

## Practical No 9

**Aim:** Using Packet Tracer, create a wireless network of multiple PCs using appropriate access point

**Theory:**

A Wireless Access Point (WAP) is a networking device that allows connecting the devices with the wired network. A Wireless Access Point (WAP) is used to create the WLAN (Wireless Local Area Network), it is commonly used in large offices and buildings which have expanded businesses.

A wireless AP connects the wired networks to the wireless client. It eases access to the network for mobile users which increases productivity and reduces the infrastructure cost.

Advantages of Wireless Access Point (WAP):

- 1) More User Access
- 2) Broader Transmission Range
- 3) Flexible Networking

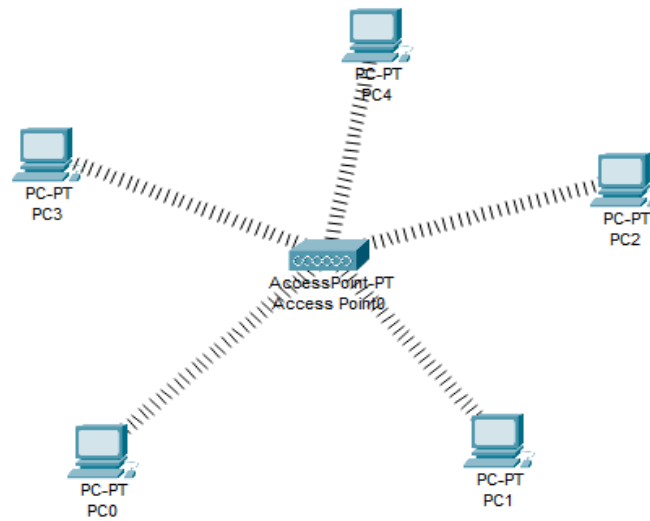
Disadvantages of Wireless Access Point (WAP):

- 1) High cost
- 2) Poor stability
- 3) Less Secure

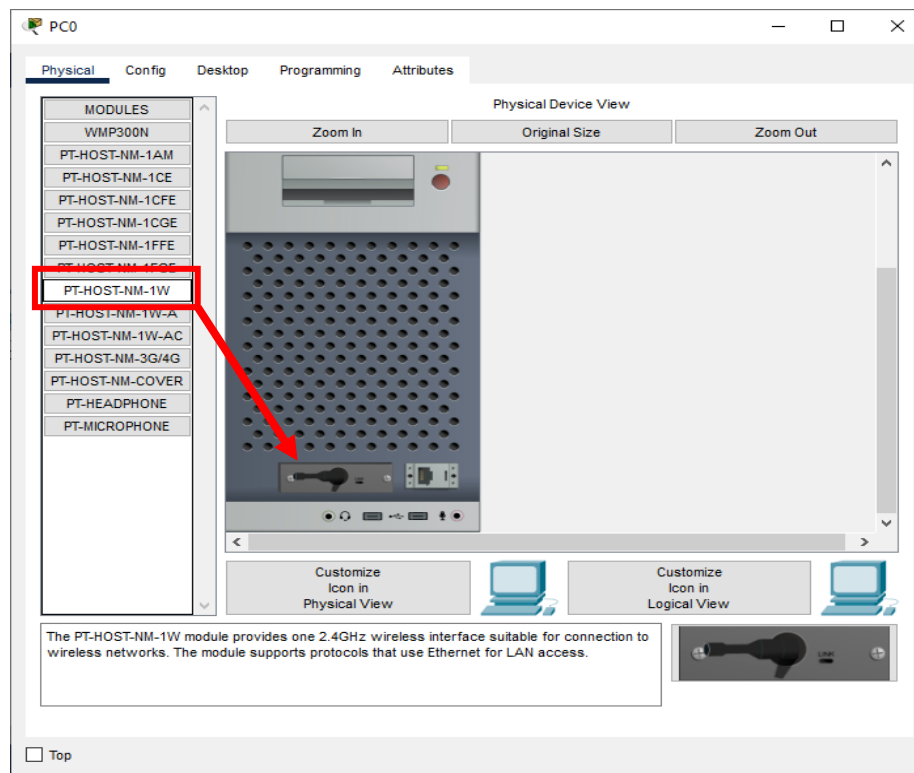
Application of Wireless Access Point:

- 1) It is a device that creates a WLAN (Wireless Local Area Network) in large enterprises.
- 2) It is used to extend the coverage area of the network so that it can't disconnect which allows more users to connect to the network easily.
- 3) An access point connects a switch, Ethernet cable, wired router, and Wi-fi to designate the particular area.
- 4) It is used to provide connectivity to the users in large offices or enterprises which allows users to roam easily anywhere in the office and be connected to a network.
- 5) LANs can also be provided in public places such as coffee shops, restaurants, airports, etc.

We use the following topology for the present case (5PCs and an Access Point)

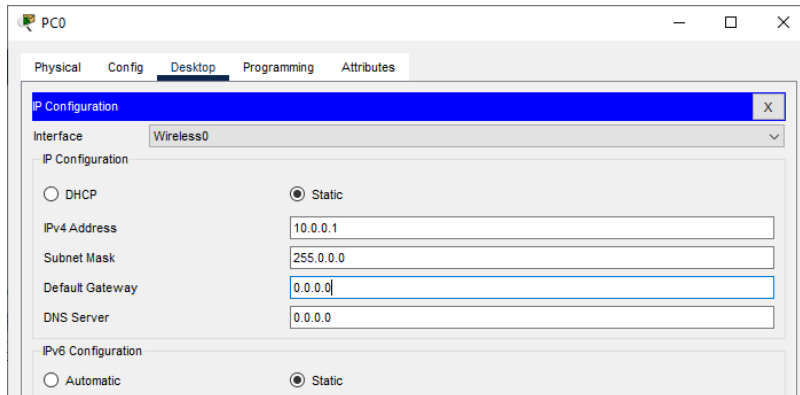


Add a Wireless interface to each PC as follows

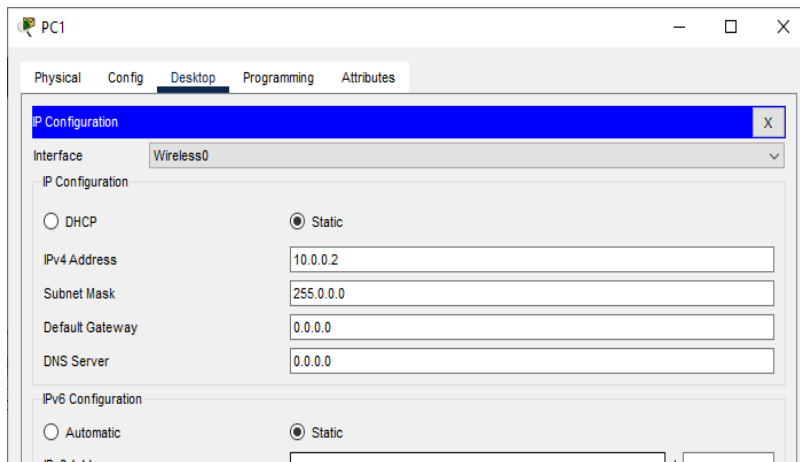


## Assigning IP Address to each PC (select Static)

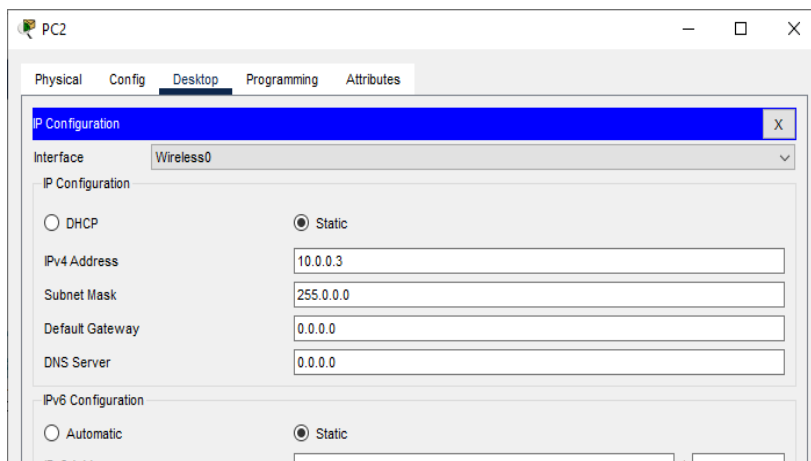
1) PC0 :



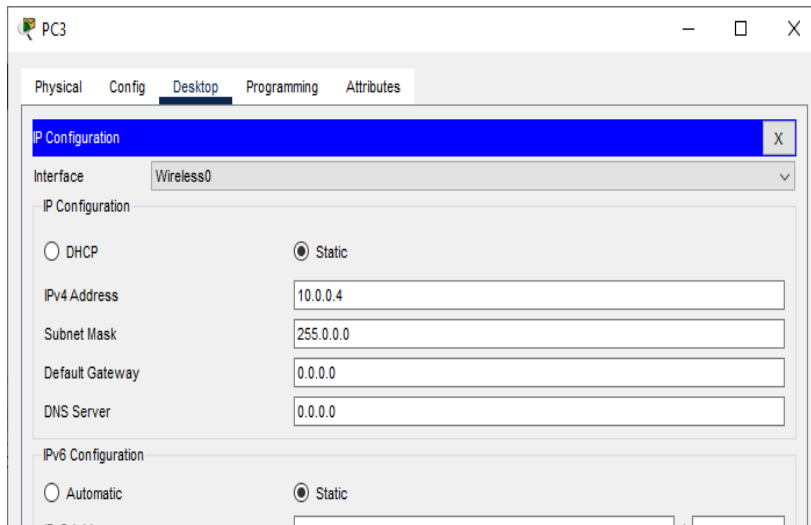
2) PC1 :



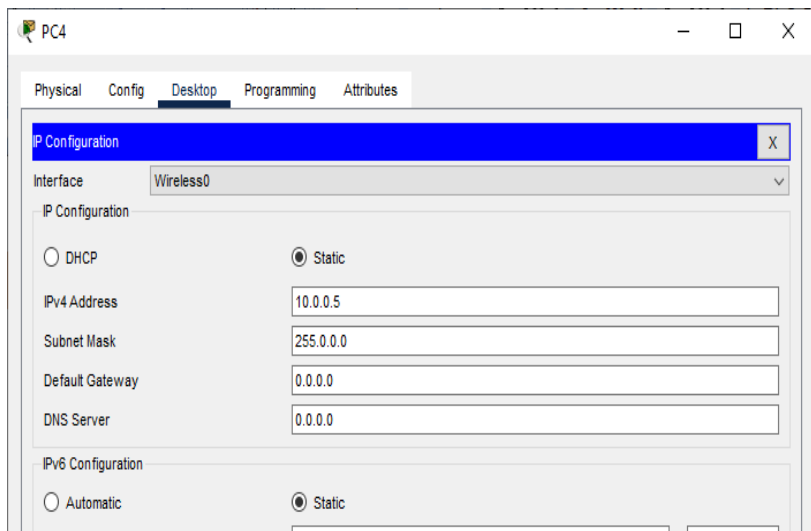
3) PC2 :



4) PC3 :



5) PC4 :

