



Instituto Tecnológico de Salina Cruz

Fundamentos de Redes

Semestre enero – julio 2015

Reporte de Practica

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Practica nº 4

Unidad 2

Objetivo:

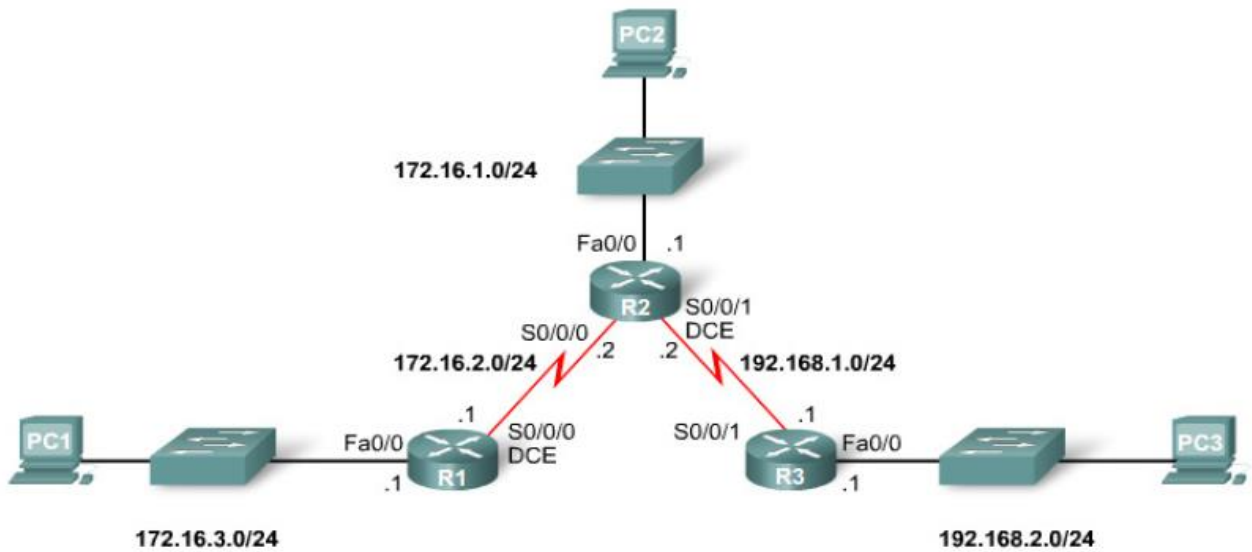
Identificar el enrutamiento estático y dinámico, además de aplicar el enrutamiento estático a una red WAN.

Instrucciones:

- 1.- Cambiar de nombre a los dispositivos.
- 2.- configurar banner a ambos router's.
- 3.- levantar los puertos fa0 a ambos routers.
- 4.- levantar los seriales de ambos routers.
6. Comprobar conexiones por medio de ping.

Materiales:

- 1.- computadora.
- 2.- Packet tracert.



