**Experiment No:** 4

**Experiment Name:** To Configure Enhanced Interior Gateway Routing Protocol (EIGRP)

**Apparatus:**

1. Cisco Packet Tracer
2. Computer
3. Switch
4. Router
5. Copper Straight through cable

**Procedure:**

Step 1: Open the Cisco Packet Tracer.

Step 2: From [End Devices] take six Computers and Label as PC0, PC1, PC2, PC3, PC4, PC5, PC6. From [Network Devices] select [Switches] and take three switches namely 2960 IOS15 then again select [Routers] and take three routers namely 2811.

Step 3: From [Connections] select Automatically Choose Connection Type then connect these devices as figure shown below.

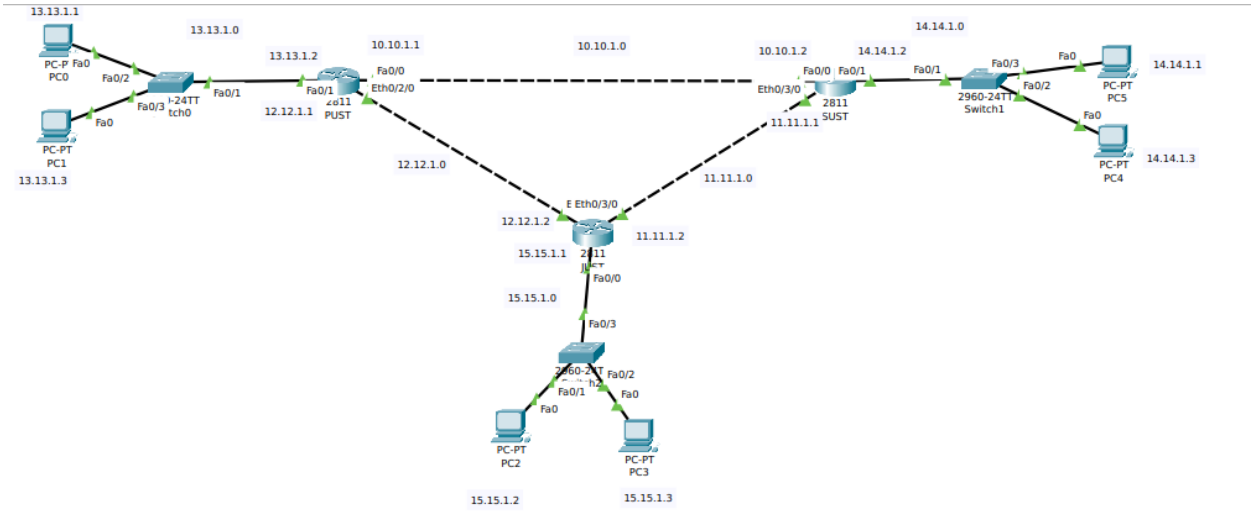


**Figure: 7 Setup Layout**

Step 4: IP Address Configuration for PC0, PC1, PC2, PC3, PC4, PC5. PC0, PC1 Computers are under PUST router. PC2, PC3 Computers are under JUST router. PC4, PC5 are under SUST router.

Click PC0>Desktop>IP Configuration

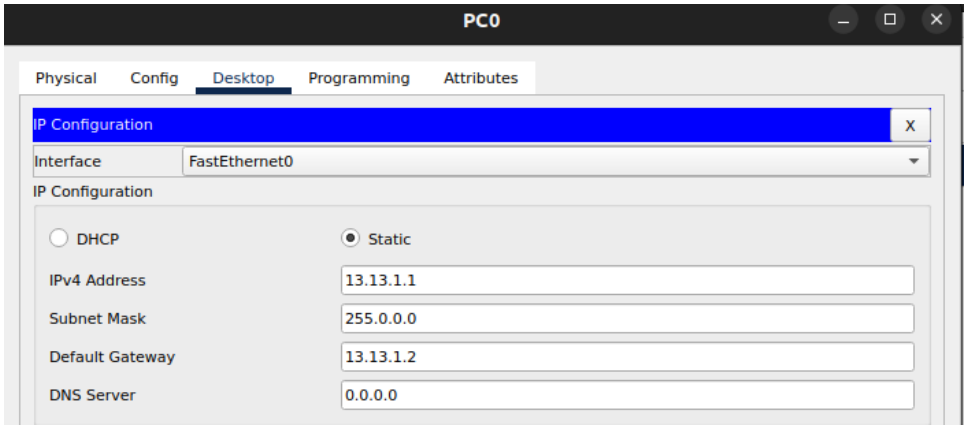


**Figure 8: PC IP Address and Gateway Setup**

Step 5: To set up routers, Perform the following command

**For PUST:**

Router>enable
Router #configure terminal
Router(config) #hostname PUST
PUST (config) #interface FastEthernet0/0
PUST (config-if) #ip address 10.10.1.1 255.0.0.0
PUST (config-if) #duplex auto
PUST (config-if) #speed auto
PUST (config-if) #exit
PUST (config) #interface FastEthernet0/1
PUST (config-if) #ip address 13.13.1.2 255.0.0.0
PUST (config-if) #duplex auto
PUST (config-if) #speed auto
PUST (config-if) #exit
PUST (config) #interface Ethernet0/2/0
PUST (config-if) #ip address 12.12.1.1 255.0.0.0
PUST (config-if) #duplex auto
PUST (config-if) #speed auto
PUST (config-if) #exit
PUST (config) #router eigrp 20
PUST (config-router)#network 13.0.0.0

PUST (config-router)#network 10.0.0.0
PUST (config-router)#network 12.0.0.0
PUST (config-router)#exit
PUST (config)#exit
PUST #
%SYS-5-CONFIG_I: Configured from console by console
wr
Building configuration...
[OK]

**For JUST:**

Router>enable
Router #configure terminal
Router(config) #hostname JUST
JUST(config)#interface FastEthernet0/0
JUST(config-if)#ip address 15.15.1.1 255.0.0.0
JUST(config-if)#duplex auto
JUST(config-if)#speed auto
JUST(config-if)#exit
JUST(config)#interface Ethernet0/2/0
JUST(config-if)#ip address 12.12.1.2 255.0.0.0
JUST(config-if)#duplex auto
JUST(config-if)#speed auto
JUST(config-if)#exit
JUST(config)#interface Ethernet0/3/0
JUST(config-if)#ip address 11.11.1.2 255.0.0.0
JUST(config-if)#duplex auto
JUST(config-if)#speed auto
JUST(config-if)#exit
JUST(config)#router eigrp 20
JUST(config-router)#network 12.0.0.0
JUST(config-router)#network 11.0.0.0
JUST(config-router)# network 15.0.0.0
JUST(config-router)#exit
JUST(config)#exit
JUST#

%SYS-5-CONFIG_I: Configured from console by console
wr
Building configuration...
[OK]

**For SUST:**

Router>enable
Router #configure terminal
Router(config) #hostname SUST
SUST(config)#interface FastEthernet0/0
SUST(config-if)#ip address 10.10.1.2 255.0.0.0
SUST(config-if)#duplex auto
SUST(config-if)# speed auto
SUST(config-if)#exit
SUST(config)#interface FastEthernet0/1
SUST(config-if)#ip address 14.14.1.2 255.0.0.0
SUST(config-if)#duplex auto
SUST(config-if)#speed auto
SUST(config-if)#exit
SUST(config)#interface Ethernet0/3/0
SUST(config-if)#ip address 11.11.1.1 255.0.0.0
SUST(config-if)#duplex auto
SUST(config-if)#speed auto
SUST(config-if)#exit
SUST(config)#router eigrp 20
SUST(config-router)#network 10.0.0.0
SUST(config-router)#network 14.0.0.0
SUST(config-router)#network 11.0.0.0
SUST(config-router)#exit
SUST(config)#exit
SUST#
%SYS-5-CONFIG_I: Configured from console by console
wr
Building configuration...[OK]

Step 6: Open Command Prompt of PC0 and send Ping to PC5 and PC2.