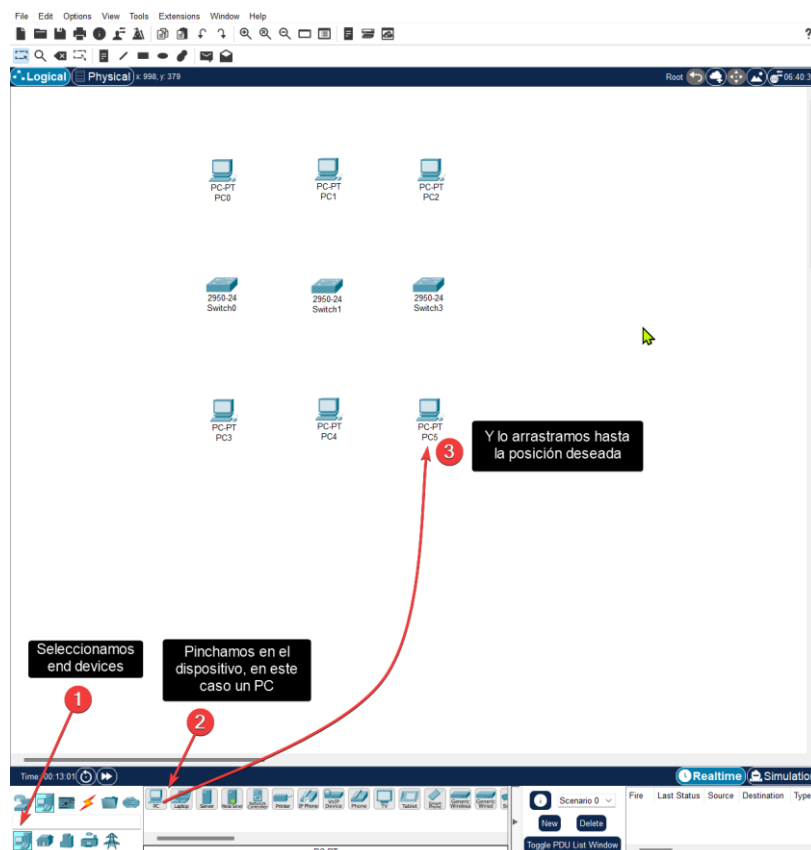
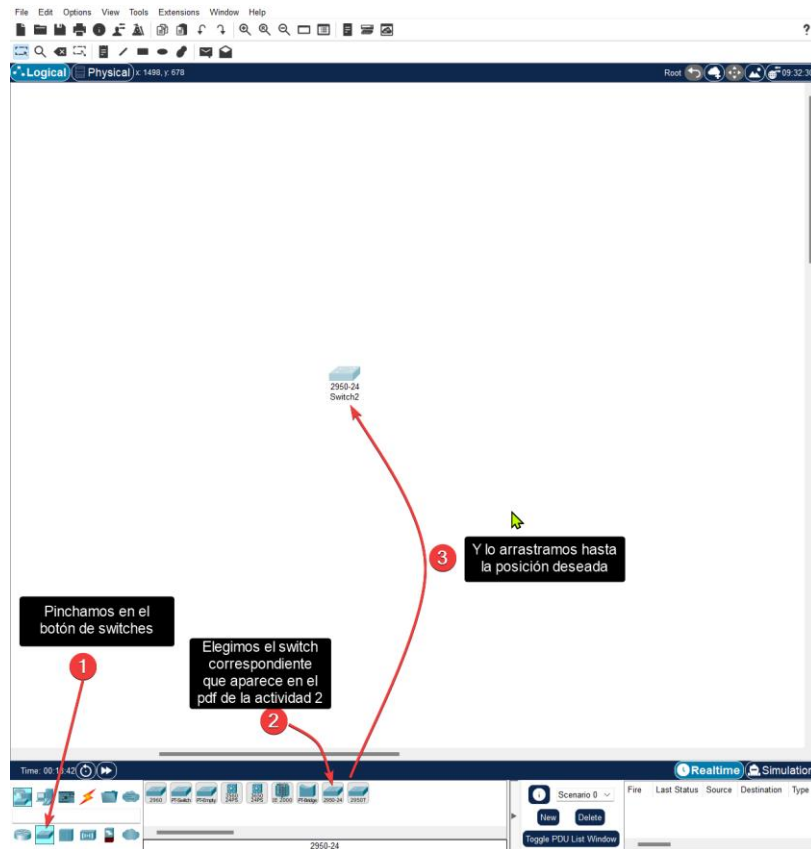
