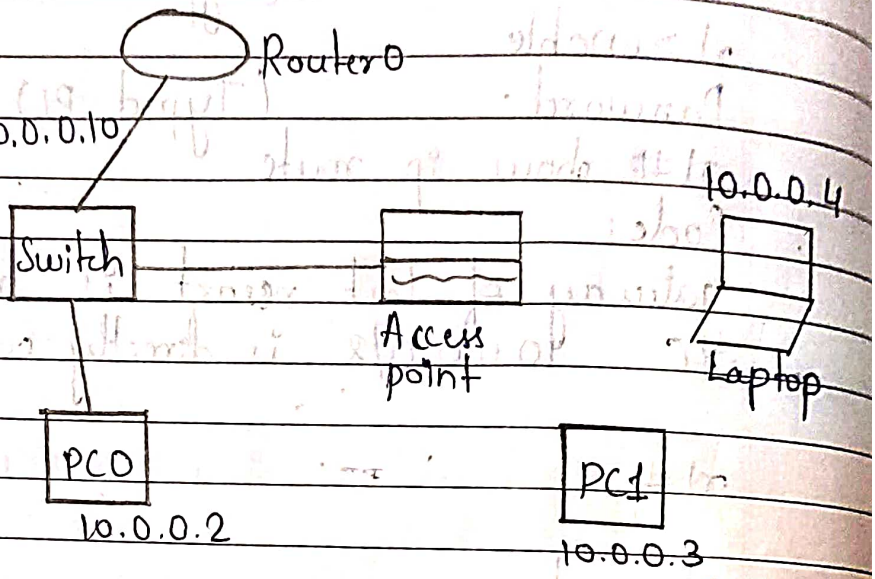
10/8/23

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

Topology:



Procedure -

1) Construct the above topology. Use access point connect it to router. Set the IP address of the PC connected with wire and configure router 1.

2) Configure access-point-1 → port 1 → SSID name → WLAN
Select WEP and give any 10 digit key (here 1234567890)

3) To configure PC0 and laptop wirelessly, switch off the device. Drag the existing PT-HOST-NM-1AM to the component listed in the LHS. Drag WMP300N wirelessly interface to the empty port and switch on the device.

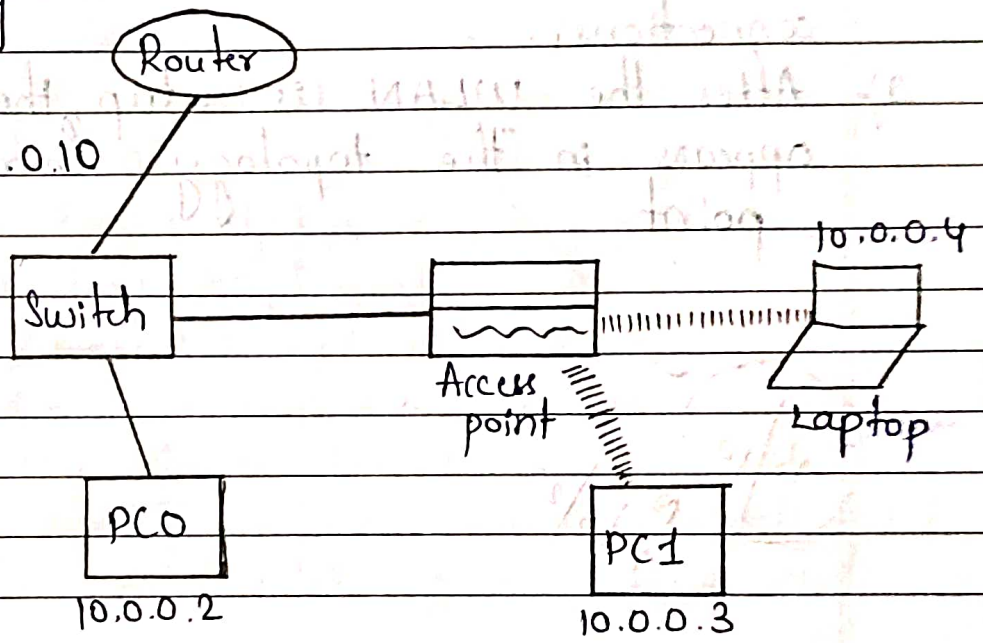
4) Now, in the config tab, a new wireless interface would have been added. Configure SSID, WEP, WEP key, IP address &

gateway to the device.

