

Program 13

Aim: To construct a WLAN and make the nodes communicate wirelessly.

Topology , Procedure and Observation:

18/12/24

Experiment - 12

WLAN (37)

1. To conduct a wireless LAN and make nodes communicate wirelessly.

Topology:

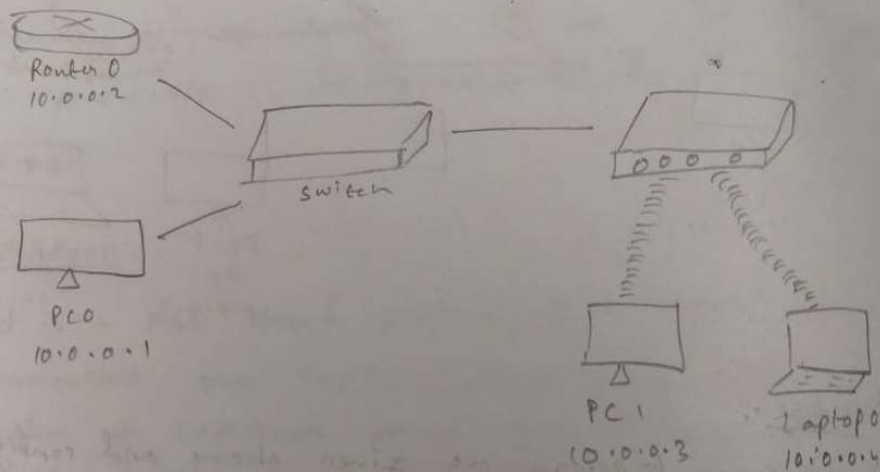
Procedure:

- 1) Create a topology as given above and configure the device.
- 2) Configure the access point.
Click Access Point → config → Point 1:
SSID : bmsce
Select : WEP
Set key : 01234567890
- 3) Configuring PC1 and Laptop with wireless standard.
 - Switch off device
 - Drag the existing PT-Host - NM-1AM to component listed in the LHS
 - Drag WMP300N wireless interface to the empty port
 - Switch on the device.

4.) In the configure take a new wireless interface was added.

5.) configure the device by entering SSID, WEP, WEP Key, IP address and Gateway.

Topology after wireless configuration.



6.) Ping from every device to every other device to check for connection.

Observation:

1.) We were able to ping from every device to every other device.

2.) Access Point:

- Creates bridge between wired and wireless devices
- SSID Broadcasting: announces the wireless network's name (SSID) to allow devices to ~~connect~~ connect using WEP, WPA or WPA2

3) WMP 300N wireless interface:

- Wireless network adapter that enables devices to communicate with access point using wireless signals.

4) Pinging: 10.0.0.1 to 10.0.0.3:

~~10.0.0.1~~ → switch → Access Point → 10.0.0.3

- This is after the ARP tables are updated after broadcasting.

5) Pinging: 10.0.0.3 to 10.0.0.1:

10.0.0.3 → Access point → switch → ~~10.0.0.1~~

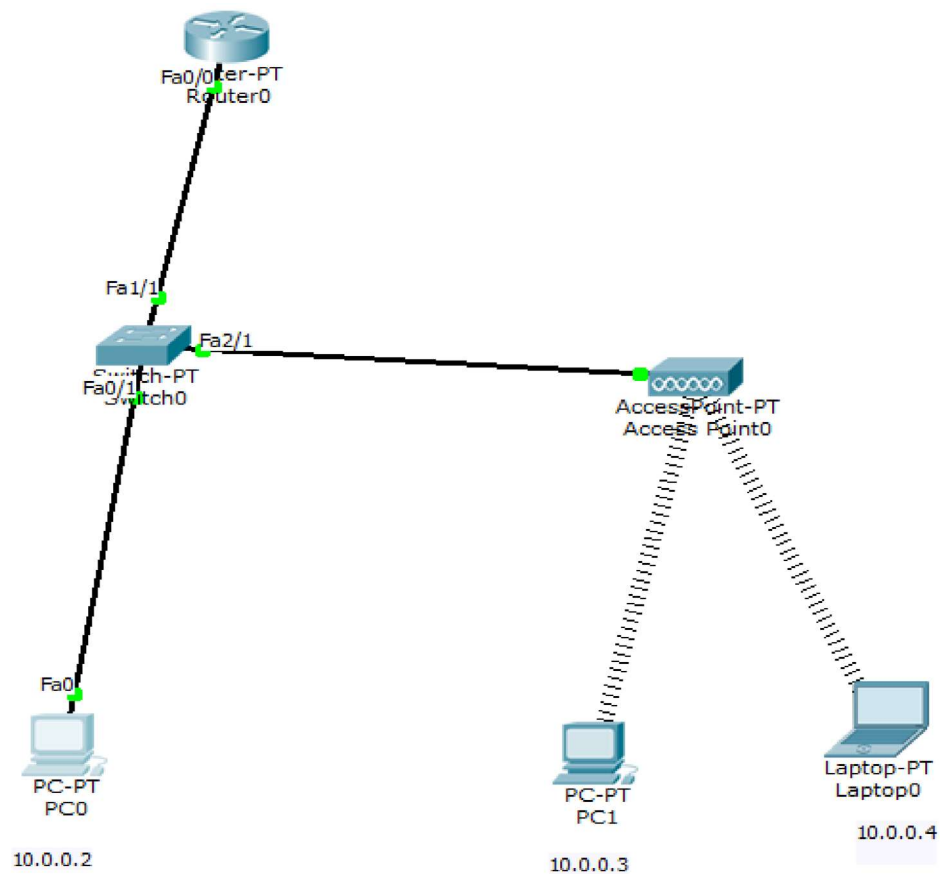
6) Pinging: 10.0.0.3 to 10.0.0.4:

10.0.0.3 → Access point → 10.0.0.4

7.) Every device is now connected to every other device in the WLAN.

~~At the~~
20/12/20

Screen Shots:



```
PC0
Physical Config Desktop Custom Interface
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time=22ms TTL=128
Reply from 10.0.0.3: bytes=32 time=6ms TTL=128
Reply from 10.0.0.3: bytes=32 time=3ms TTL=128
Reply from 10.0.0.3: bytes=32 time=7ms 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 = 3ms, Maximum = 22ms, Average = 9ms

PC>ping 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data:

Reply from 10.0.0.4: bytes=32 time=19ms TTL=128
Reply from 10.0.0.4: bytes=32 time=5ms TTL=128
Reply from 10.0.0.4: bytes=32 time=6ms TTL=128
Reply from 10.0.0.4: bytes=32 time=7ms TTL=128

Ping statistics for 10.0.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 19ms, Average = 9ms

PC>
```