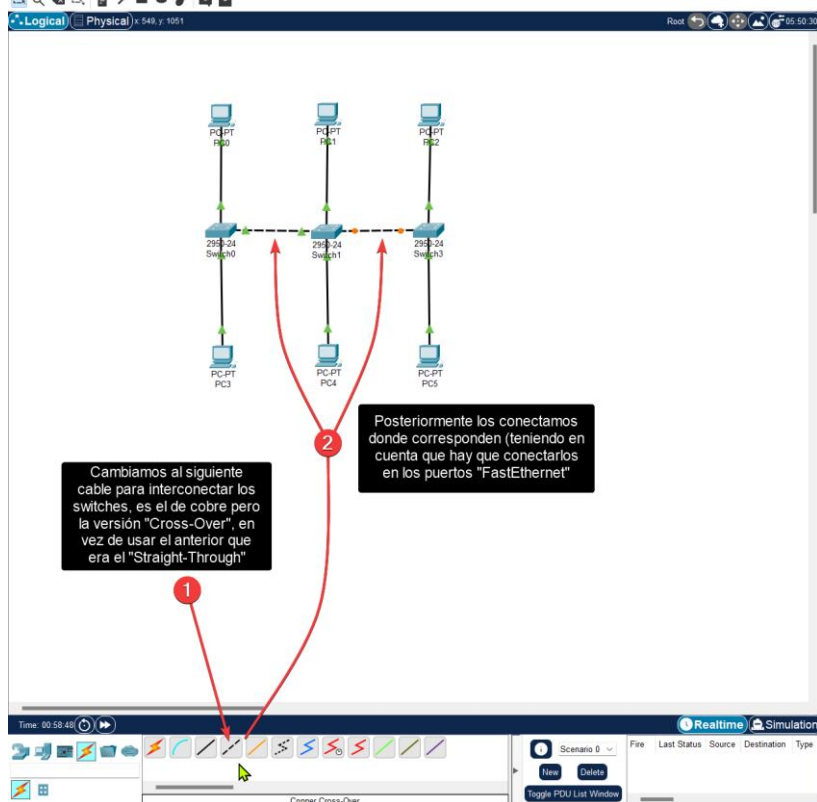
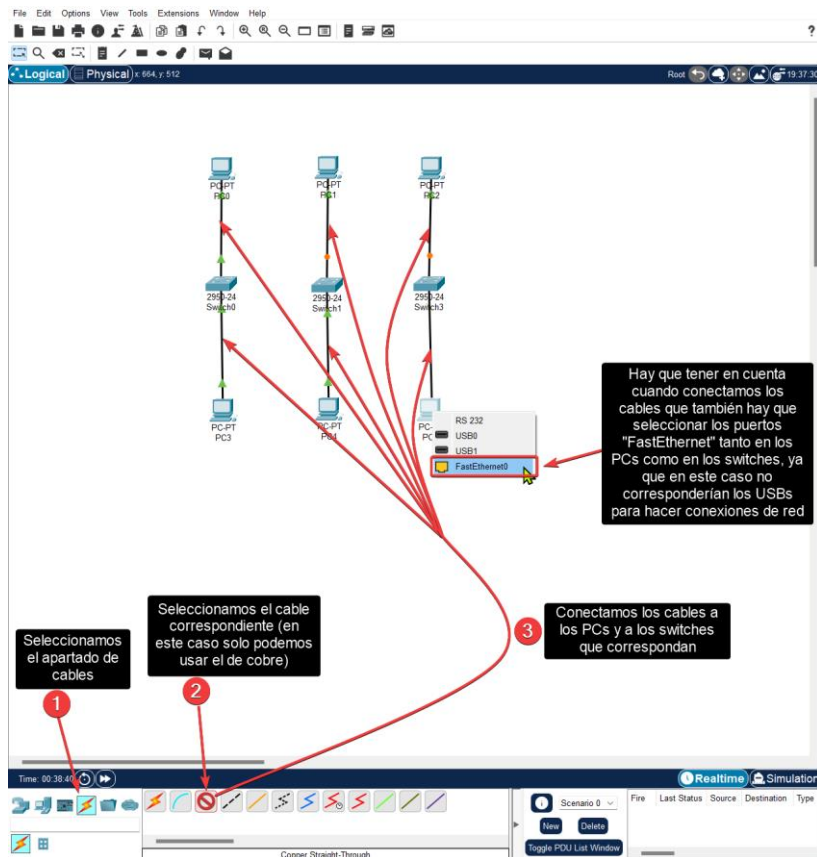