1. Construir la tabla de direccionamiento

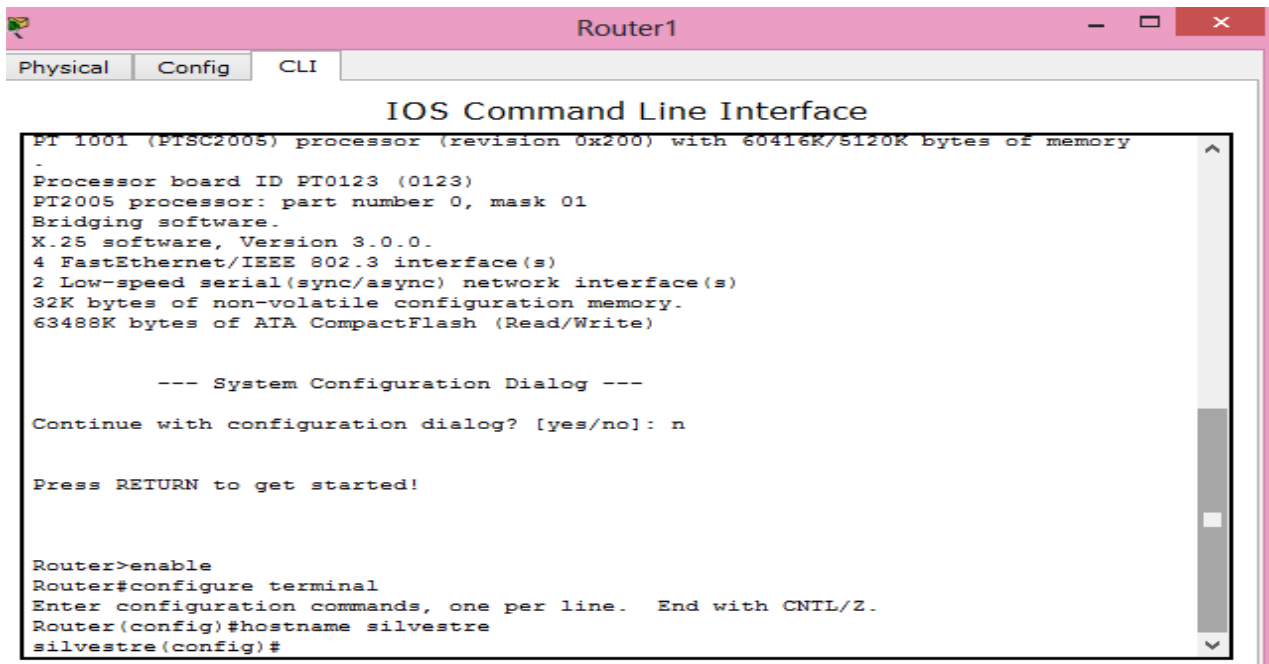
Dispositivo	Interfaz	Dirección IP	Mascara de subred	Gateway
R1	Fa0/0	172.16.3.1	255.255.0.0	No aplicable
	Sa2/0	192.16.3.1	255.255.0.0	No aplicable
R2	Fa0/0	172.16.1.1	255.255.0.0	No aplicable
	Sa2/0	192.168.1.1	255.255.255.0	No aplicable
	Sa3/0	192.16.1.5	255.255.255.0	No aplicable
R3	Fa0/0	192.168.2.1	255.255.255.0	No aplicable
	Sa2/0	192.168.1.2	255.255.255.0	No aplicable
PC1	No aplicable	172.16.3.10	255.255.0.0	172.16.3.1
PC2	No aplicable	172.16.1.10	255.255.0.0	172.16.1.1
PC3	No aplicable	192.168.2.10	255.255.255.0	192.168.2.1

2. Realizar la configuración inicial

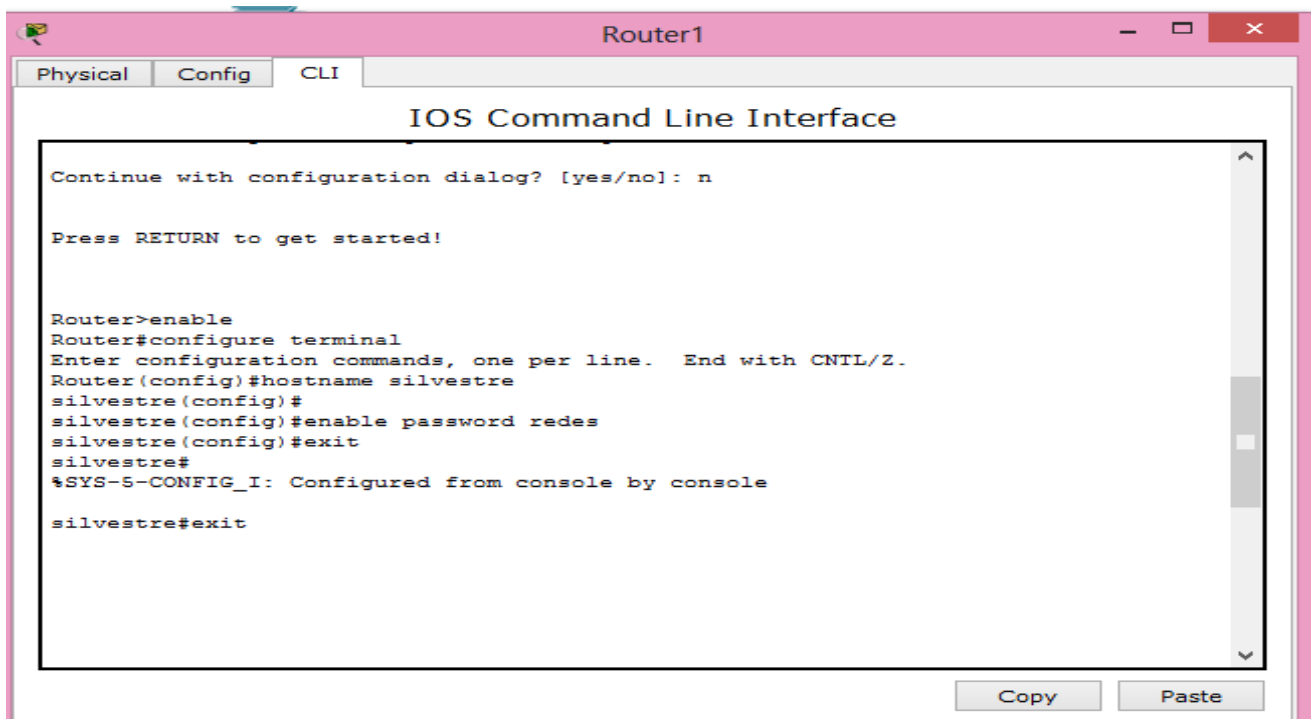
Par ello es necesario aplicarle a todos los dispositivos.

