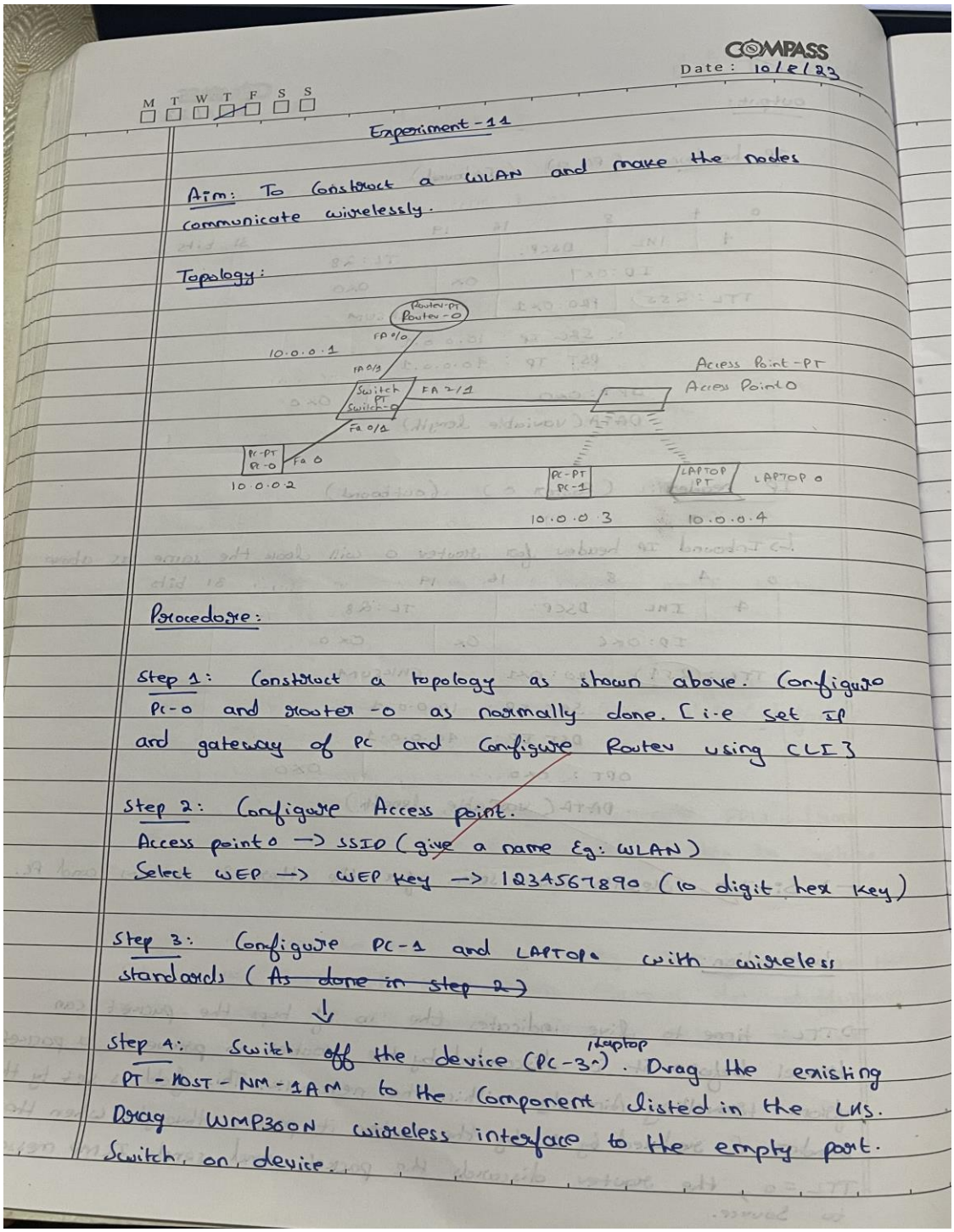
LAB PROGRAM – 11

Q) To construct a WLAN and make the nodes communicatewirelessly

Procedure :



COMPASS
Date : 10/8/23

M T W T F S S

Experiment - 11

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

Topology:

Procedure:

Step 1: Construct a topology as shown above. Configure Pc-0 and Router -0 as normally done. [i.e set IP and gateway of Pc and Configure Router using CLI]

Step 2: Configure Access point.
Access point 0 → SSID (give a name Eg: WLAN)
Select WEP → WEP key → 1234567890 (10 digit hex key)

Step 3: Configure PC-1 and LAPTOP 0 with wireless standards (~~As done in step 2~~)

↓

Step 4: Switch off the device (PC-3^(laptop)). Drag the existing PT-HOST-NM-1AM to the Component listed in the LHS. Drag WMP300N wireless interface to the empty port. Switch on device.

