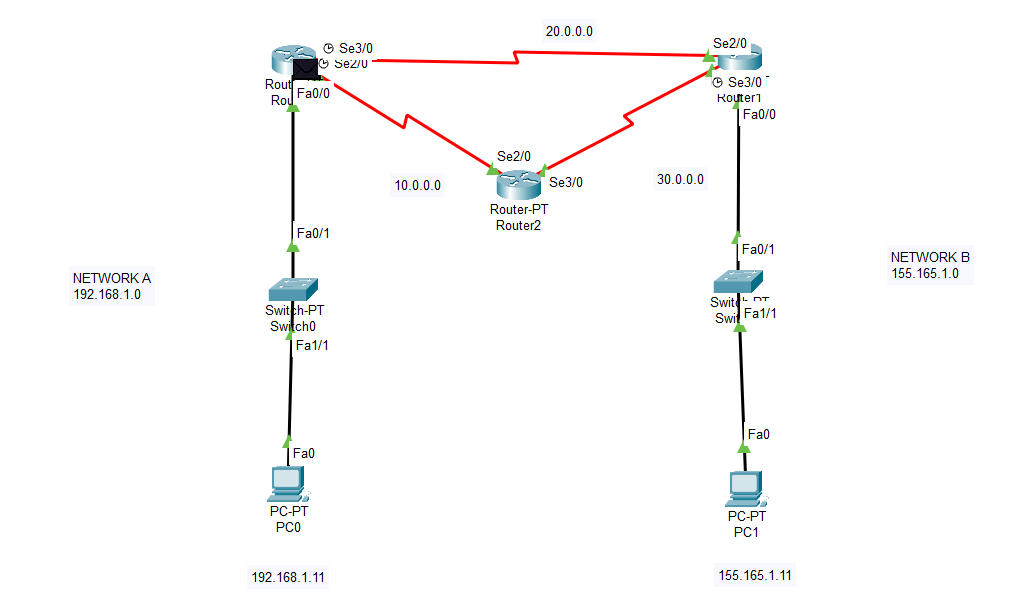
7)



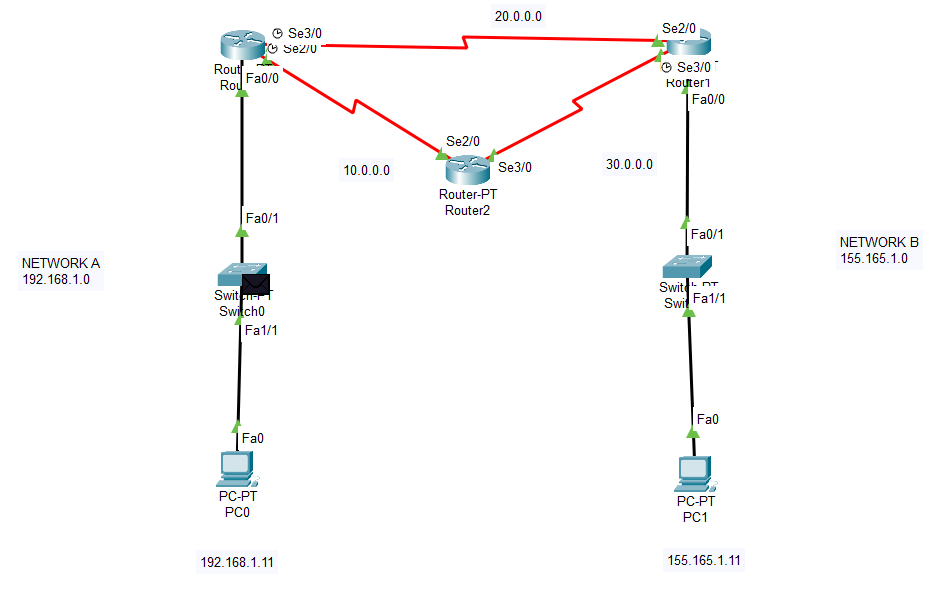
8)



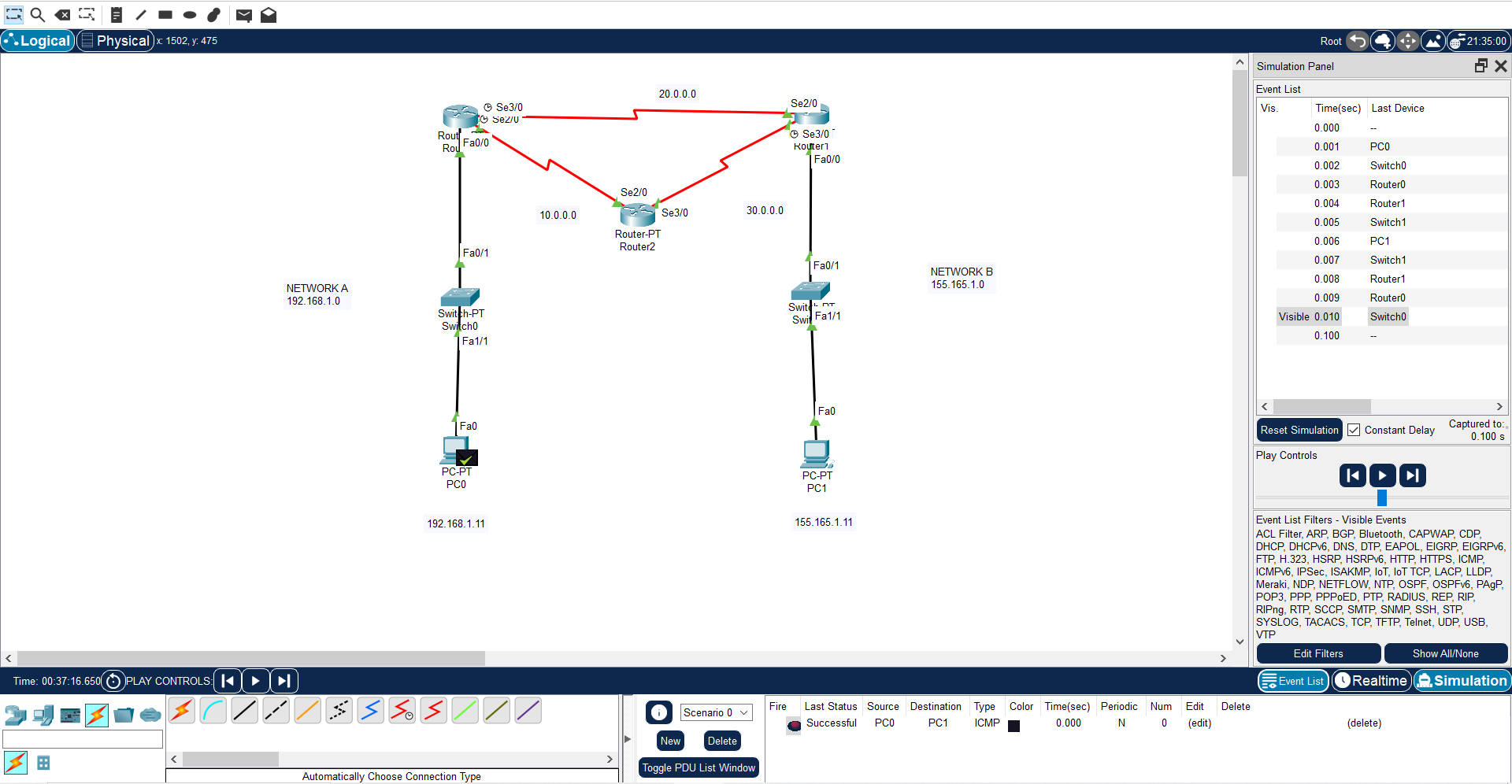
9)



10)



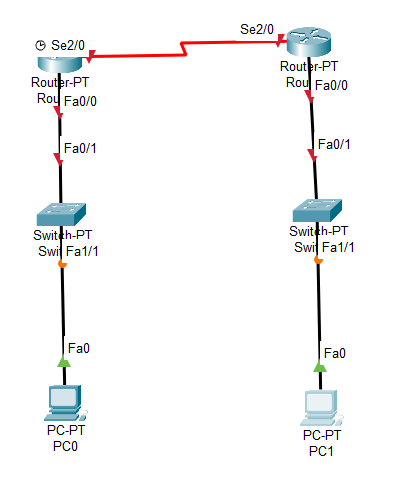
Final Output:



**RIP (Routing Information Protocol):**

Step 1:

Create a network shown as below



Step 2:

Give IP addresses to the PCs

For PC 0

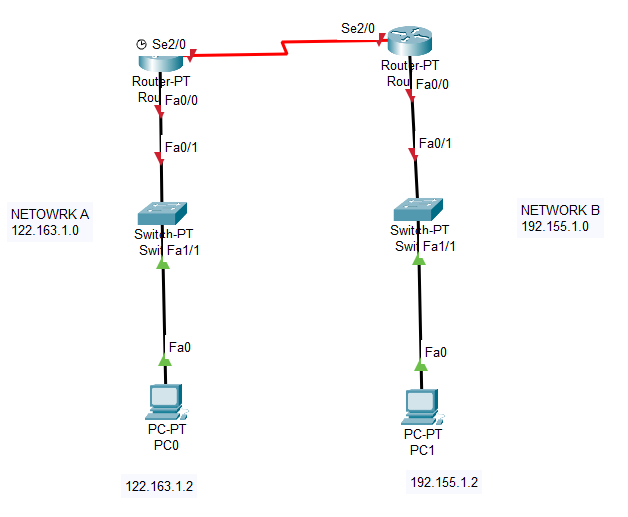
IPV4 = 122.163.1.2

Default gateway = 122.163.1.1

For PC 1

IPV4 = 192.155.1.2

Default gateway = 192.155.1.1



Step 3:

Configure the routers

For Router 0:

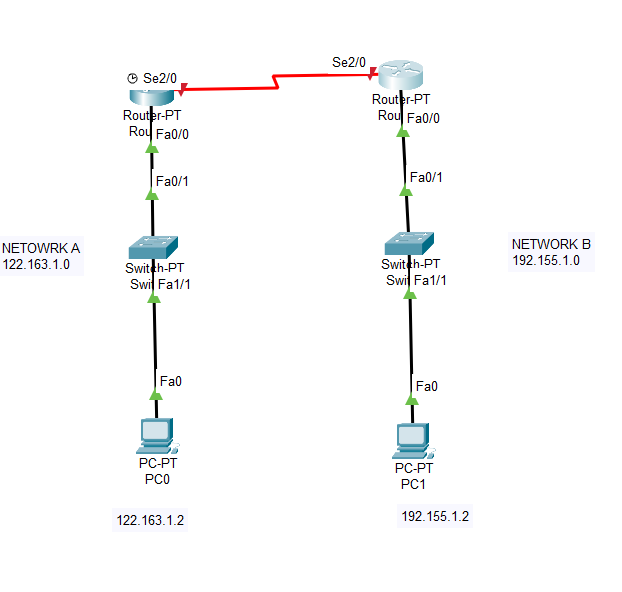
IPV4 = 122.163.1.1

Port status on

For Router 1:

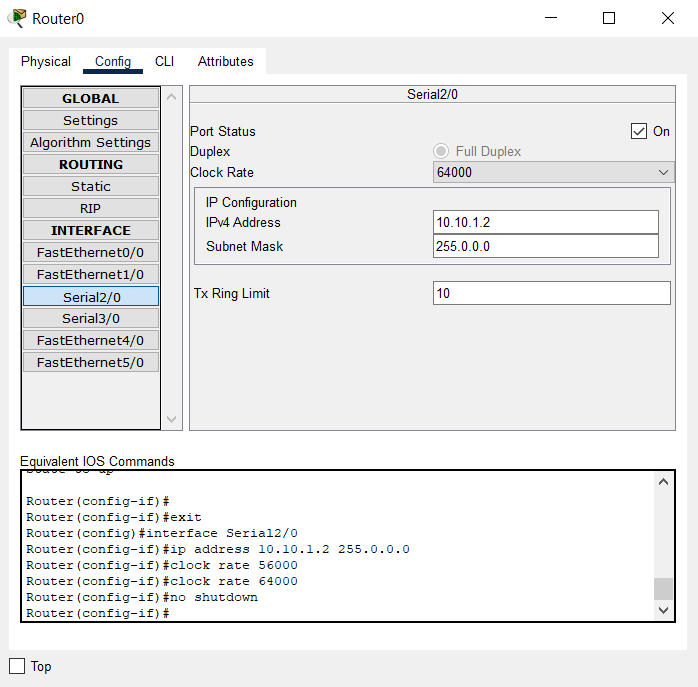
IPV4 = 192.155.1.1

Port status on

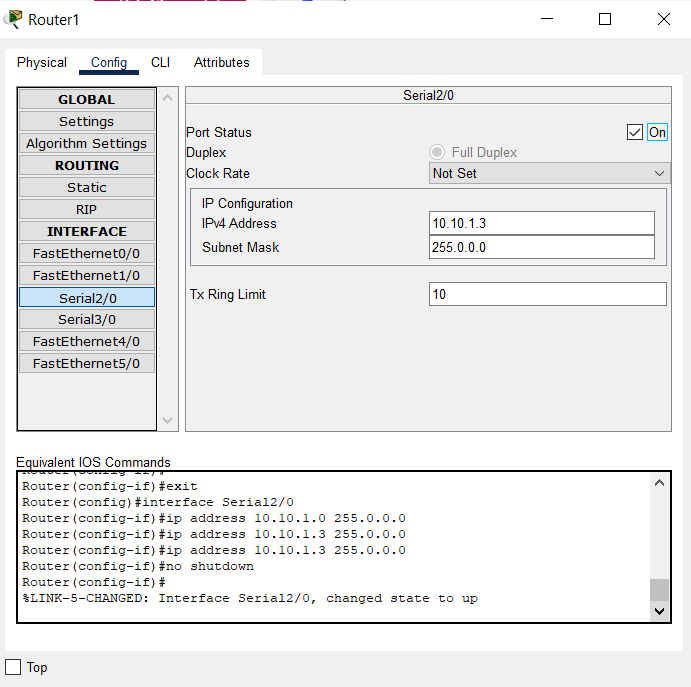


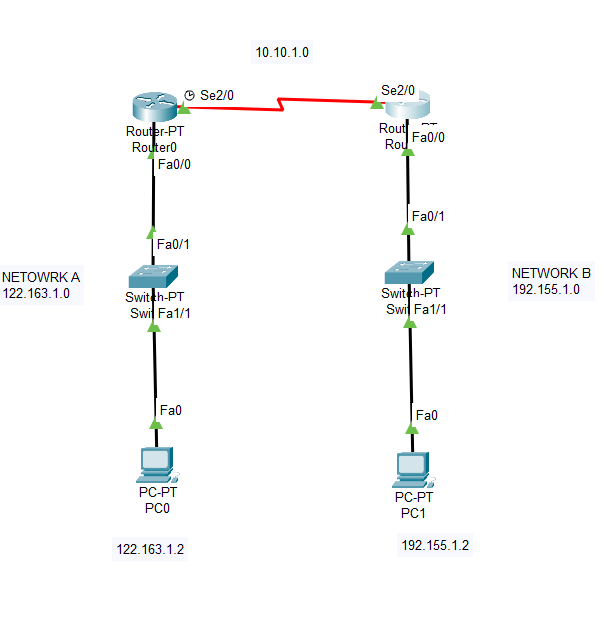
Step 4: Configure routers for network

For Router 0:



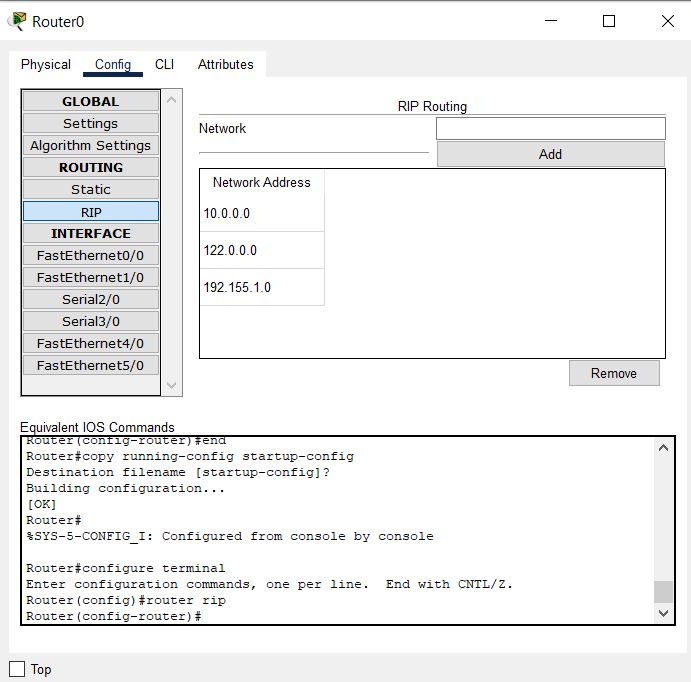
For Router 1:



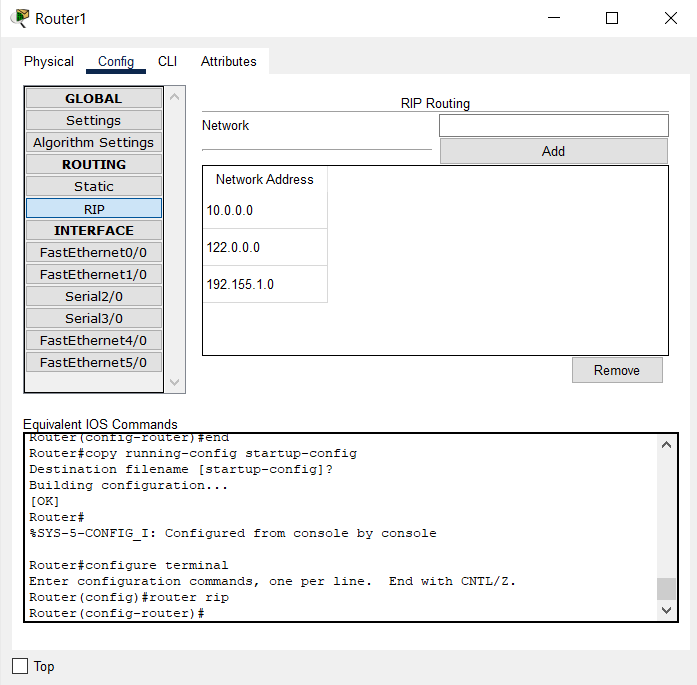


Step 5: Implementing RIP

For Router 0:



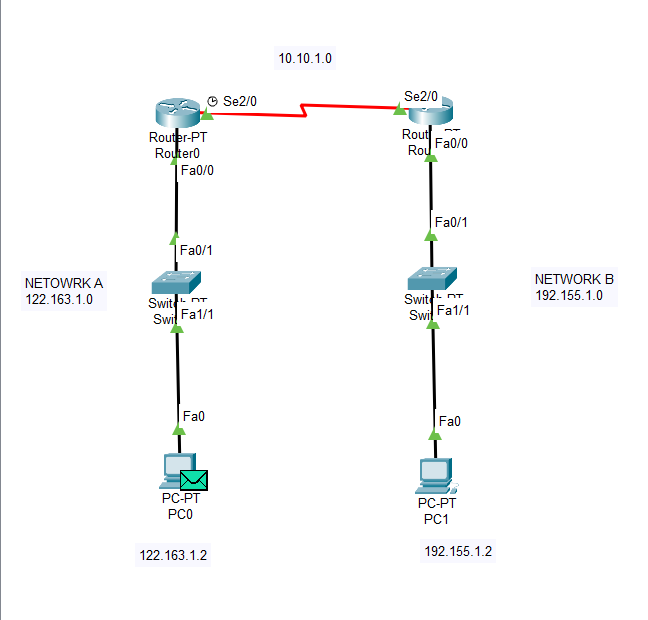
For Router 1:



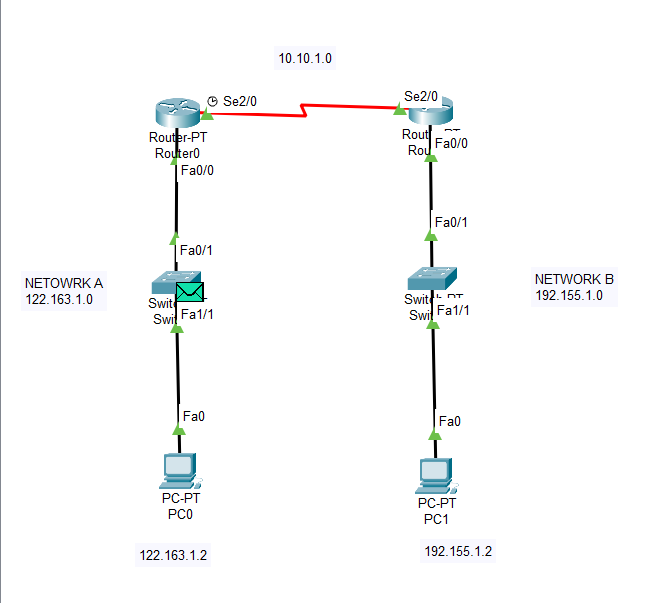
Step 6:Take a simple PDU and check if the network is working

Steps

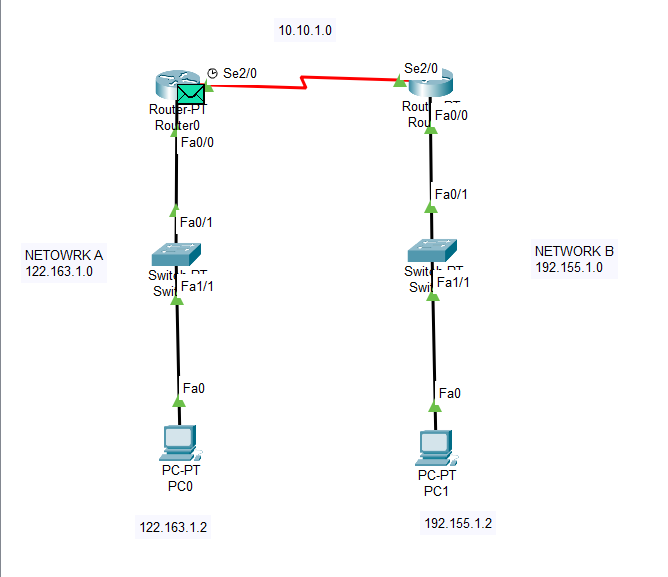
1)



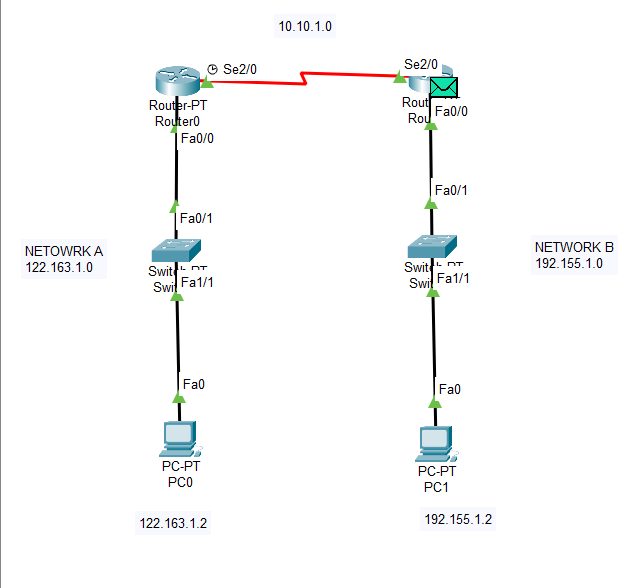
2)



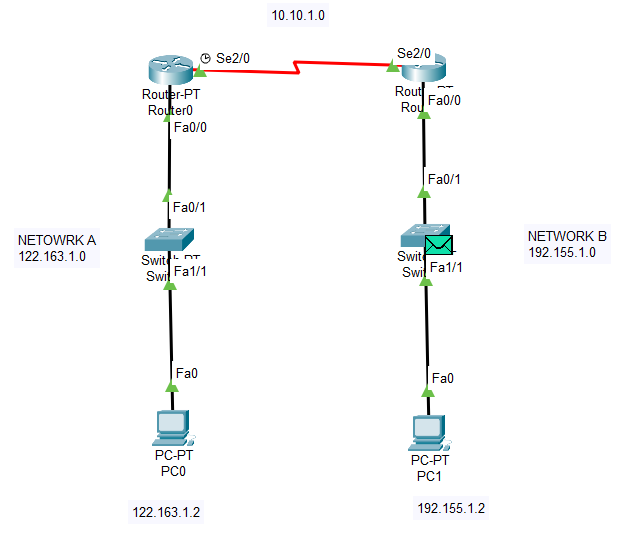
3)



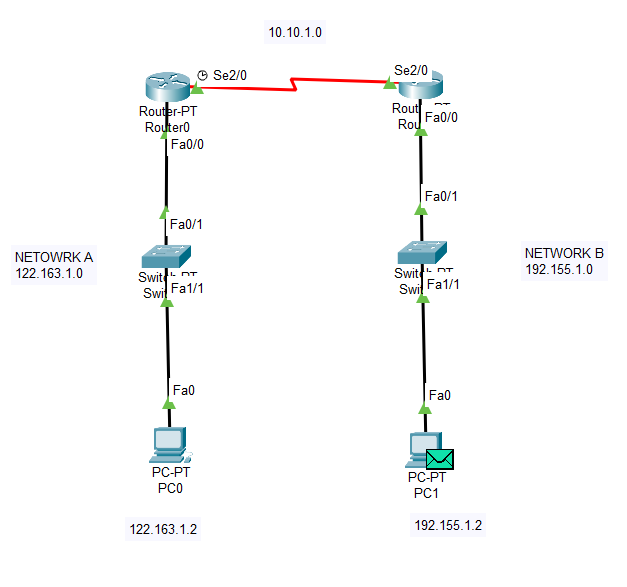
4)



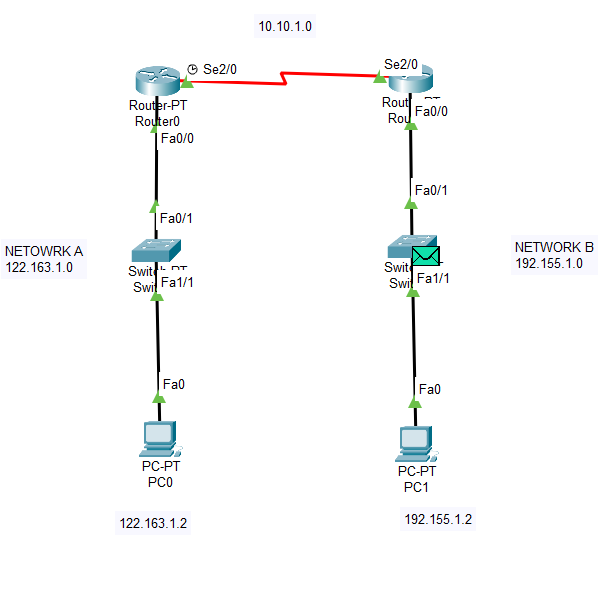
5)



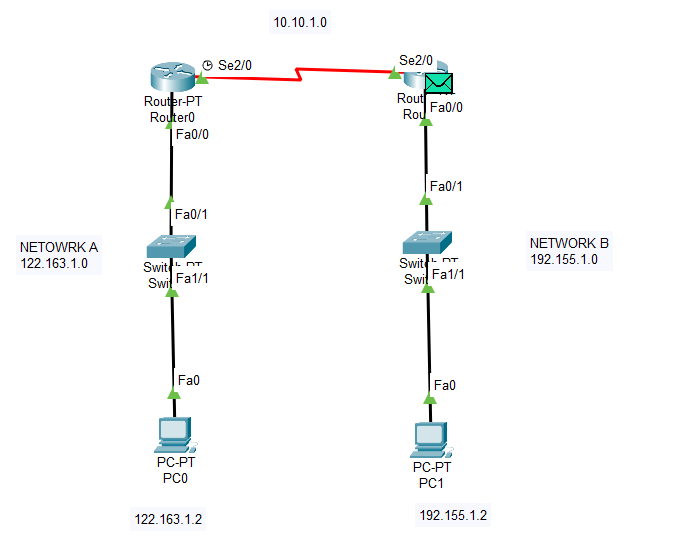
6)



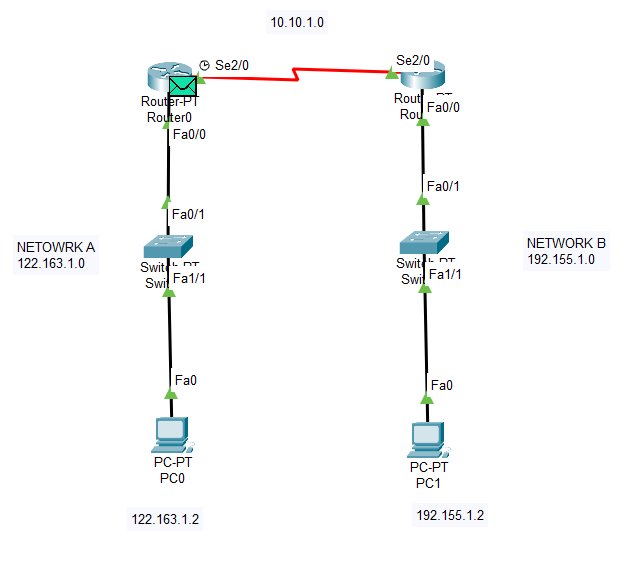
7)



8)



9)



**Final Output:**