Router 1.

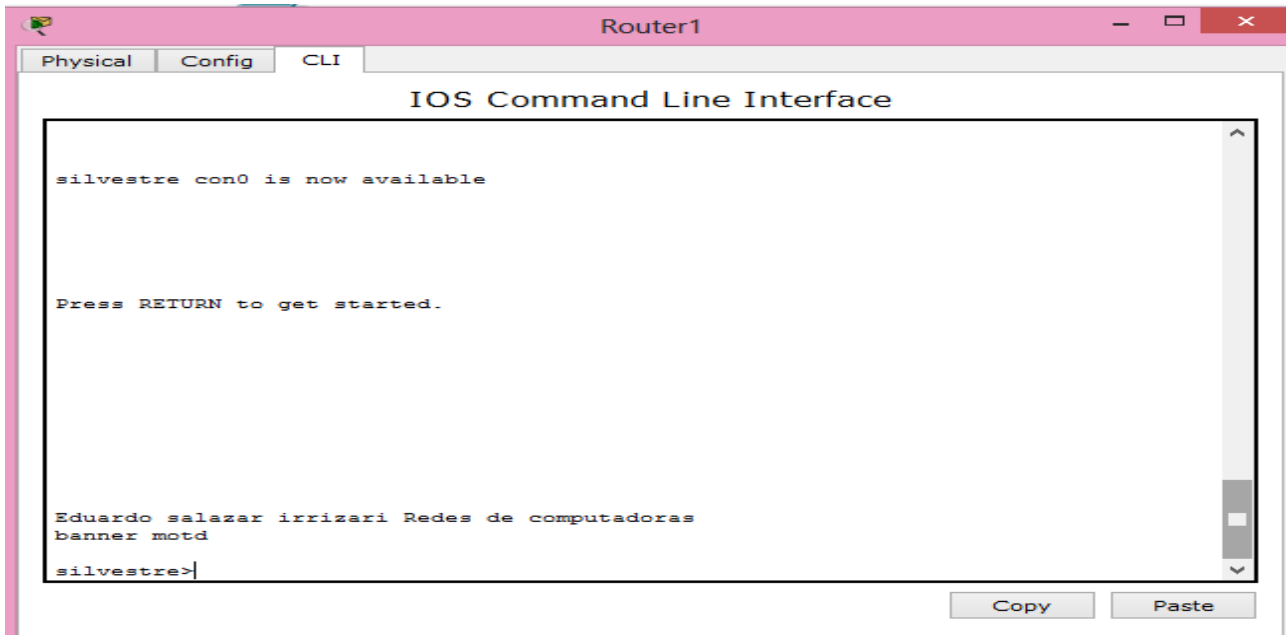
Primero cambiamos el nombre.



Después le asignamos una contraseña.



Posteriormente le asignamos un banner.