Router > enable
config t
interface fastethernet 0/0
ip address 10.0.0.10 255.0.0.0
no shut

Result -

Topology -



Result - in PC0

PC > ping 10.0.0.3

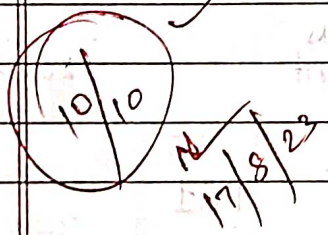
Pinging 10.0.0.3 with 32 bytes of data:

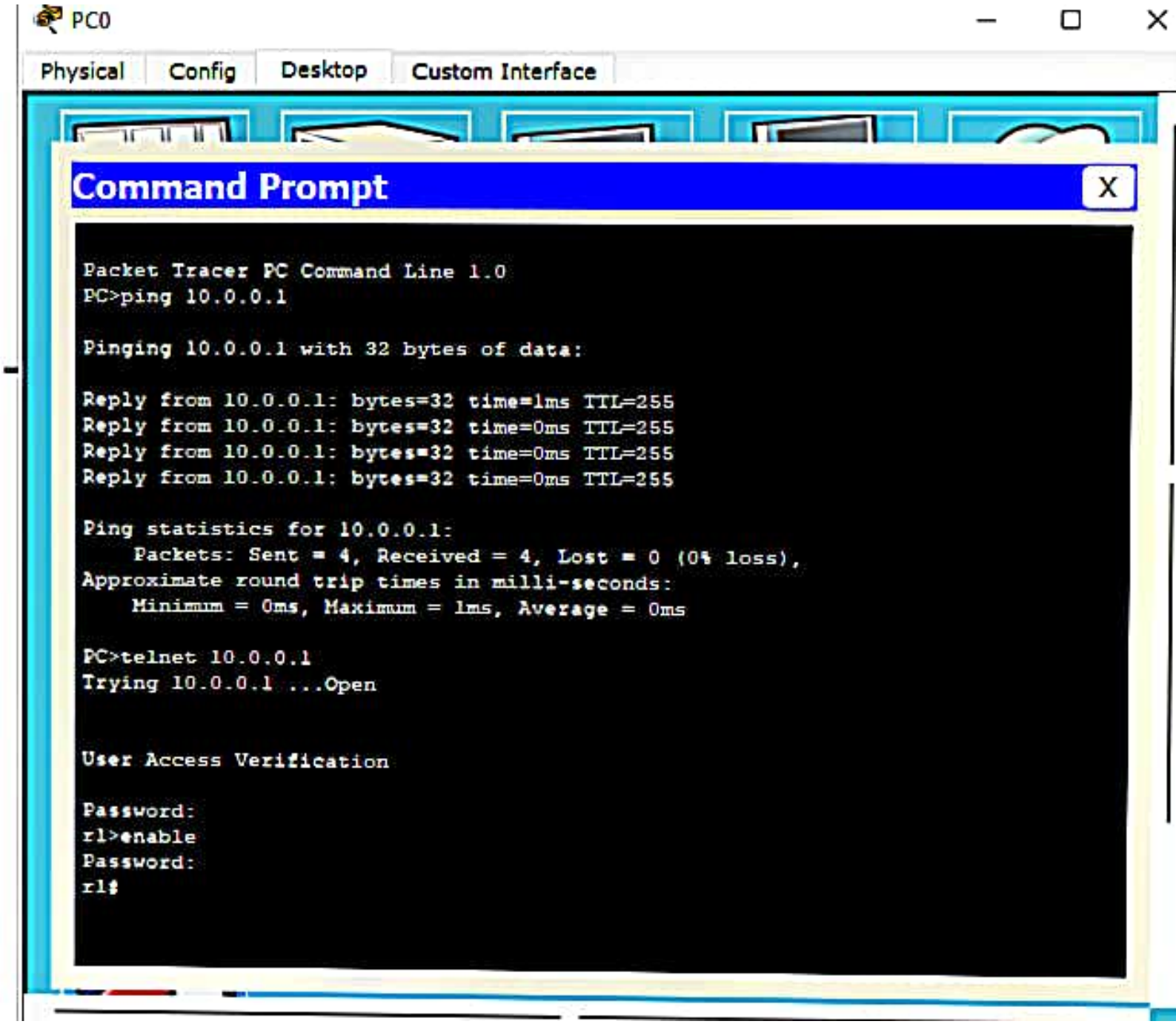
Reply from 10.0.0.3 : bytes = 32 time = 21 ms TTL=12
Reply from 10.0.0.3 : bytes = 32 time = 13 ms TTL=12
Reply from 10.0.0.3 : bytes = 32 time = 6 ms TTL=12
Reply from 10.0.0.3 : bytes = 32 time = 0 ms TTL=12