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Step 5: In the Config tab of (PC-1 & Laptop 0) a new wireless interface would have been added. Configure SSID, WEP key, IP Address, Gateway (10.0.0.1) to the device.

Result:

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 = 19ms TTL = 128
Reply from 10.0.0.3 : bytes = 32 time = 8ms TTL = 128
Reply from 10.0.0.3 : bytes = 32 time = 10ms 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:

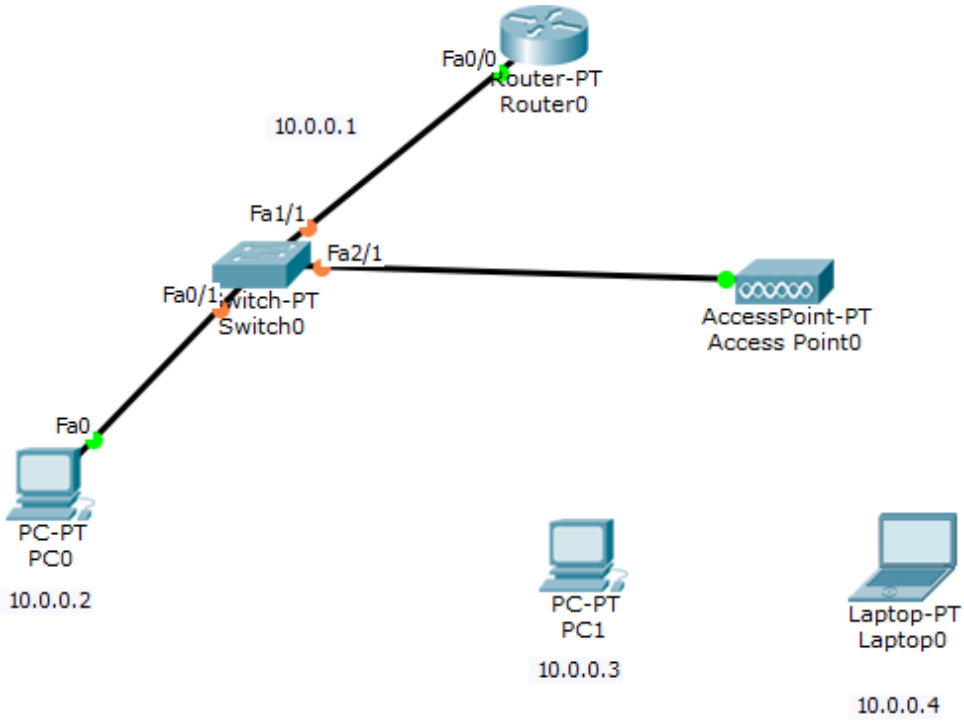
Minimum = 8ms, Maximum = 19ms, Average = 11ms

observation:

WLAN - (wireless local area network) is colocated devices that form a network based on radio transmissions. WLAN transmits information over radio waves. Data is sent in form of packets. Each packet consists of layers, labels and instructions with unique MAC address assigned to end points.

