WEEK 11

To construct a WLAN and make the nodes communicate wirelessly

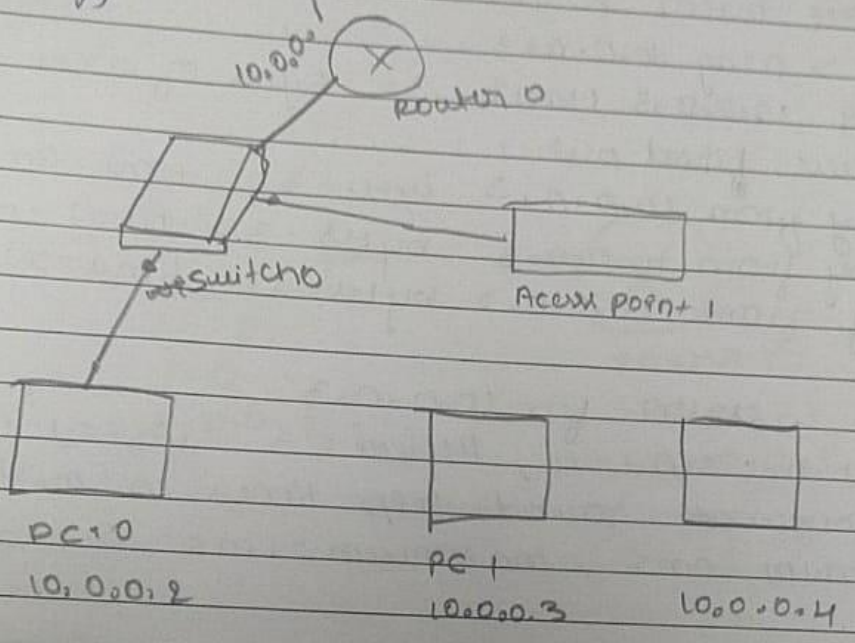
OBSERVATION:

DATE: PAGE:

Aim:

to construct a WLAN and make the nodes communicate wirelessly

Topology



Procedure

Construct the above topology

configure PC0 & Router 0 as normally done

configure Access point 1 - port 1 -> SSID name - WLAN

Select 'LOEP & give any 10 digit key - 1234567890

configure PC1 & laptop with wireless standard

Switch off the device Drag the existing PT-HOST NM-1AM to the component listed in LHS

drag WMP 300N wireless interface to the empty port, switch on the device

In the config tab a new wireless interface would have been added. Now configure SSID, WEP, WEP key IP address and gateway to the device

- Ping from every device to every other device

Ping output

Packet tracer PC command line 1.0

PC > Ping 10.0.0.3

Pening 10.0.0.3 with 32 bytes of data

Request timed out

Replay from 10.0.0.3 bytes = 32 time = 0ms TTL = 128

Replay from 10.0.0.3 bytes = 32 Times = 0ms TTL = 128

Reply from 10.0.0.3 bytes = 32 time = 2ms TTL = 128

Ping statistics for 10.0.0.3

Packets : sent = 4, Recived = 3 lost = 1 (25% loss)

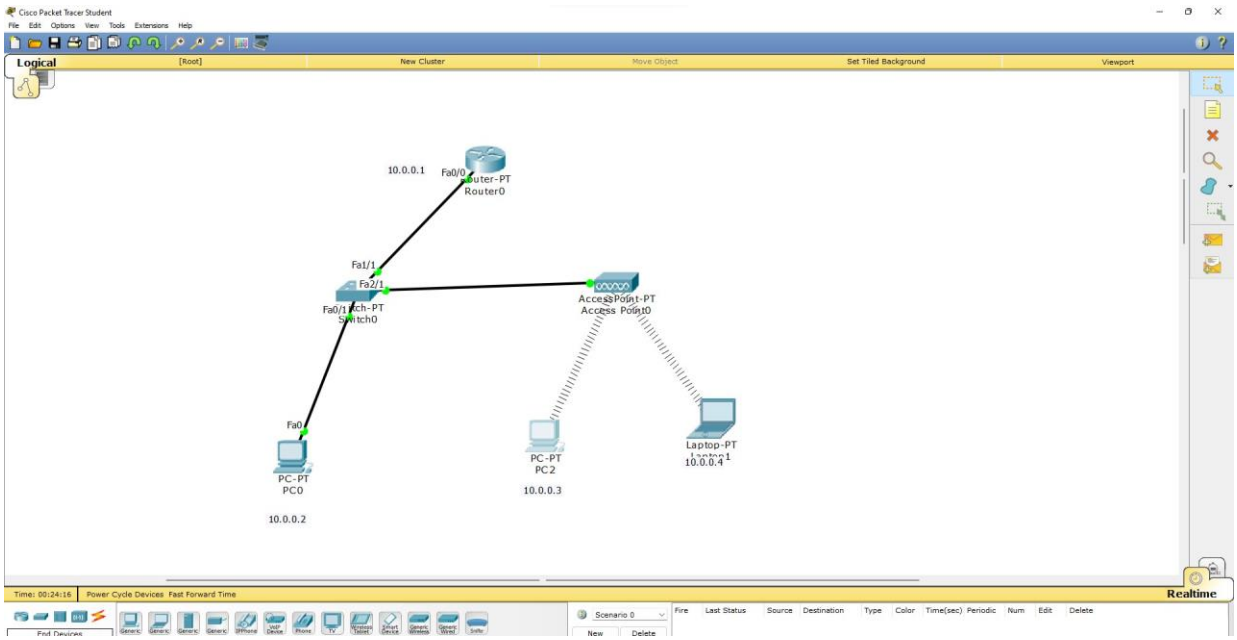
Approximate round trip times in milliseconds:

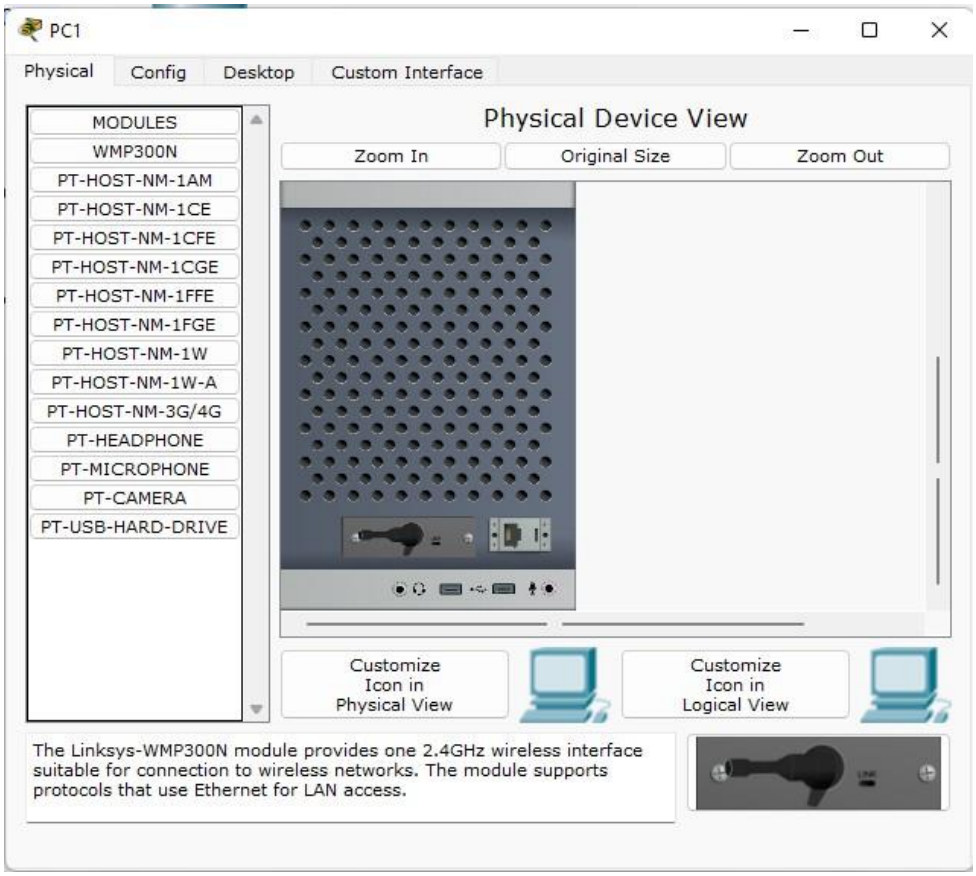
minimum = 0ms, maximum = 1ms Average = 0ms

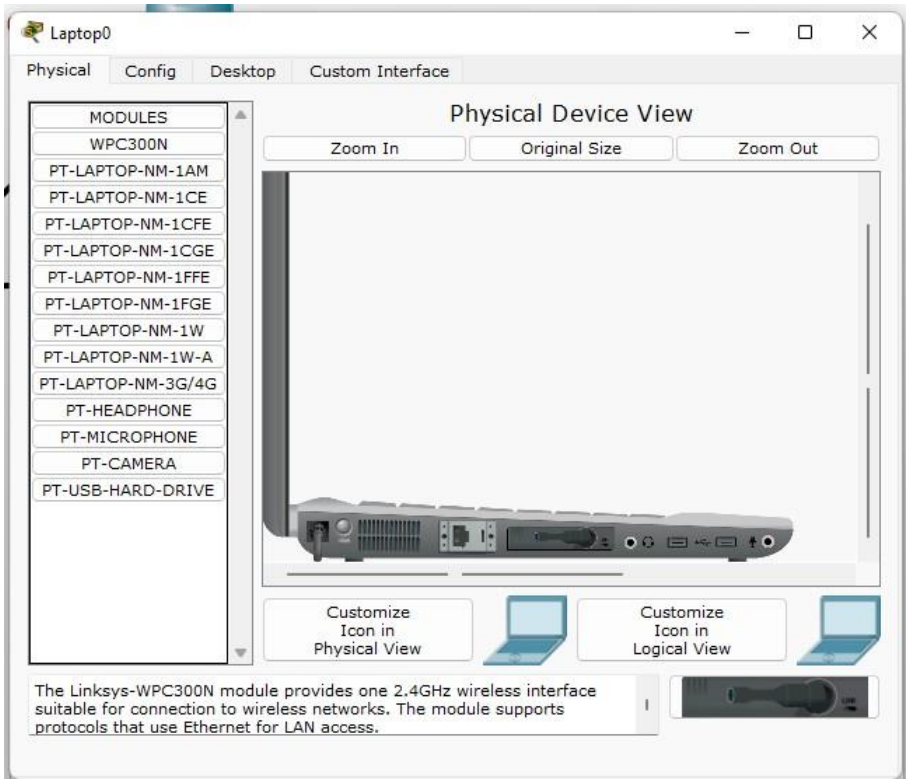
observation

- A WLAN is a group of colocated devices that form a network is based on radio transmissions
- Data sent in packets contain layers with labels & instruction MAC address to end points for routing.
- the Access point is the base station that server as a hub to which another stations connect
- with one accesspoint we can connect to multiple devices wirelessly & transmit data

TOPOLOGY:


Logical
10.0.0.1
Fa0/0
Router-PT
Router0
Fa1/1
Fa2/1
Fa0/1
Switch-PT
Switch0
Access Point-PT
Access Point0
Fa0
PC-PT
PC0
10.0.0.2
PC-PT
PC2
10.0.0.3
Laptop-PT
10.0.0.4
Realtime


PC1
Physical
Config
Desktop
Custom Interface
MODULES
WMP300N
PT-HOST-NM-1AM
PT-HOST-NM-1CE
PT-HOST-NM-1CFE
PT-HOST-NM-1CGE
PT-HOST-NM-1FFE
PT-HOST-NM-1FGE
PT-HOST-NM-1W
PT-HOST-NM-1W-A
PT-HOST-NM-3G/4G
PT-HEADPHONE
PT-MICROPHONE
PT-CAMERA
PT-USB-HARD-DRIVE
Physical Device View
Zoom In
Original Size
Zoom Out
Customize Icon in Physical View
Customize Icon in Logical View
The Linksys-WMP300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.


Laptop0
Physical
Config
Desktop
Custom Interface
MODULES
WPC300N
PT-LAPTOP-NM-1AM
PT-LAPTOP-NM-1CE
PT-LAPTOP-NM-1CFE
PT-LAPTOP-NM-1CGE
PT-LAPTOP-NM-1FFE
PT-LAPTOP-NM-1FGE
PT-LAPTOP-NM-1W
PT-LAPTOP-NM-1W-A
PT-LAPTOP-NM-3G/4G
PT-HEADPHONE
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Physical Device View
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Original Size
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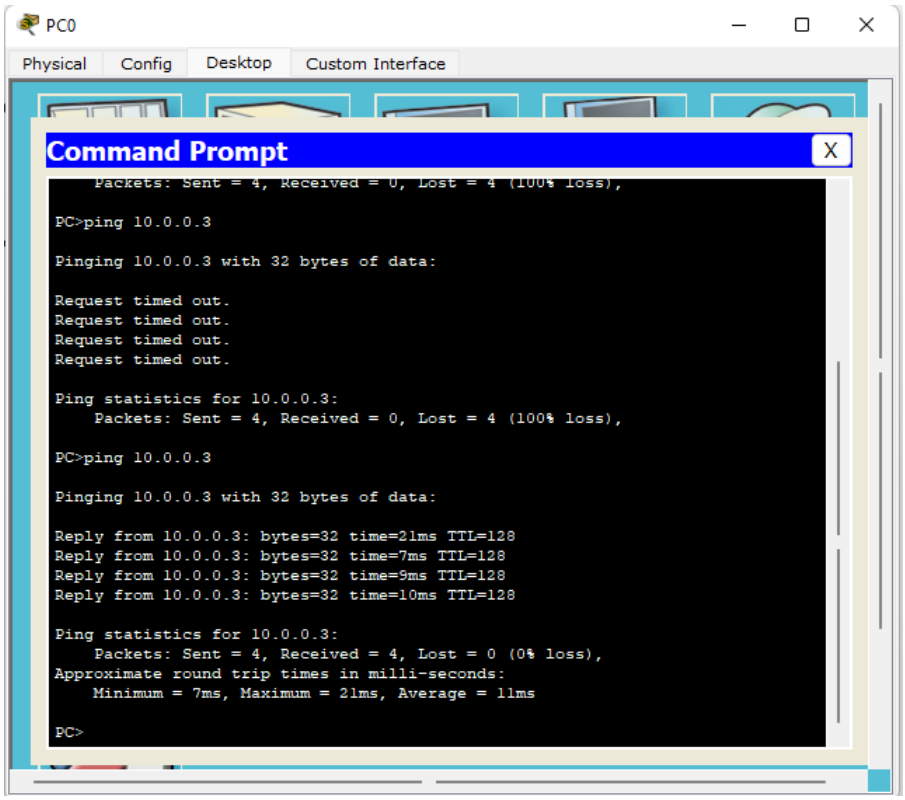
OUTPUT:


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
PC>ping 10.0.0.3
Pinging 10.0.0.3 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.
Ping statistics for 10.0.0.3:
Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
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=21ms TTL=128
Reply from 10.0.0.3: bytes=32 time=7ms TTL=128
Reply from 10.0.0.3: bytes=32 time=9ms TTL=128
Reply from 10.0.0.3: bytes=32 time=10ms 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 = 7ms, Maximum = 21ms, Average = 11ms
PC>