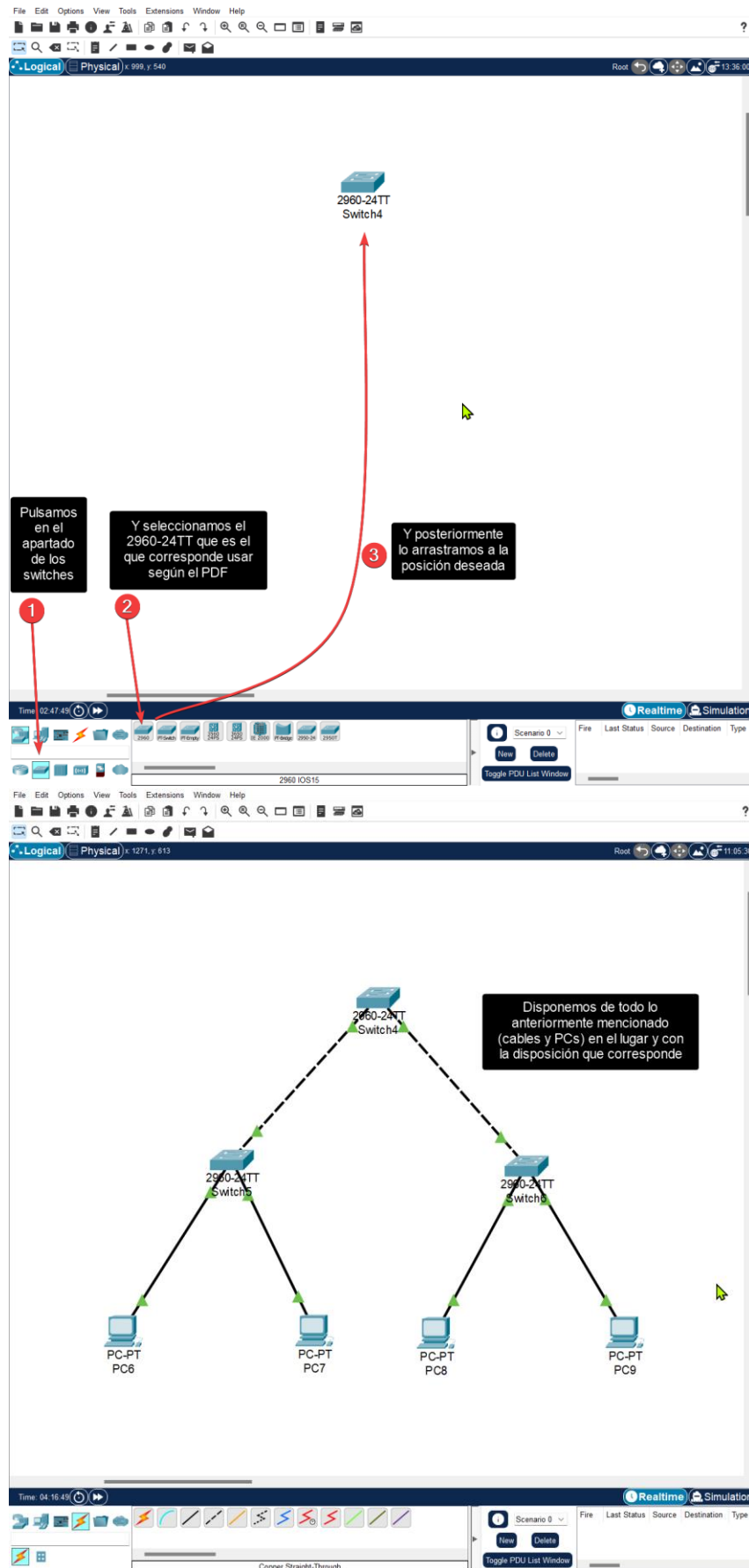
TOPOLOGÍA 1

PARTE 1

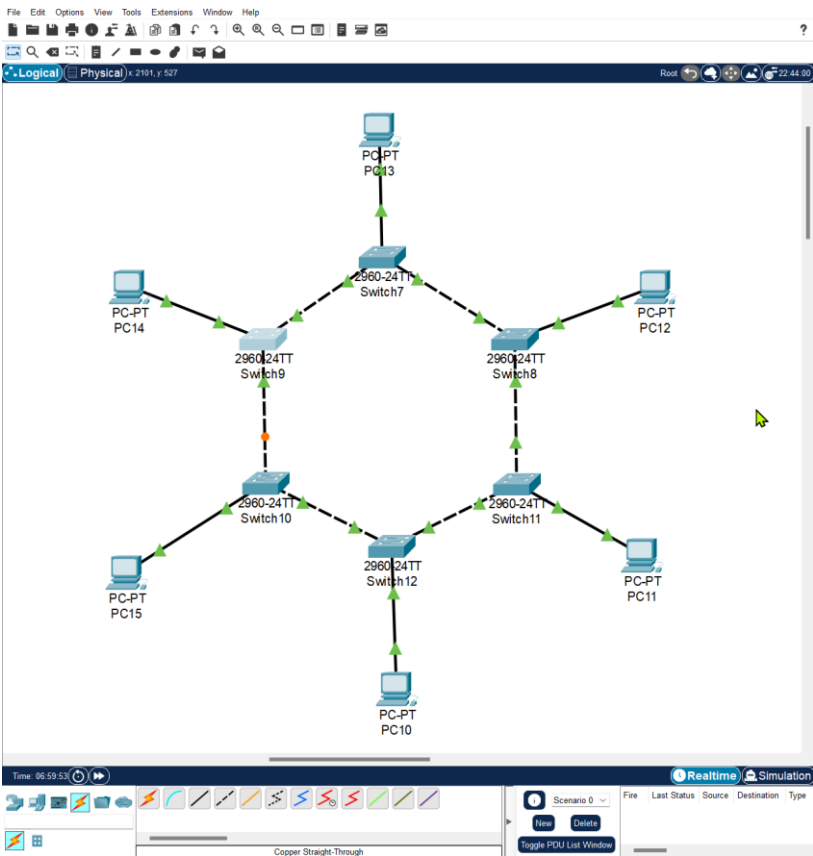




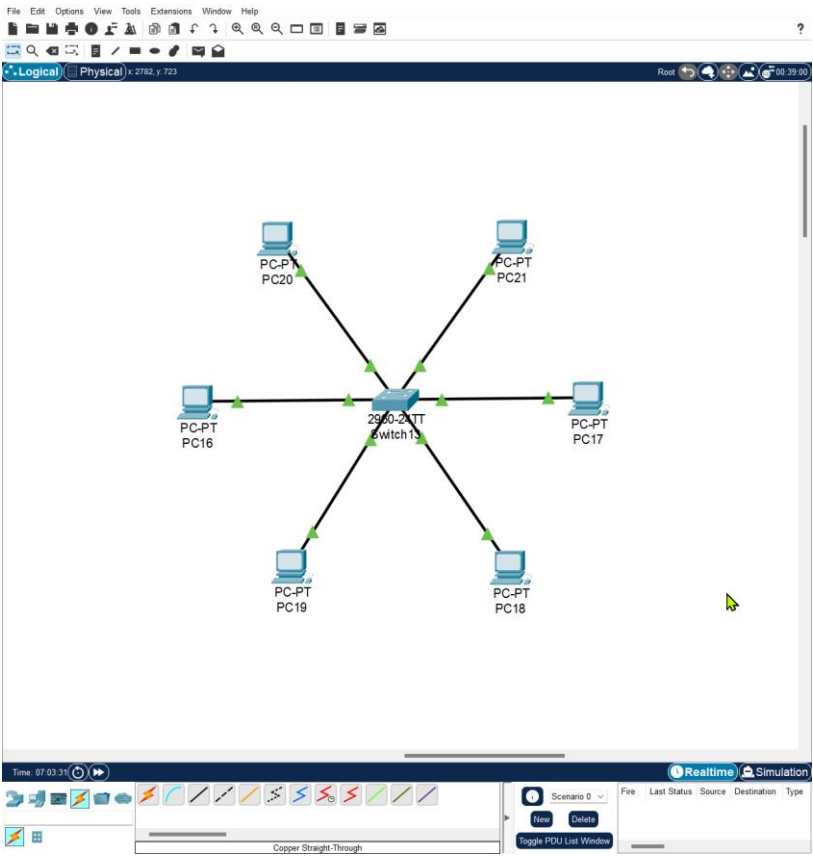
TOPOLOGÍA 2



TOPOLOGÍA 3



TOPOLOGÍA 4

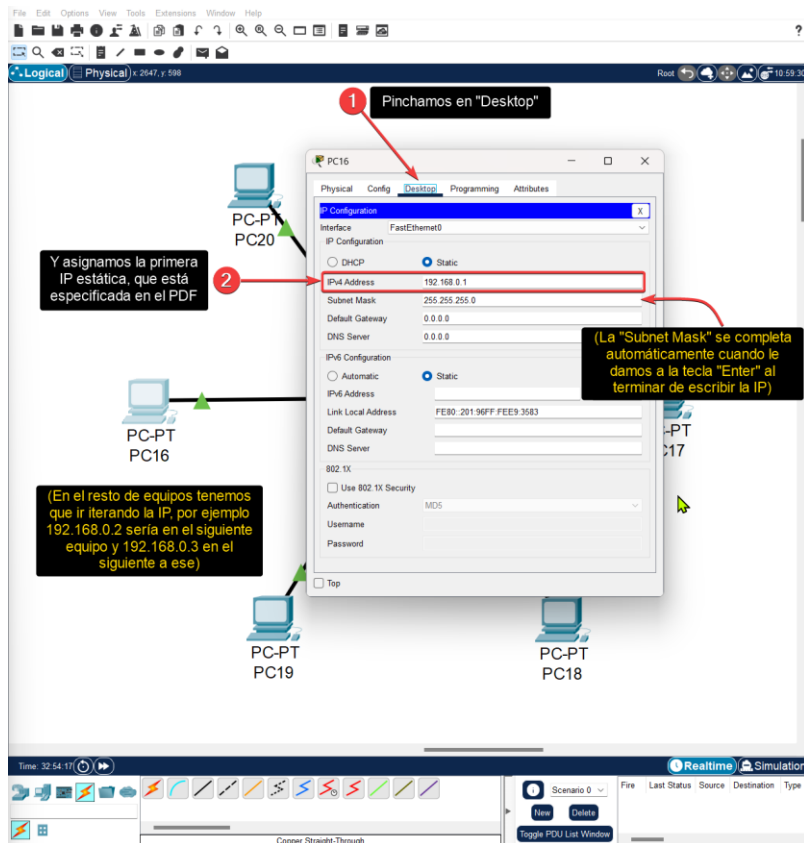


PARTE 2

The image consists of two screenshots from a network simulation software interface.

The top screenshot shows a network topology with a central switch labeled "2960-24TT Switch13". It is connected to six PCs: PC-PT PC20, PC-PT PC21, PC-PT PC17, PC-PT PC18, PC-PT PC19, and PC-PT PC16. PC16 is highlighted with a red box. A text box with an arrow pointing to PC16 contains the text: "Para asignar una IP estática a un equipo primero seleccionamos con el click izquierdo". The interface includes a menu bar (File, Edit, Options, View, Tools, Extensions, Window, Help) and a toolbar. The bottom status bar shows "Time: 32:46:43" and "Realtime Simulation".

The bottom screenshot shows the configuration window for PC16. The "Physical" tab is selected, and the "IP Configuration" icon is highlighted with a red box. A text box with an arrow pointing to the icon contains the text: "Abrimos IP Configuration". The configuration window displays a grid of icons for various network services: IP Configuration, Dial-up, Terminal, Command Prompt, Web Browser, PC Wireless, VPN, Traffic Generator, MIB Browser, Cisco IP Communicator, Email, PPPoE Dialer, Text Editor, IPv4 Firewall, IPv6 Firewall, Netflow Collector, Ix3 IDE, TFTP Service, Telnet / SSH Client, and Bluetooth. The interface includes the same menu bar and toolbar as the top screenshot. The bottom status bar shows "Time: 32:49:00" and "Realtime Simulation".