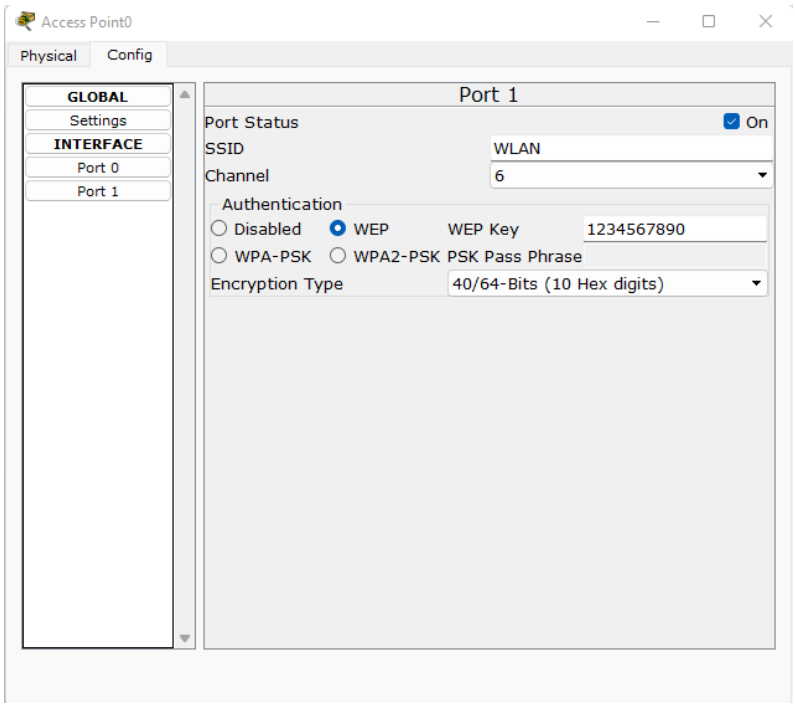
Access point is a base station that serves as a bridge between wired and wireless networks. Through Access points we can connect to multiple devices wirelessly and transmit data.

Topology :

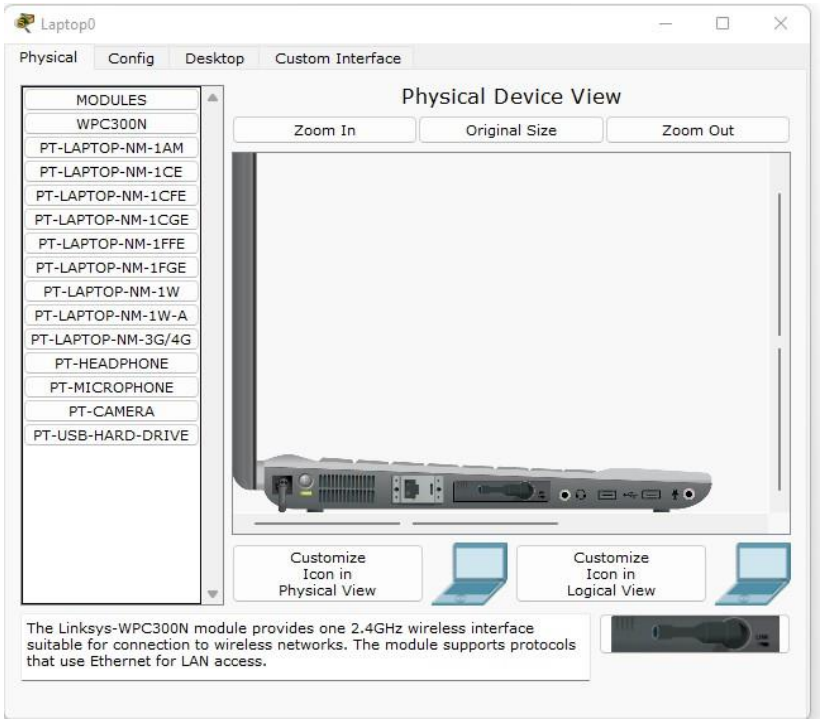


Configurations :