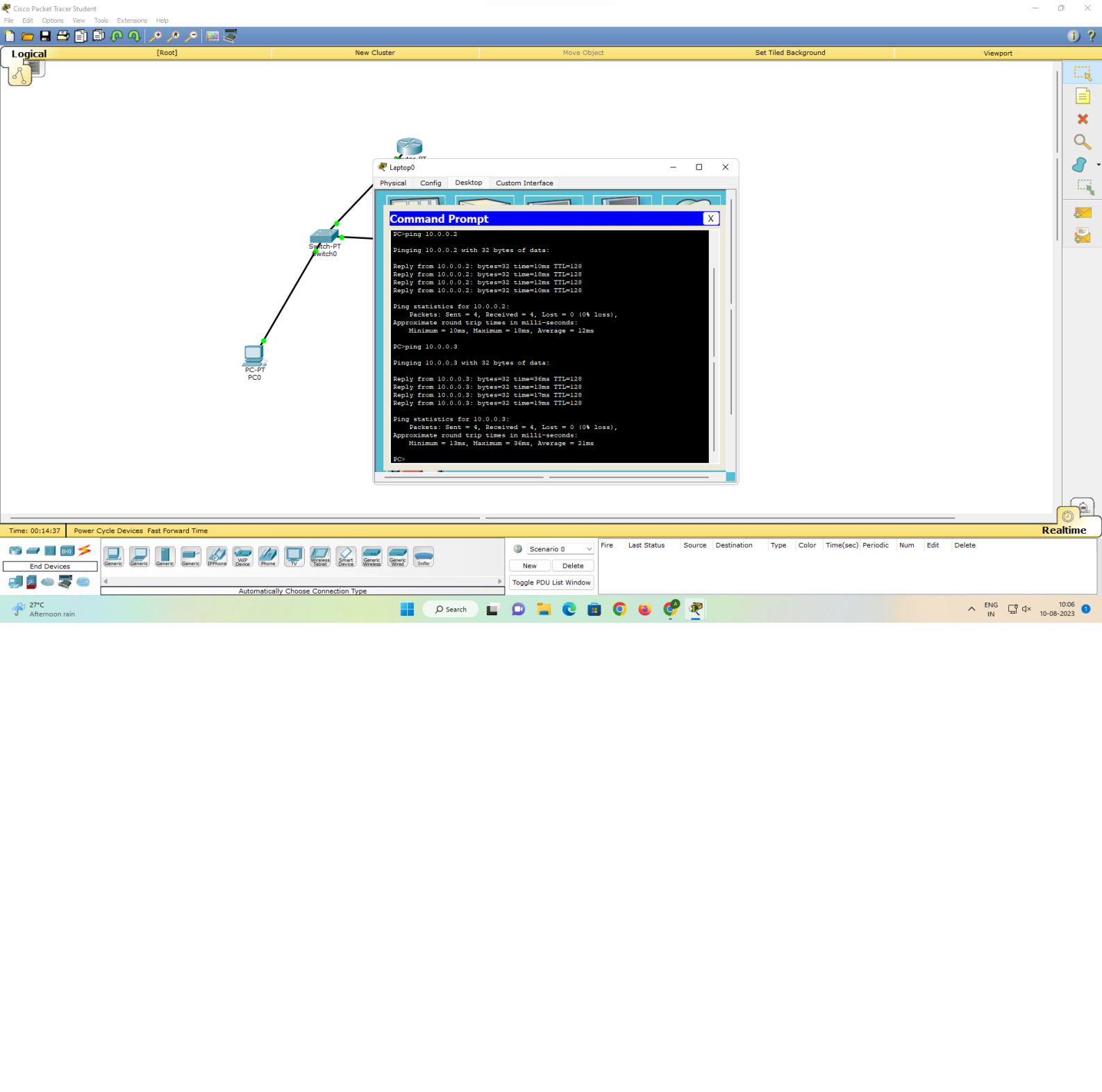
Ping statistics for 10.0.0.3
Packets: Sent = 4, Received = 4, Lost = 0
Approximate roundtrip time in milliseconds
Minimum = 6 ms, Maximum = 21 ms, Average = 12 ms