PING DE LA TOPOLOGÍA 1

```

Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=1ms TTL=128
Reply from 192.168.0.1: bytes=32 time=3ms TTL=128
Reply from 192.168.0.1: bytes=32 time=3ms TTL=128
Reply from 192.168.0.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 4ms

C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.4

Pinging 192.168.0.4 with 32 bytes of data:

Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.5

Pinging 192.168.0.5 with 32 bytes of data:

Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time=7ms TTL=128

Ping statistics for 192.168.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 7ms, Average = 1ms

C:\>ping 192.168.0.6

Pinging 192.168.0.6 with 32 bytes of data:

Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time=6ms TTL=128

Ping statistics for 192.168.0.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 6ms, Average = 1ms

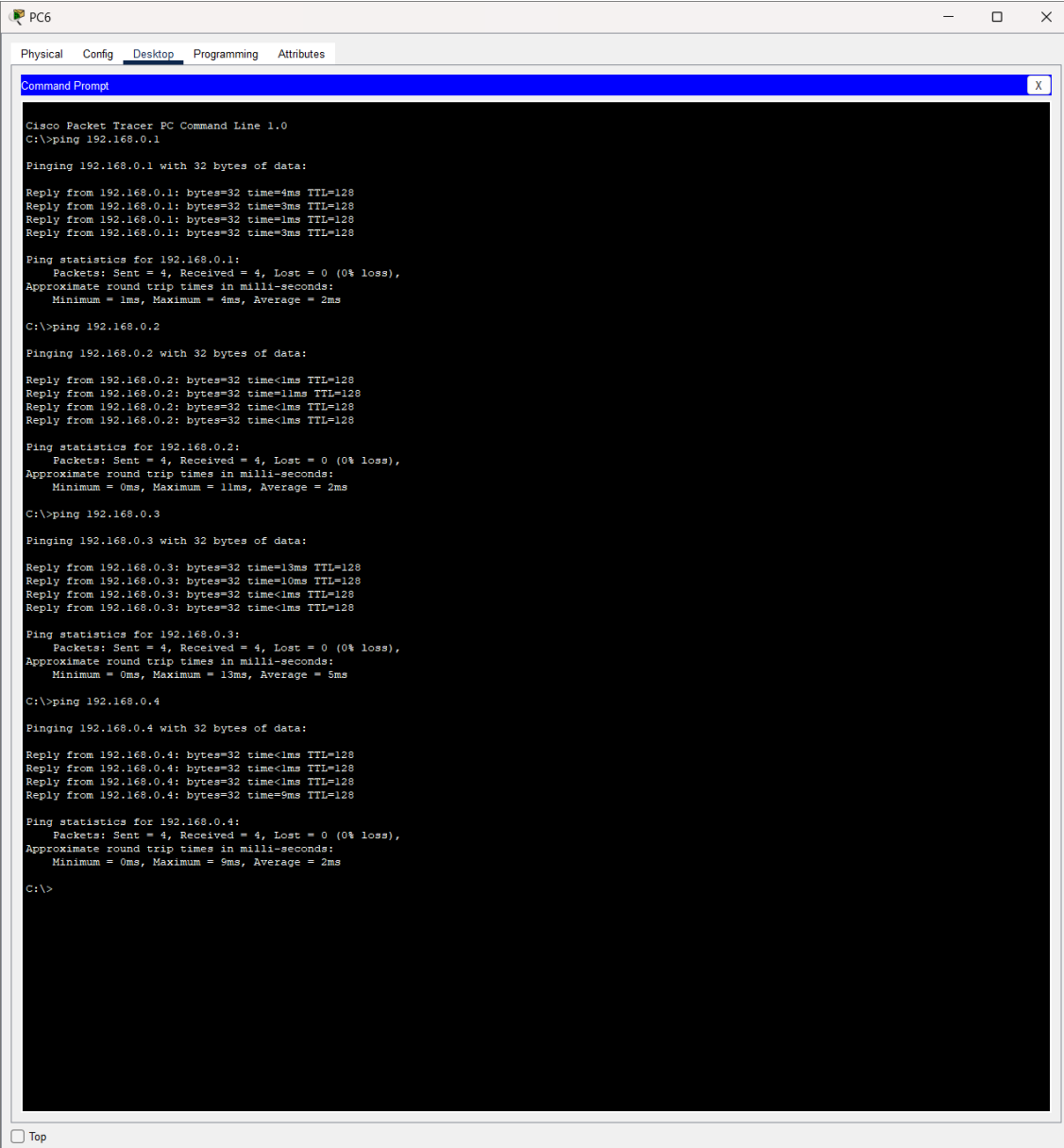
C:\>
  
```

El **ping** nos sirve en primer lugar para **probar si hay conexión** entre dos equipos conectados a una misma red, en segundo lugar, podemos ver los **paquetes que se envían** para comprobarlo, son 4 y de ellos puede que en caso de fallo se pierda alguno, además se puede medir su **velocidad** en milisegundos.

Como podemos apreciar en la foto de los ping de la topología 1, hay conexión entre todos los equipos de la red.

Para hacer el ping tenemos que irnos al comand prompt del equipo desde que queremos hacer ping a los demás equipos.

PING DE LA TOPOLOGÍA 2



The screenshot shows a Cisco Packet Tracer PC Command Line window for PC6. The window has tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active, showing a Command Prompt window. The Command Prompt displays the output of several ping commands executed from PC6 to various IP addresses in the 192.168.0.x range. Each ping command is successful, showing 4 replies with 32 bytes of data, 0% loss, and approximate round trip times in milliseconds.

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=4ms TTL=128
Reply from 192.168.0.1: bytes=32 time=3ms TTL=128
Reply from 192.168.0.1: bytes=32 time=1ms TTL=128
Reply from 192.168.0.1: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 4ms, Average = 2ms

C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time=11ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 11ms, Average = 2ms

C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time=13ms TTL=128
Reply from 192.168.0.3: bytes=32 time=10ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 13ms, Average = 5ms

C:\>ping 192.168.0.4

Pinging 192.168.0.4 with 32 bytes of data:

Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time=9ms TTL=128

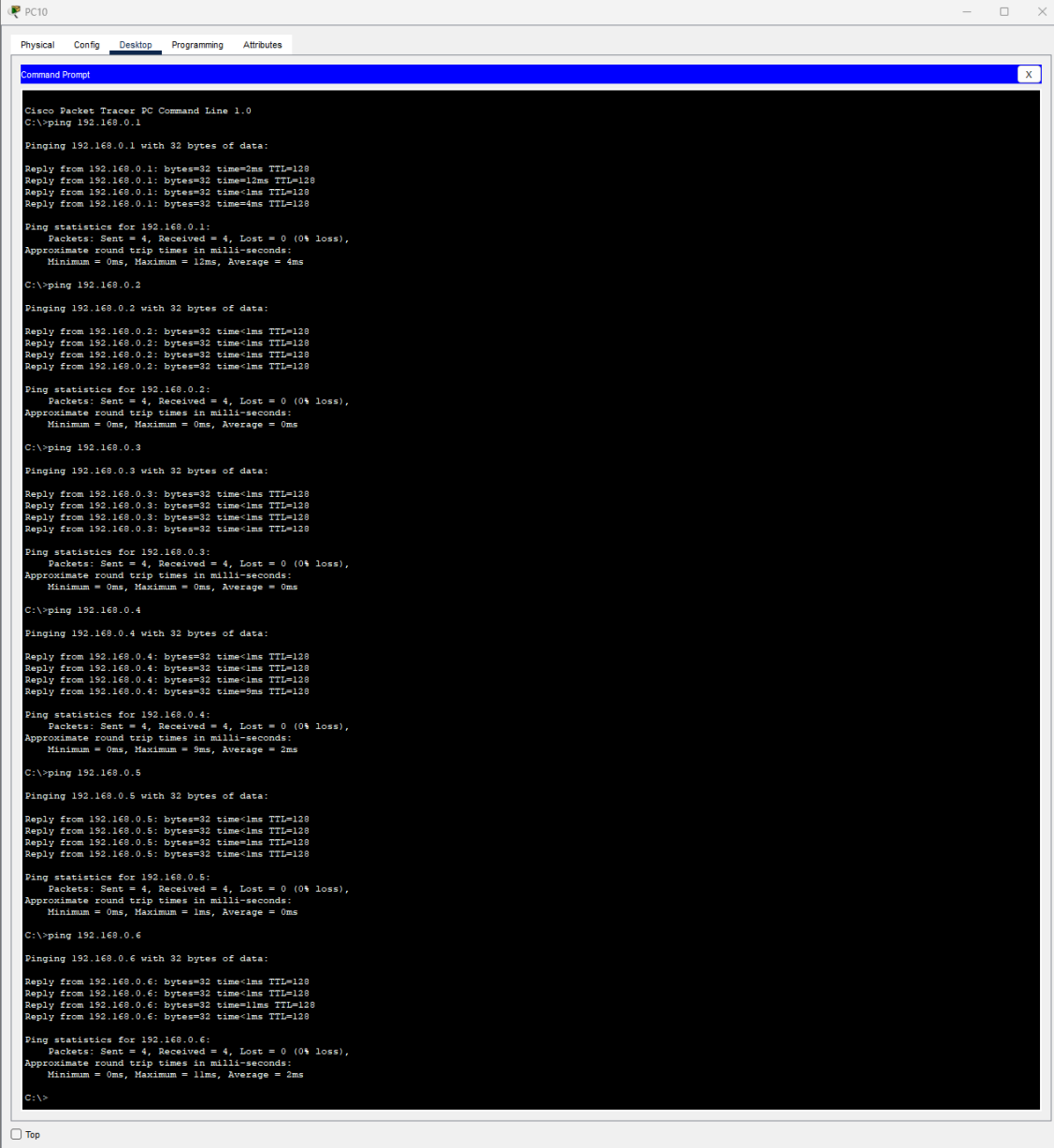
Ping statistics for 192.168.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 9ms, Average = 2ms

C:\>
```

☐ Top

Como podemos apreciar en la foto de los ping de la topología 2, hay conexión entre todos los equipos de la red.

PING DE LA TOPOLOGÍA 3



```
PC10
Physical Config Desktop Programming Attributes
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=2ms TTL=128
Reply from 192.168.0.1: bytes=32 time=12ms TTL=128
Reply from 192.168.0.1: bytes=32 time=1ms TTL=128
Reply from 192.168.0.1: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 12ms, Average = 4ms

C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 192.168.0.4

Pinging 192.168.0.4 with 32 bytes of data:

Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 2ms

C:\>ping 192.168.0.5

Pinging 192.168.0.5 with 32 bytes of data:

Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.0.6

Pinging 192.168.0.6 with 32 bytes of data:

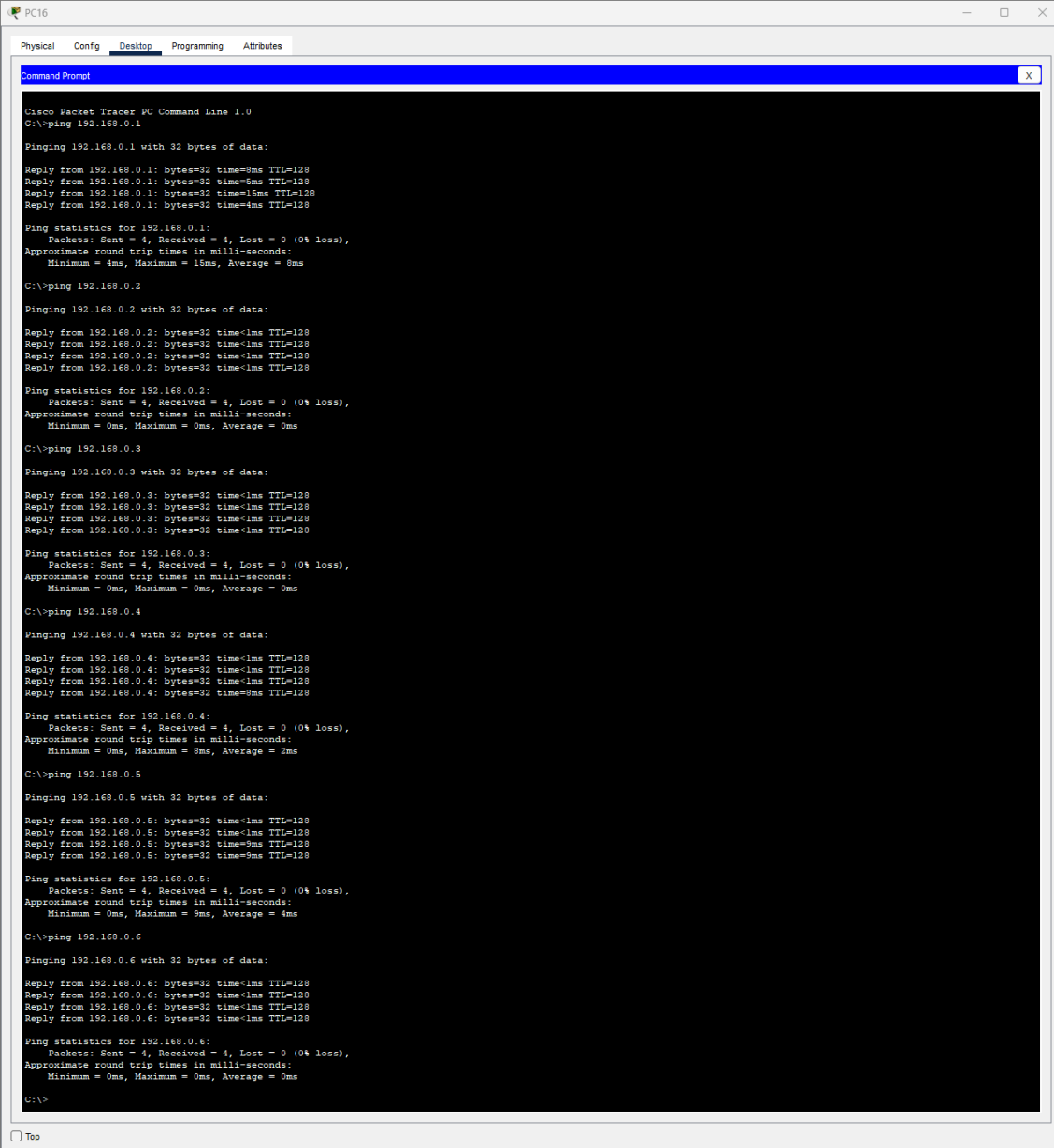
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time=11ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 11ms, Average = 2ms

C:\>
```

Como podemos apreciar en la foto de los ping de la topología 3, hay conexión entre todos los equipos de la red.

PING DE LA TOPOLOGÍA 4



The screenshot shows a Cisco Packet Tracer PC Command Line window for a device named PC16. The window has tabs for Physical, Config, Desktop, Programming, and Attributes, with Desktop selected. The Command Prompt shows the following output:

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=8ms TTL=128
Reply from 192.168.0.1: bytes=32 time=5ms TTL=128
Reply from 192.168.0.1: bytes=32 time=15ms TTL=128
Reply from 192.168.0.1: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 4ms, Maximum = 15ms, Average = 8ms
C:\>ping 192.168.0.2

Pinging 192.168.0.2 with 32 bytes of data:

Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128
Reply from 192.168.0.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:

Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128
Reply from 192.168.0.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 192.168.0.4

Pinging 192.168.0.4 with 32 bytes of data:

Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time<1ms TTL=128
Reply from 192.168.0.4: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 8ms, Average = 2ms
C:\>ping 192.168.0.5

Pinging 192.168.0.5 with 32 bytes of data:

Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time<1ms TTL=128
Reply from 192.168.0.5: bytes=32 time=5ms TTL=128
Reply from 192.168.0.5: bytes=32 time=5ms TTL=128

Ping statistics for 192.168.0.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 5ms, Average = 4ms
C:\>ping 192.168.0.6

Pinging 192.168.0.6 with 32 bytes of data:

Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128
Reply from 192.168.0.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.0.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>
```

At the bottom left of the window, there is a checkbox labeled "Top" which is currently unchecked.

Como podemos apreciar en la foto de los ping de la topología 4, hay conexión entre todos los equipos de la red.