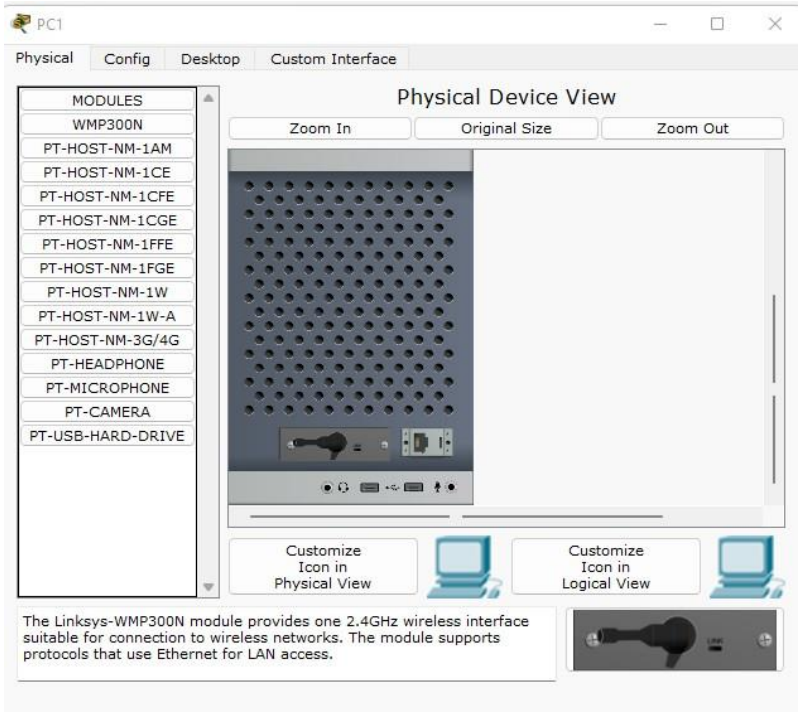
Access Point0:



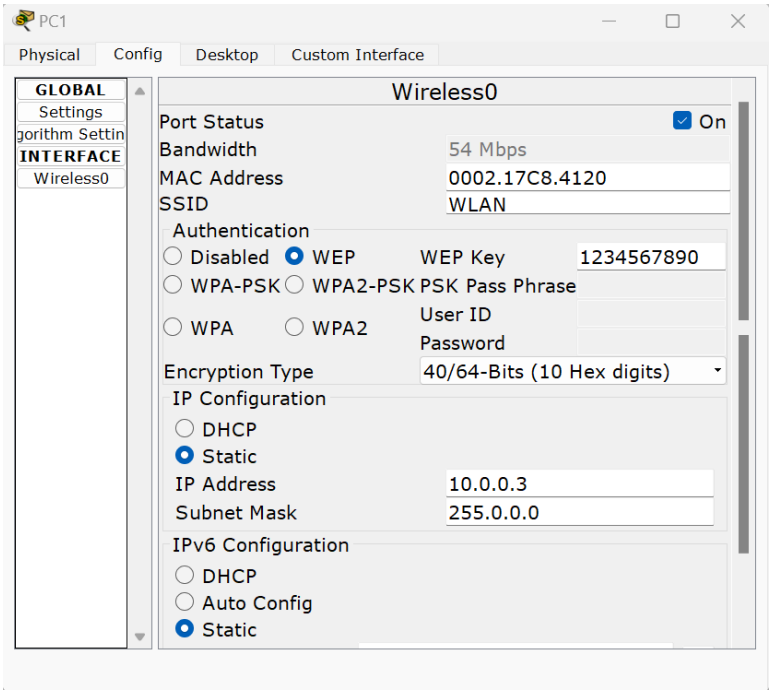
Laptop0 Physical port change



PC0 Physical port change:

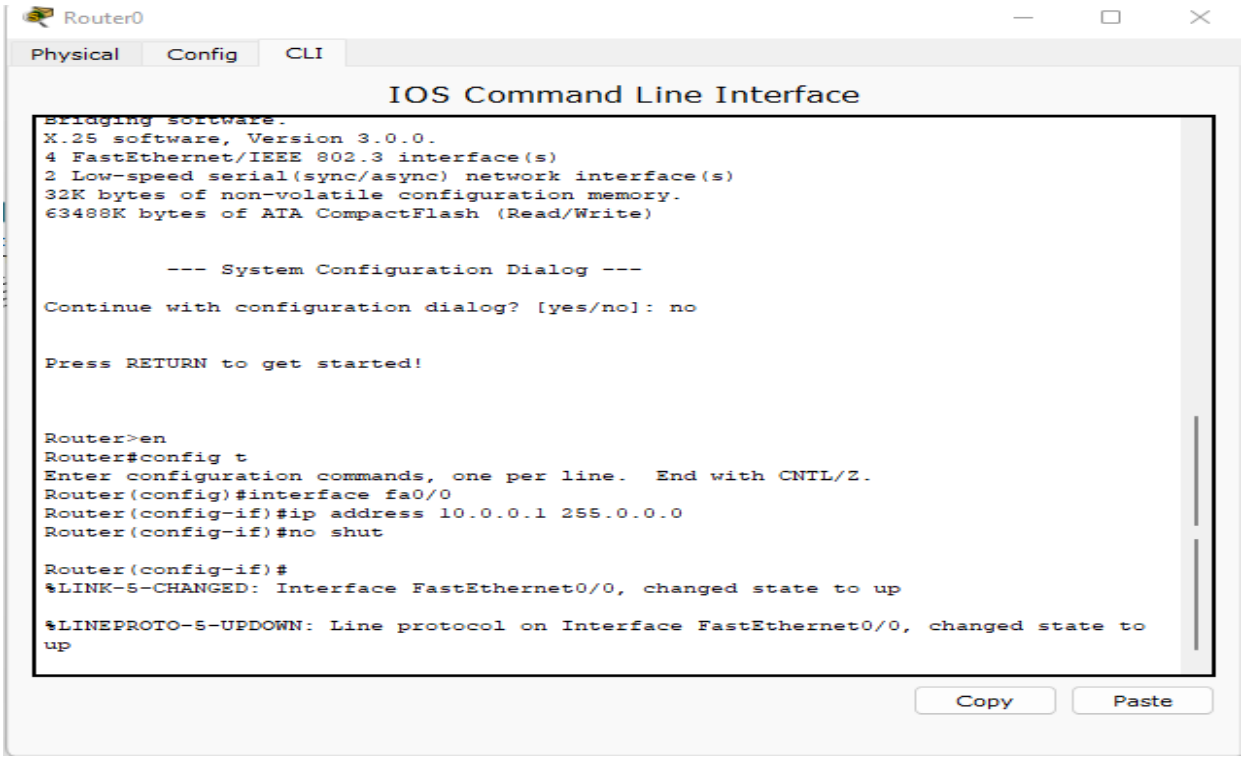


PC0 and Laptop0 Wireless configuration:

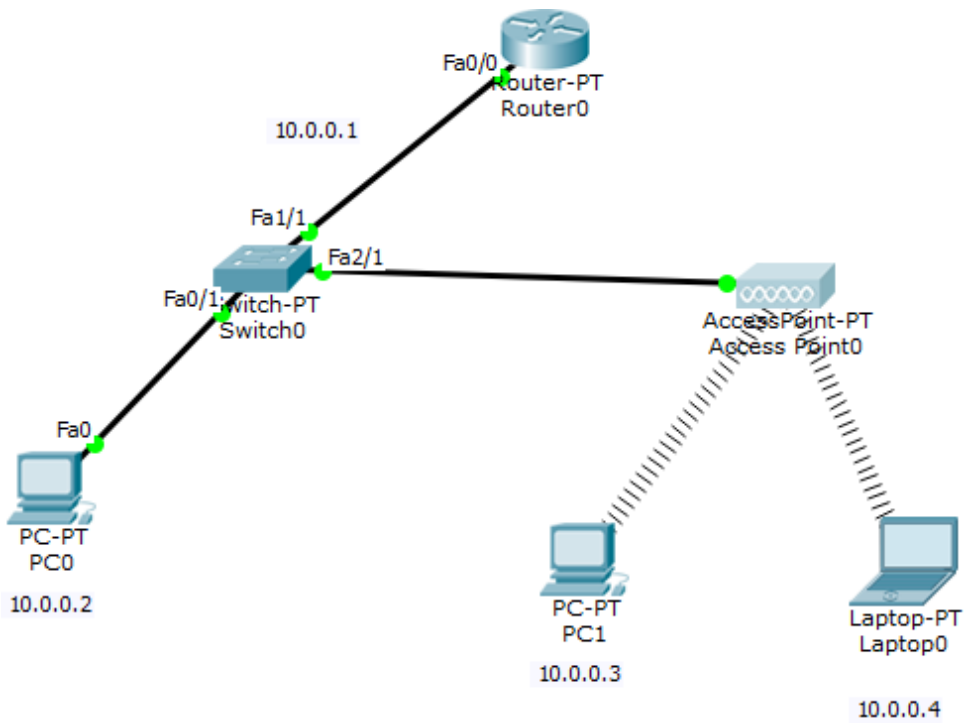


Router Configuration :