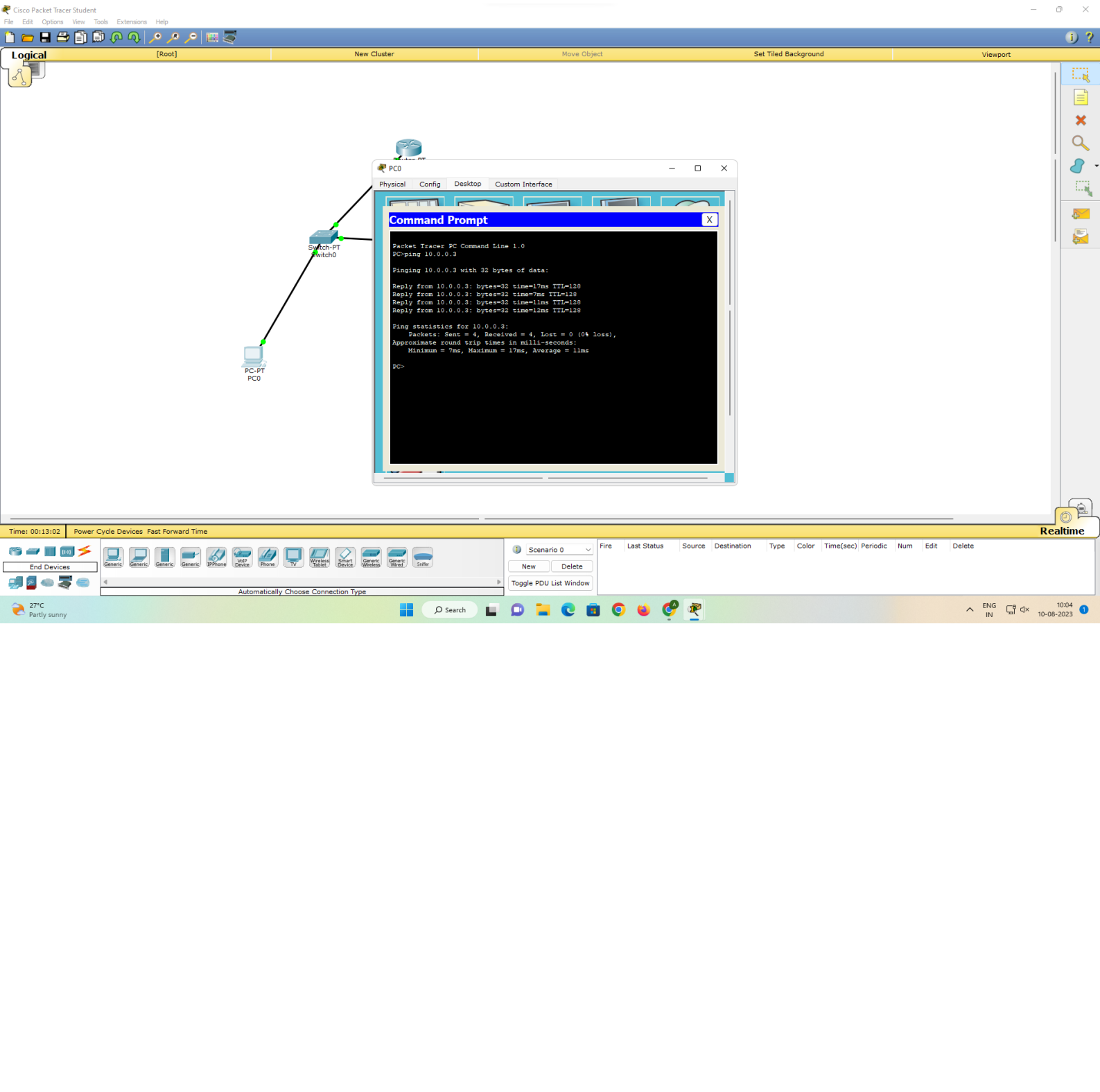
Observation -

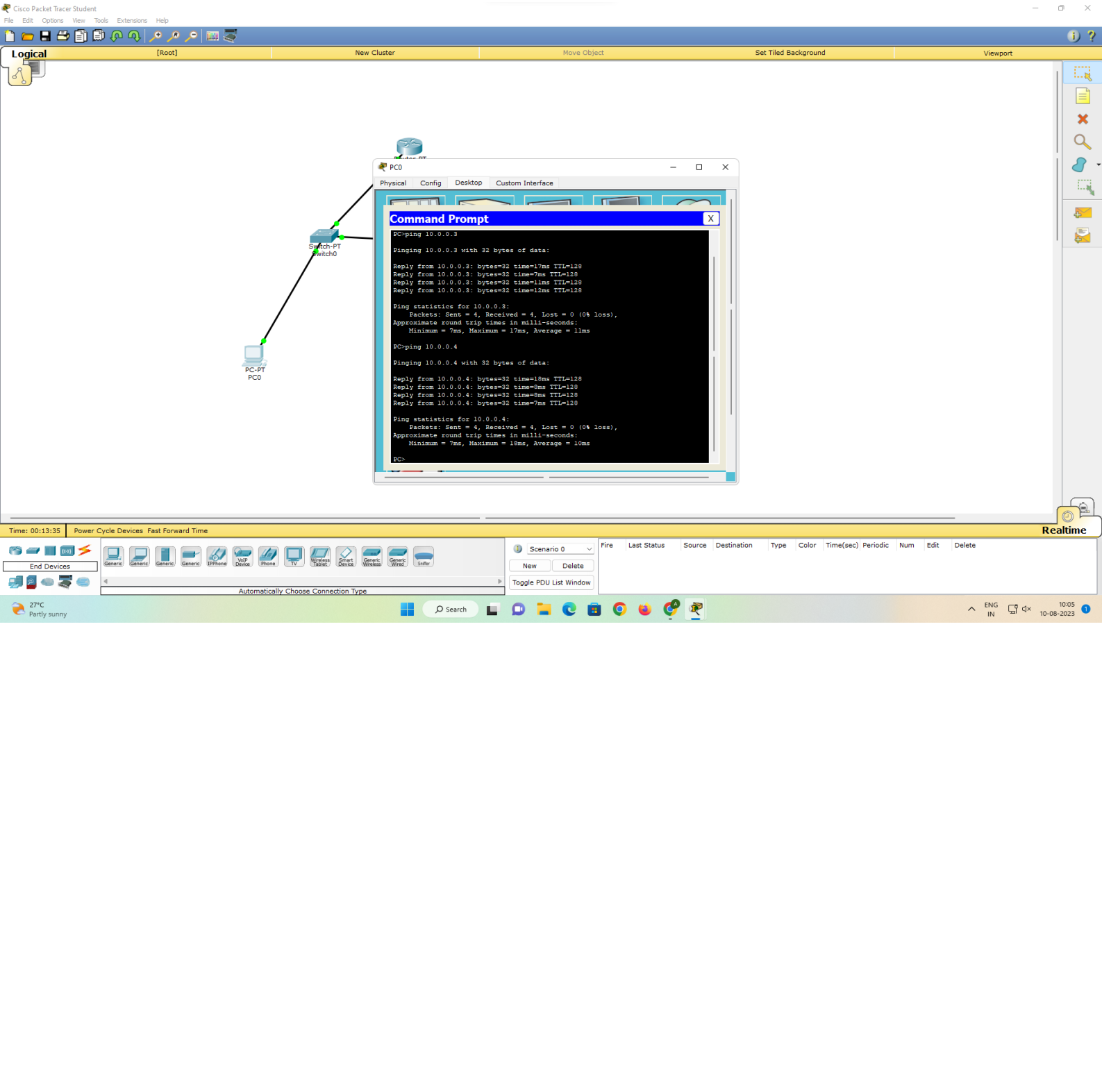
1) Wireless local area network WLAN is a group of alocated computers or other devices that form a network based on radio transmission rather than wired connections.
2) After the WLAN is setup, the lined connection appears in the topology from the access point.

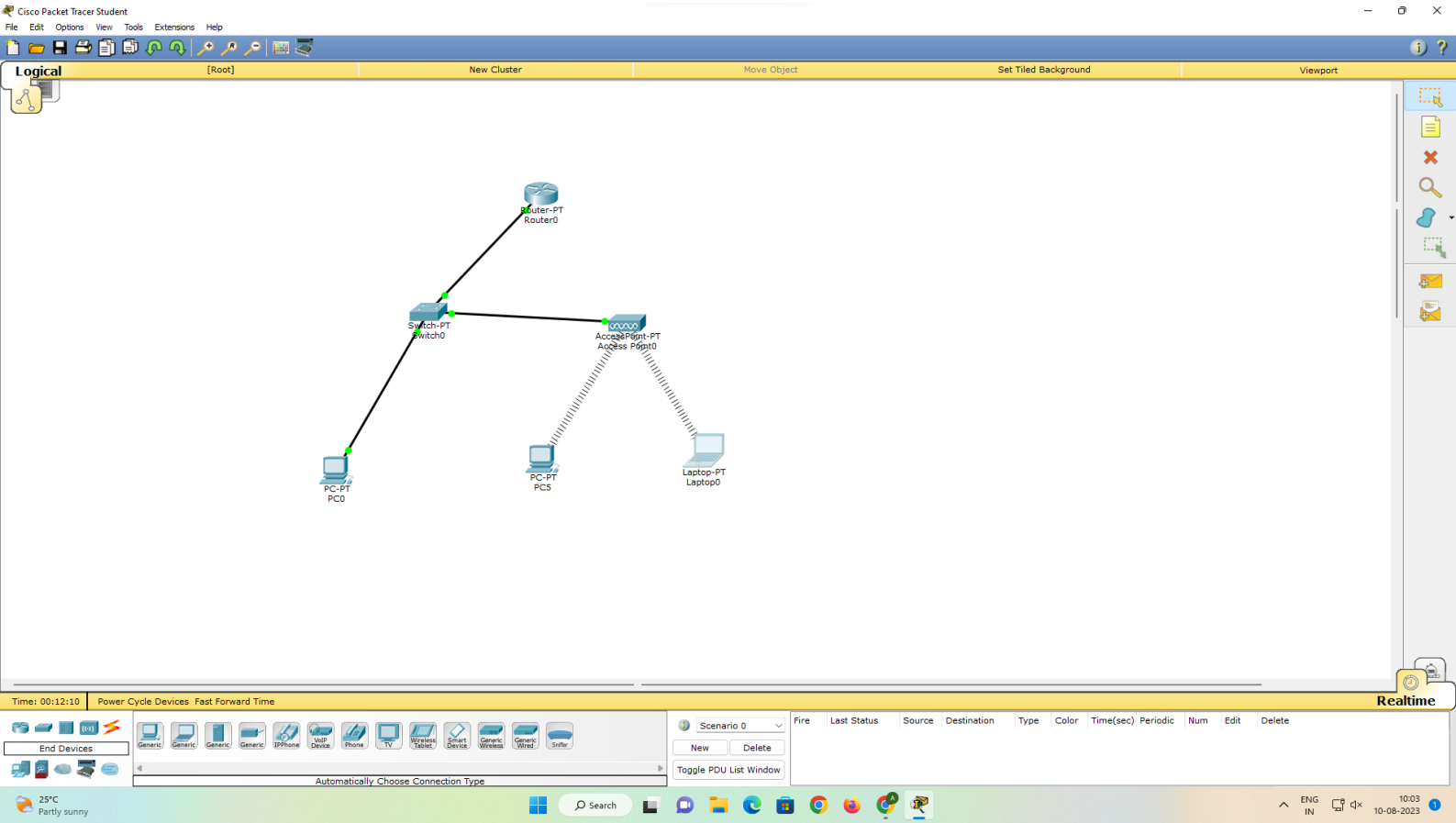



PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time=1ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Reply from 10.0.0.1: bytes=32 time=0ms TTL=255
Ping statistics for 10.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
PC>telnet 10.0.0.1
Trying 10.0.0.1 ...Open
User Access Verification
Password:
r1>enable
Password:
r1#


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Laptop0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
PC>ping 10.0.0.2
Pinging 10.0.0.2 with 32 bytes of data:
Reply from 10.0.0.2: bytes=32 time=10ms TTL=128
Reply from 10.0.0.2: bytes=32 time=18ms TTL=128
Reply from 10.0.0.2: bytes=32 time=12ms TTL=128
Reply from 10.0.0.2: bytes=32 time=10ms TTL=128
Ping statistics for 10.0.0.2:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 10ms, Maximum = 18ms, Average = 12ms
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=36ms TTL=128
Reply from 10.0.0.3: bytes=32 time=13ms TTL=128
Reply from 10.0.0.3: bytes=32 time=17ms TTL=128
Reply from 10.0.0.3: bytes=32 time=19ms 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 = 36ms, Average = 21ms
PC>
Switch-PT
Switch0
PC-PT
PC0
Time: 00:14:37
Power Cycle Devices Fast Forward Time
Realtime
End Devices
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
27°C
Afternoon rain
Search
ENG
IN
10:06
10-08-2023


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
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=17ms TTL=128
Reply from 10.0.0.3: bytes=32 time=7ms TTL=128
Reply from 10.0.0.3: bytes=32 time=11ms TTL=128
Reply from 10.0.0.3: bytes=32 time=12ms 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 = 17ms, Average = 11ms
PC>
Switch-PT
Switch0
PC-PT
PC0
Time: 00:13:02
Power Cycle Devices Fast Forward Time
Realtime
End Devices
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
27°C
Partly sunny
Search
ENG
IN
10:04
10-08-2023


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
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=17ms TTL=128
Reply from 10.0.0.3: bytes=32 time=7ms TTL=128
Reply from 10.0.0.3: bytes=32 time=11ms TTL=128
Reply from 10.0.0.3: bytes=32 time=12ms 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 = 17ms, Average = 11ms
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=18ms TTL=128
Reply from 10.0.0.4: bytes=32 time=9ms TTL=128
Reply from 10.0.0.4: bytes=32 time=8ms 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 = 7ms, Maximum = 18ms, Average = 10ms
PC>
Switch-PT
Switch0
PC-PT
PC0
Time: 00:13:35
Power Cycle Devices Fast Forward Time
Realtime
End Devices
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
27°C
Partly sunny
Search
ENG
IN
10:05
10-08-2023


Cisco Packet Tracer Student
File Edit Options View Tools Extensions Help
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router-PT
Router0
Switch-PT
Switch0
Access Point-PT
Access Point0
PC-PT
PC0
PC-PT
PC5
Laptop-PT
Laptop0
Time: 00:12:10
Power Cycle Devices Fast Forward Time
Realtime
End Devices
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time(sec)
Periodic
Num
Edit
Delete
25°C
Partly sunny
Search
ENG
IN
10:03
10-08-2023