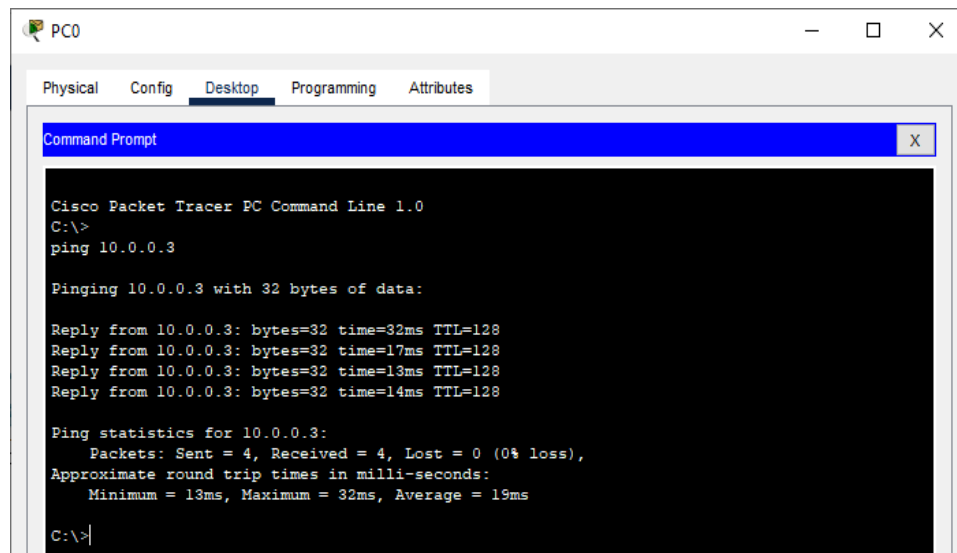


The IP addresses assigned are

Host	IP address
PC0	10.0.0.1
PC1	10.0.0.2
PC2	10.0.0.3
PC3	10.0.0.4
PC4	10.0.0.5

We verify the connectivity by sending ping message from any PC to any other PC

Pinging PC2 (10.0.0.3) from PC0 (10.0.0.1)



```
Cisco Packet Tracer PC Command Line 1.0
C:\>
ping 10.0.0.3

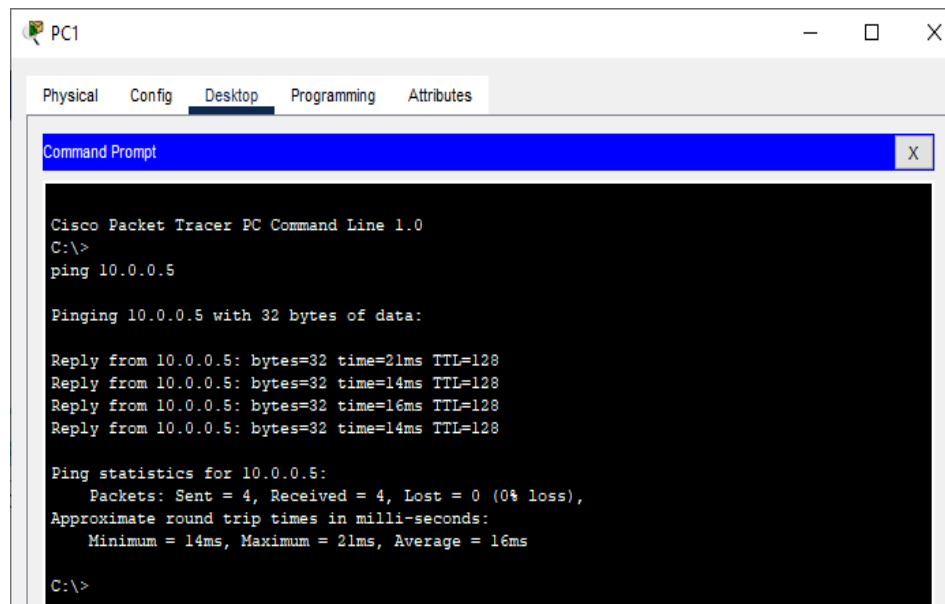
Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time=32ms TTL=128
Reply from 10.0.0.3: bytes=32 time=17ms TTL=128
Reply from 10.0.0.3: bytes=32 time=13ms TTL=128
Reply from 10.0.0.3: bytes=32 time=14ms TTL=128

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 13ms, Maximum = 32ms, Average = 19ms

C:\>
```

Pinging PC4 (10.0.0.5) from PC1 (10.0.0.2)



```
Cisco Packet Tracer PC Command Line 1.0
C:\>
ping 10.0.0.5

Pinging 10.0.0.5 with 32 bytes of data:

Reply from 10.0.0.5: bytes=32 time=21ms TTL=128
Reply from 10.0.0.5: bytes=32 time=14ms TTL=128
Reply from 10.0.0.5: bytes=32 time=16ms TTL=128
Reply from 10.0.0.5: bytes=32 time=14ms TTL=128

Ping statistics for 10.0.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 14ms, Maximum = 21ms, Average = 16ms

C:\>
```

For the video demonstration of the given practical click on the following link:

<https://youtu.be/c91hCh01DCA>