Router 0 CLI :

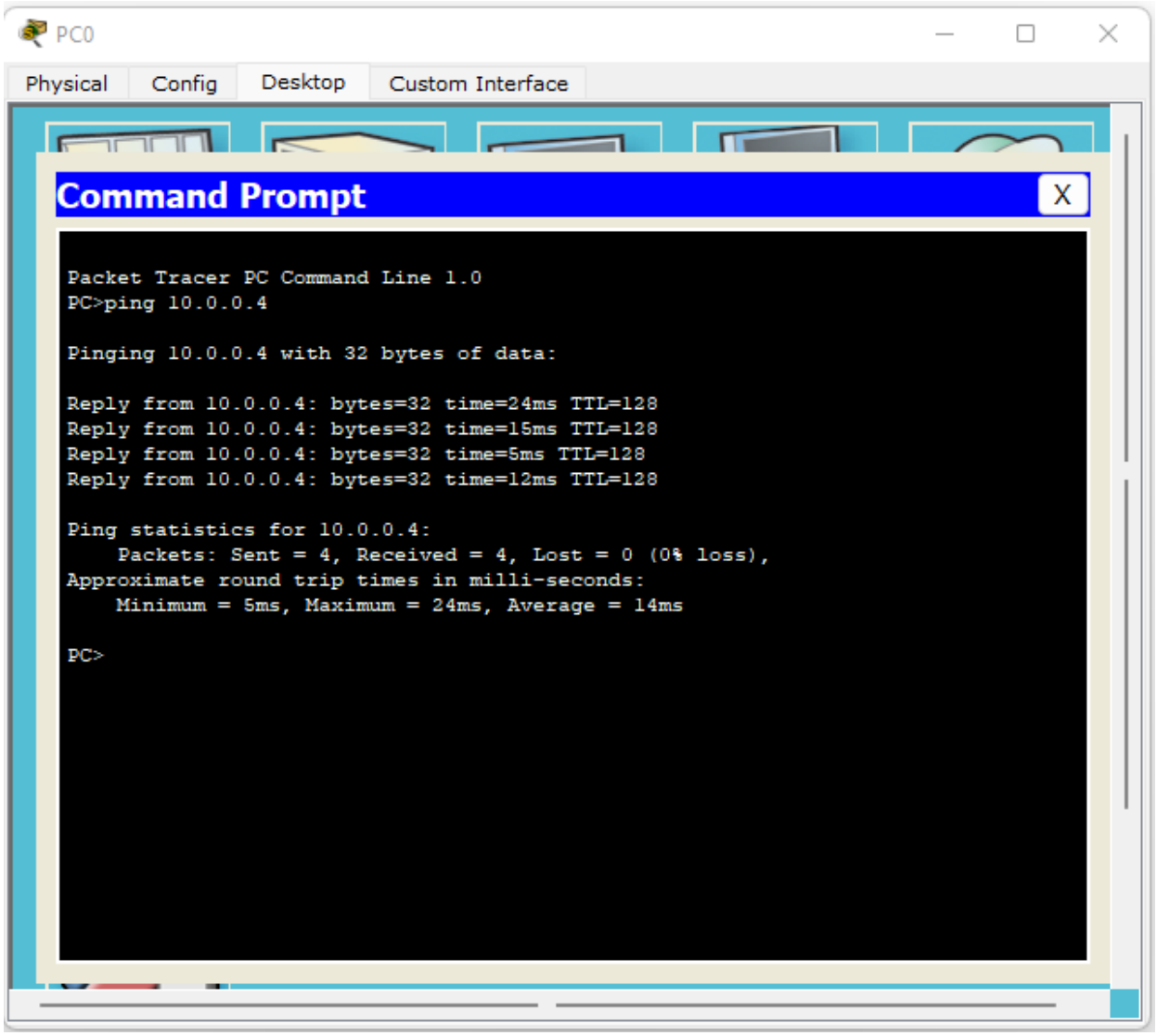


Final Topology:

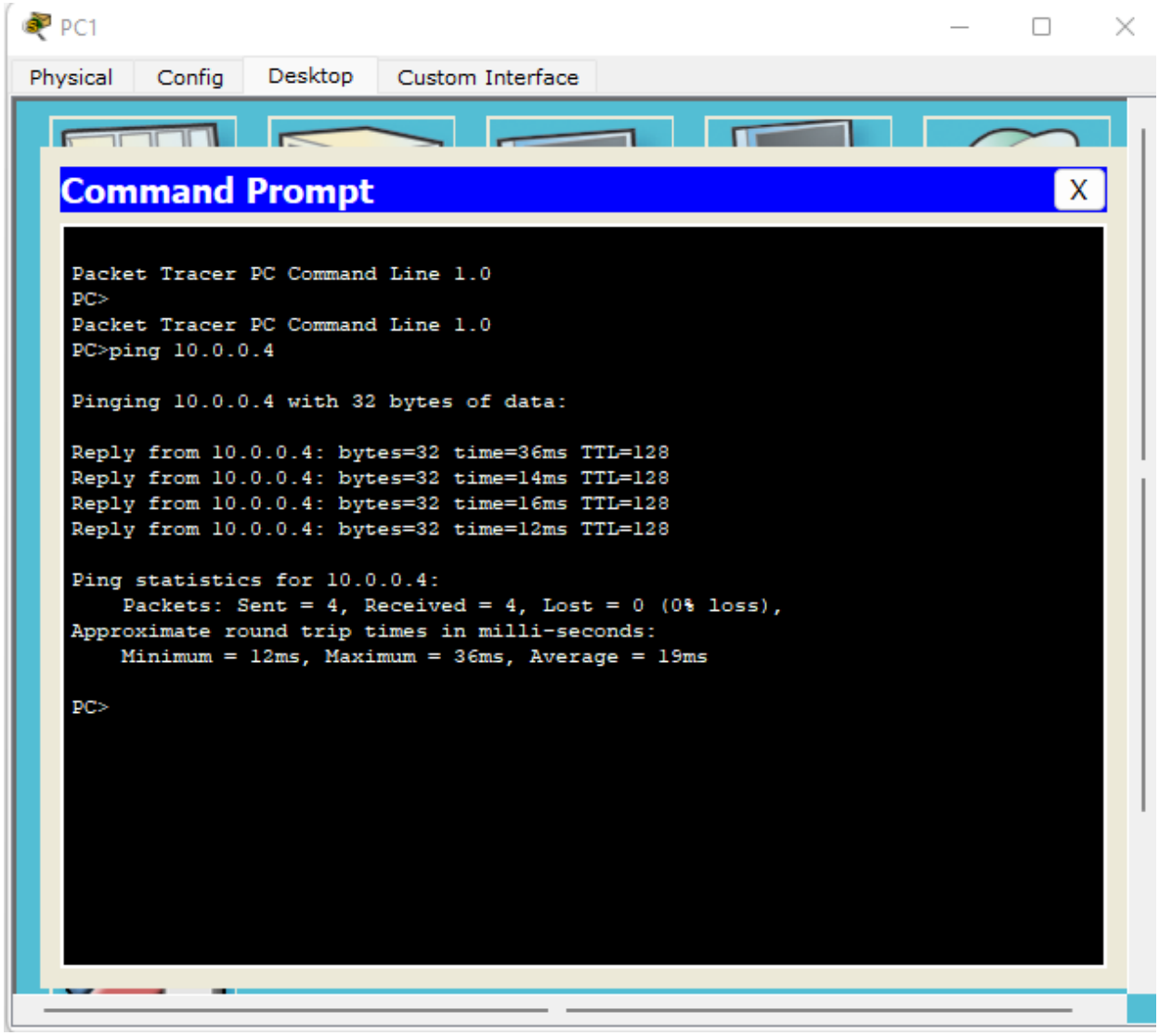


Ping Results :

PC0 to Laptop0 :



PC1 to Laptop0 :



Laptop0 to PC0: