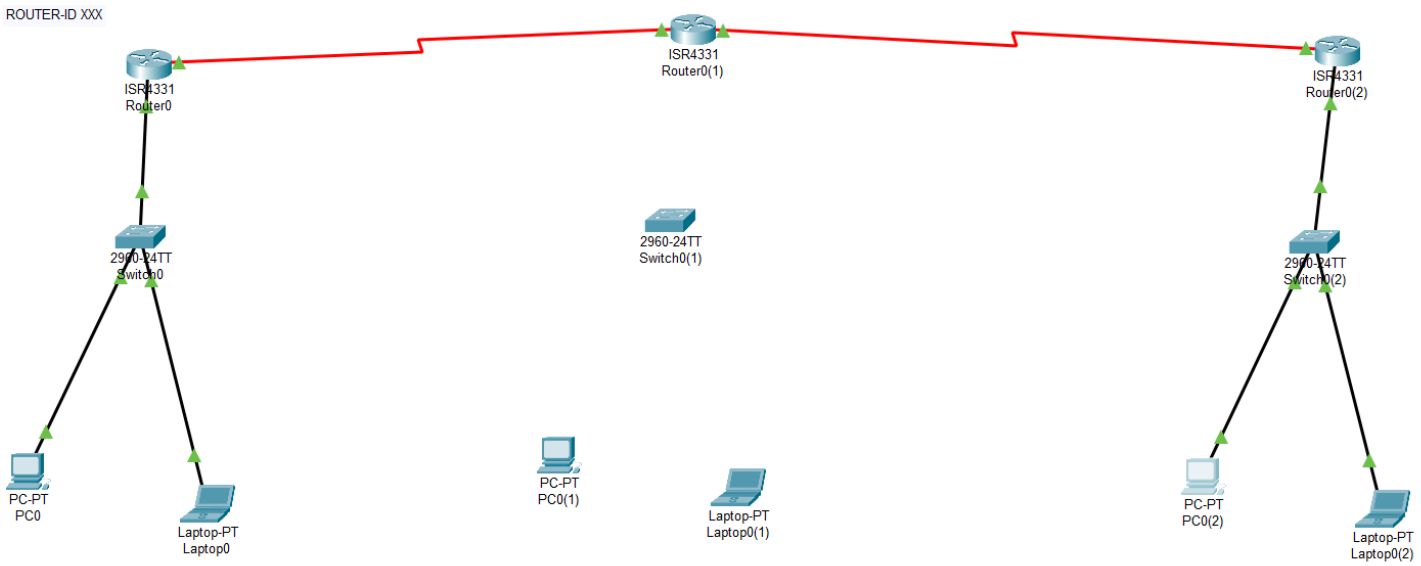
Marwadi University Marwadi Chandarana Group	**Marwadi University** **Faculty of Engineering and Technology** **Department of Information and Communication Technology**	
Subject: Computer Networks (01CT0503)	**Aim:** BGP	
Experiment No: 8	**Date:**	**Enrolment No: 92301733041**

Aim:

Step 1: make physical connection of switch, and pc using straight copper cable and serial cable



Step2: assign the ip add to pc and port of router

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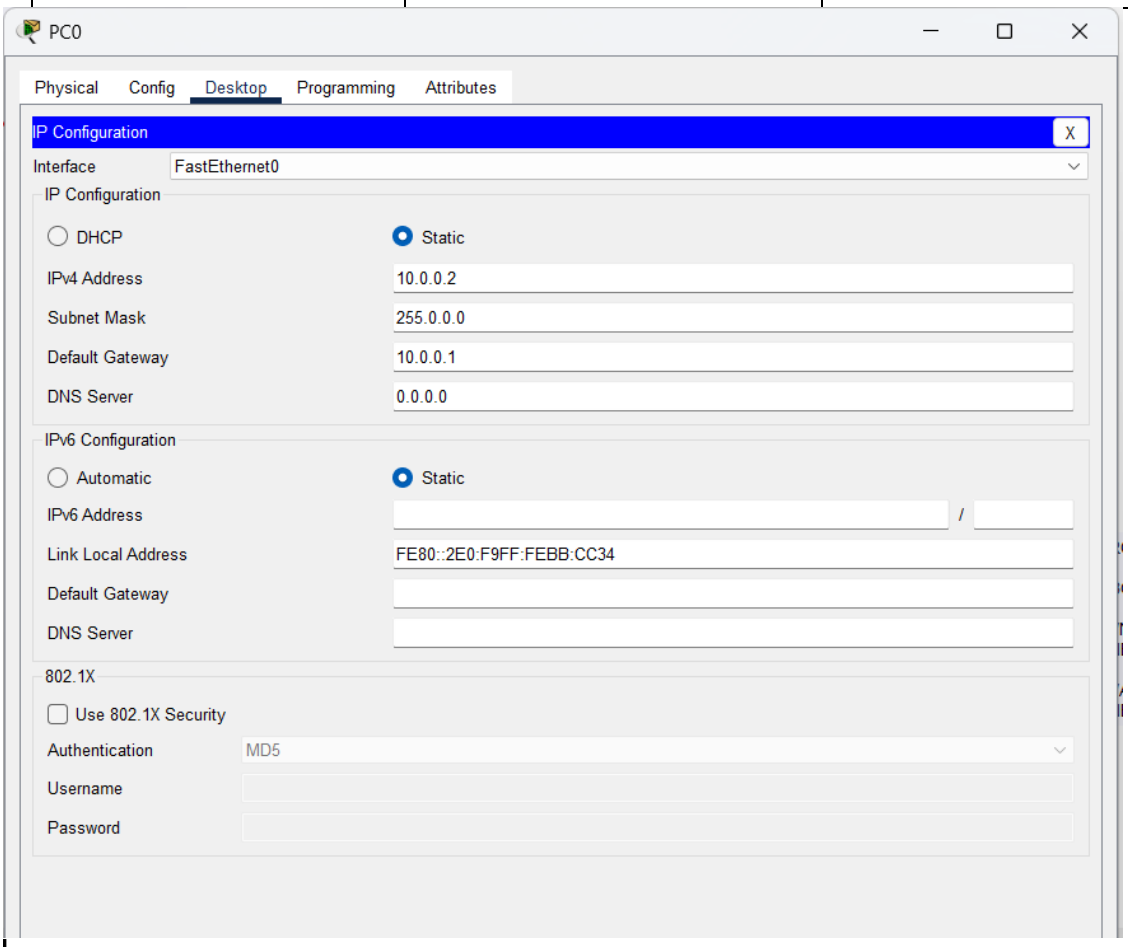


```
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int g0/0/0
Router(config-if)#ip add 10.0.0.1 255.0.0.0
Router(config-if)#no
Router(config-if)#no s
Router(config-if)#no s
% Ambiguous command: "no s"
Router(config-if)#no sh
Router(config-if)#no shutdown
```

Step 3 : perform BGP protocol ,first assign Autonomous system number to router and then assign id number then then acknowledge the router of directly connected routers and networks using commands :

ROUTER BGP 20

BGP ROUTER-ID 2.2.2.2

//NEIGHBOURS
NEIGHBOUR (NEXT CONNECTED ROUTER'S IP-ADD) REMOTE-AS (NUM)

//ASSIGN THE NETWORK CONNECTED DIRECTLY TO ITSELF USING COMMAND:
NETWORK (N-ID)

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```
Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router bgp 30
Router(config-router)#bgp router-id 3.3.3.3
Router(config-router)#neig
Router(config-router)#neighbor 25.0.0.2 remote-as 20
Router(config-router)#%BGP-5-ADJCHANGE: neighbor 25.0.0.2 Up

Router(config-router)#network 25.0.0.0 mask 255.0.0.0
Router(config-router)#network 30.0.0.0 mask 255.0.0.0
Router(config-router)#
```

Extra: if we want to change the AS num after once assigned , it will not directly change , use command “no router bgp x”.

Step 4 : check the connection

```
C:\>ping 15.0.0.2

Pinging 15.0.0.2 with 32 bytes of data:

Reply from 15.0.0.2: bytes=32 time=33ms TTL=254
Reply from 15.0.0.2: bytes=32 time=19ms TTL=254
Reply from 15.0.0.2: bytes=32 time=1ms TTL=254
Reply from 15.0.0.2: bytes=32 time=25ms TTL=254

Ping statistics for 15.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 33ms, Average = 19ms

C:\>
C:\>tracert 15.0.0.2

Tracing route to 15.0.0.2 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      10.0.0.1
  2    0 ms      0 ms      7 ms      15.0.0.2

Trace complete.

C:\>tracert 30.0.0.2

Tracing route to 30.0.0.2 over a maximum of 30 hops:

  1    0 ms      0 ms      0 ms      10.0.0.1
  2    18 ms     0 ms      17 ms     15.0.0.2
  3    2 ms      1 ms      11 ms     25.0.0.1
  4    1 ms      1 ms      9 ms      30.0.0.2

Trace complete.

C:\>
```

Conclusion: In this exp, I got to know about the another dynamic protocol which is BGP (Border Gateway Protocol), in this there are some new terms like autonomous num, id num , here we are doing the same, acknowledging the router about those router and networks which are connected directly to itself. And as mentioned command I am routing the touter using bgp protocol.