The screenshot shows the Router1 CLI interface. The title bar reads "Router1". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The terminal output shows the following commands and responses:

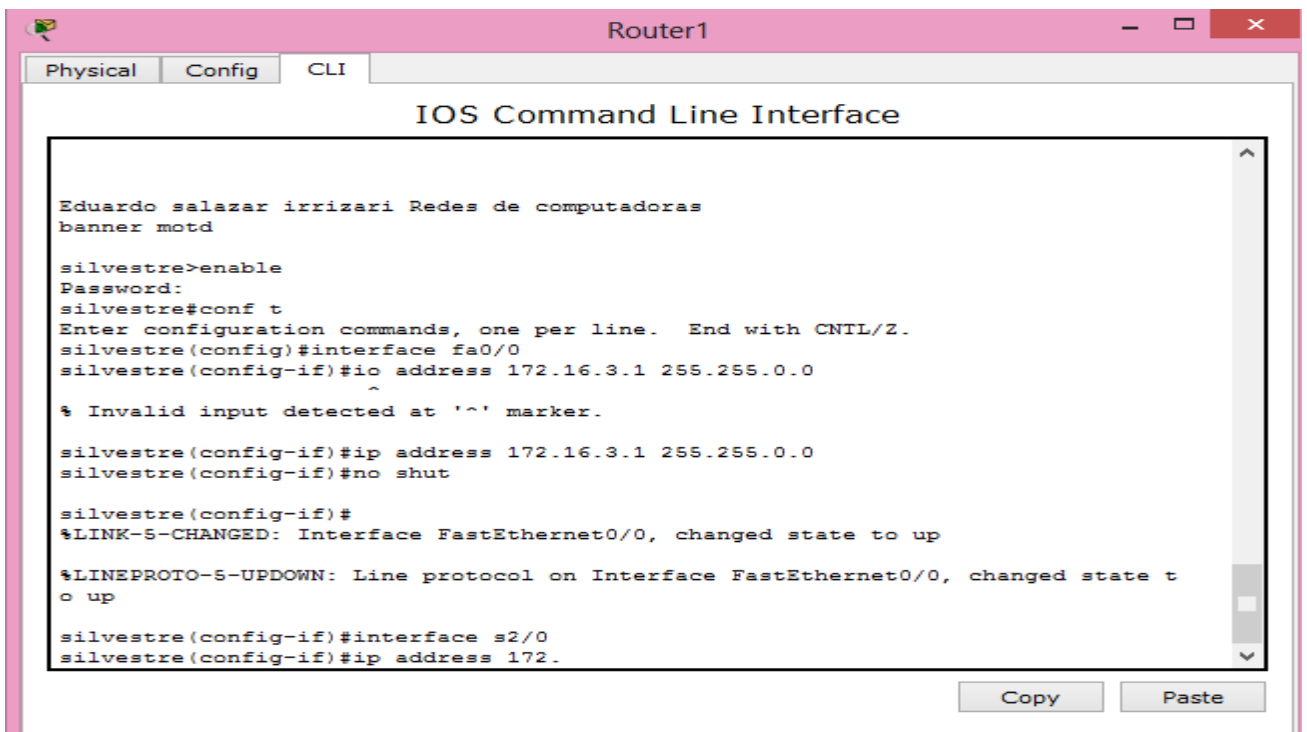
```
silvestre con0 is now available

Press RETURN to get started.

Eduardo salazar irrizari Redes de computadoras
banner motd
silvestre>
```

At the bottom right of the terminal window, there are "Copy" and "Paste" buttons.

Después levantar los puertos fa0/0.



The screenshot shows the Router1 CLI interface. The title bar reads "Router1". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The terminal output shows the following commands and responses:

```
Eduardo salazar irrizari Redes de computadoras
banner motd

silvestre>enable
Password:
silvestre#conf t
Enter configuration commands, one per line. End with CNTL/Z.
silvestre(config)#interface fa0/0
silvestre(config-if)#ip address 172.16.3.1 255.255.0.0
^
% Invalid input detected at '^' marker.

silvestre(config-if)#ip address 172.16.3.1 255.255.0.0
silvestre(config-if)#no shut

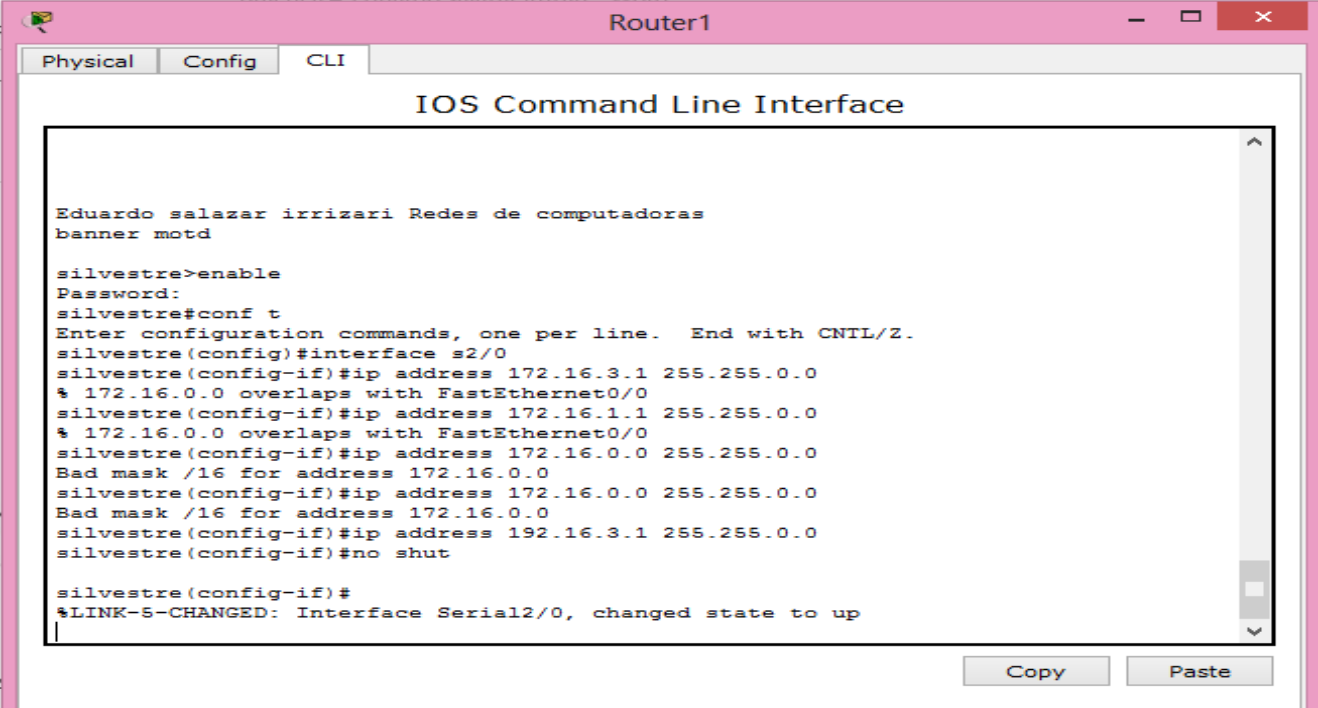
silvestre(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state t
o up

silvestre(config-if)#interface s2/0
silvestre(config-if)#ip address 172.
```

At the bottom right of the terminal window, there are "Copy" and "Paste" buttons.

Luego levantamos el serial 2/0.



```
Router1
Physical Config CLI
IOS Command Line Interface

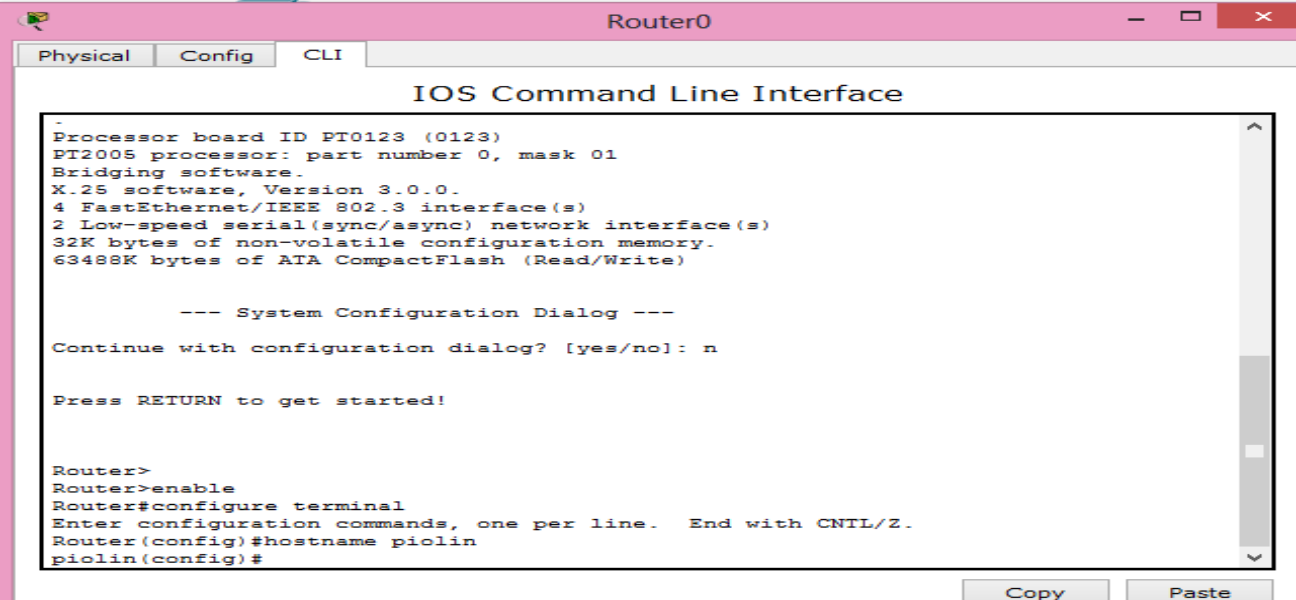
Eduardo salazar irrizari Redes de computadoras
banner motd

silvestre>enable
Password:
silvestre#conf t
Enter configuration commands, one per line. End with CNTL/Z.
silvestre(config)#interface s2/0
silvestre(config-if)#ip address 172.16.3.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
silvestre(config-if)#ip address 172.16.1.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
silvestre(config-if)#ip address 172.16.0.0 255.255.0.0
Bad mask /16 for address 172.16.0.0
silvestre(config-if)#ip address 172.16.0.0 255.255.0.0
Bad mask /16 for address 172.16.0.0
silvestre(config-if)#ip address 192.16.3.1 255.255.0.0
silvestre(config-if)#no shut

silvestre(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
```

Router 2.

Primeramente cambiamos el nombre.



```
Router0
Physical Config CLI
IOS Command Line Interface

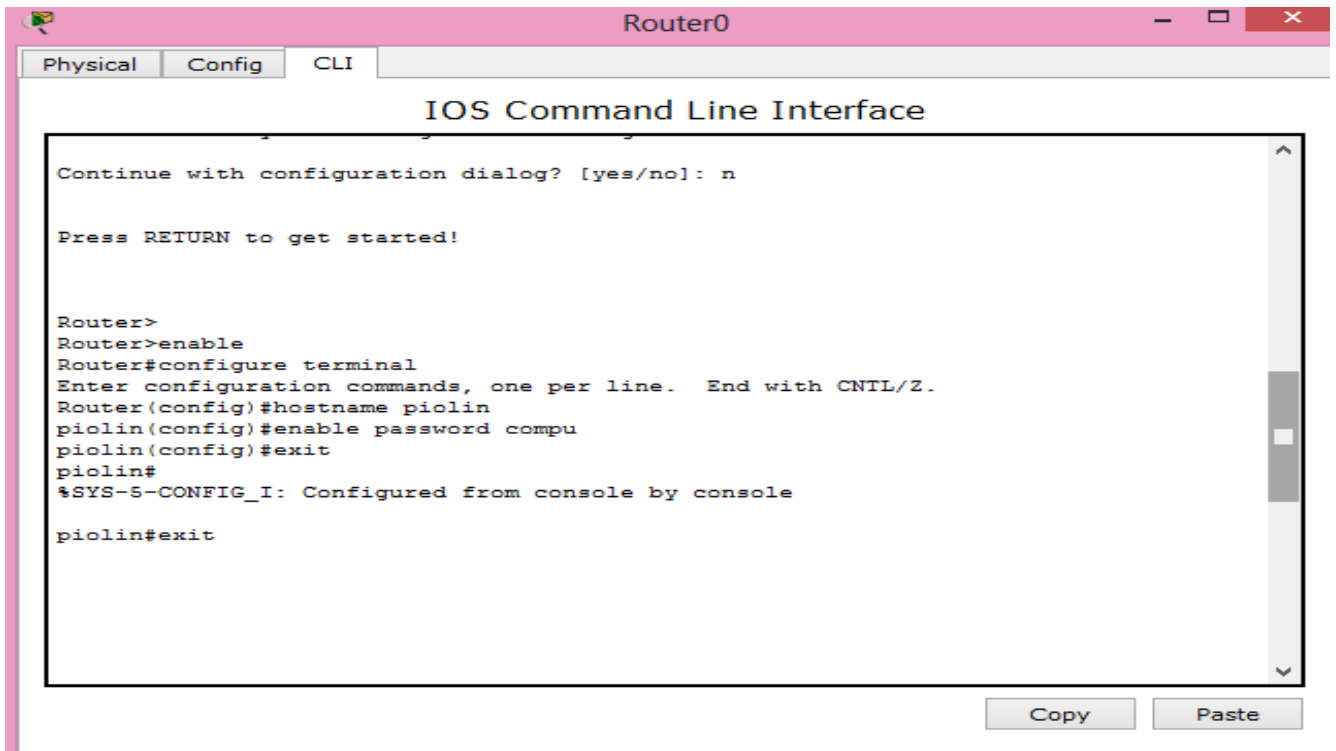
-
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

Router>
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname piolin
piolin(config)#
```

Después le asignamos una contraseña.



The screenshot shows the Router0 CLI interface with the following text:

```
Continue with configuration dialog? [yes/no]: n

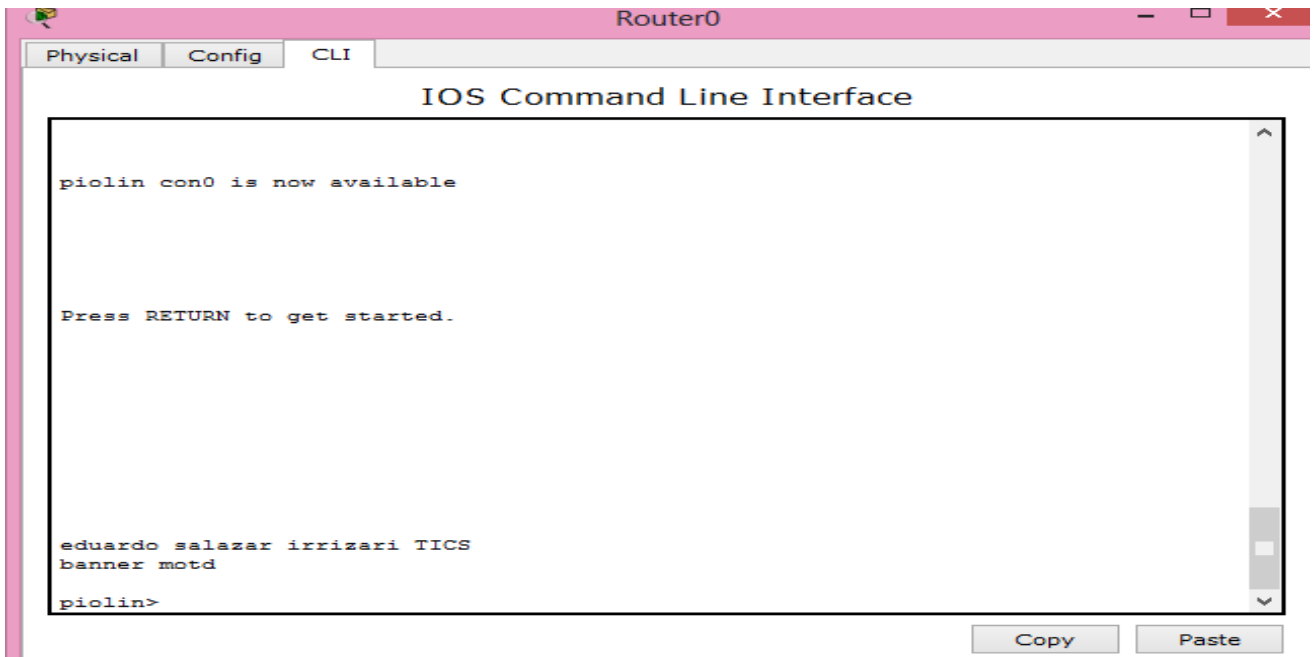
Press RETURN to get started!

Router>
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname piolin
piolin(config)#enable password compu
piolin(config)#exit
piolin#
%SYS-5-CONFIG_I: Configured from console by console

piolin#exit
```

Buttons for Copy and Paste are visible at the bottom right of the terminal window.

Luego le asignamos un banner.



The screenshot shows the Router0 CLI interface with the following text:

```
piolin con0 is now available

Press RETURN to get started.

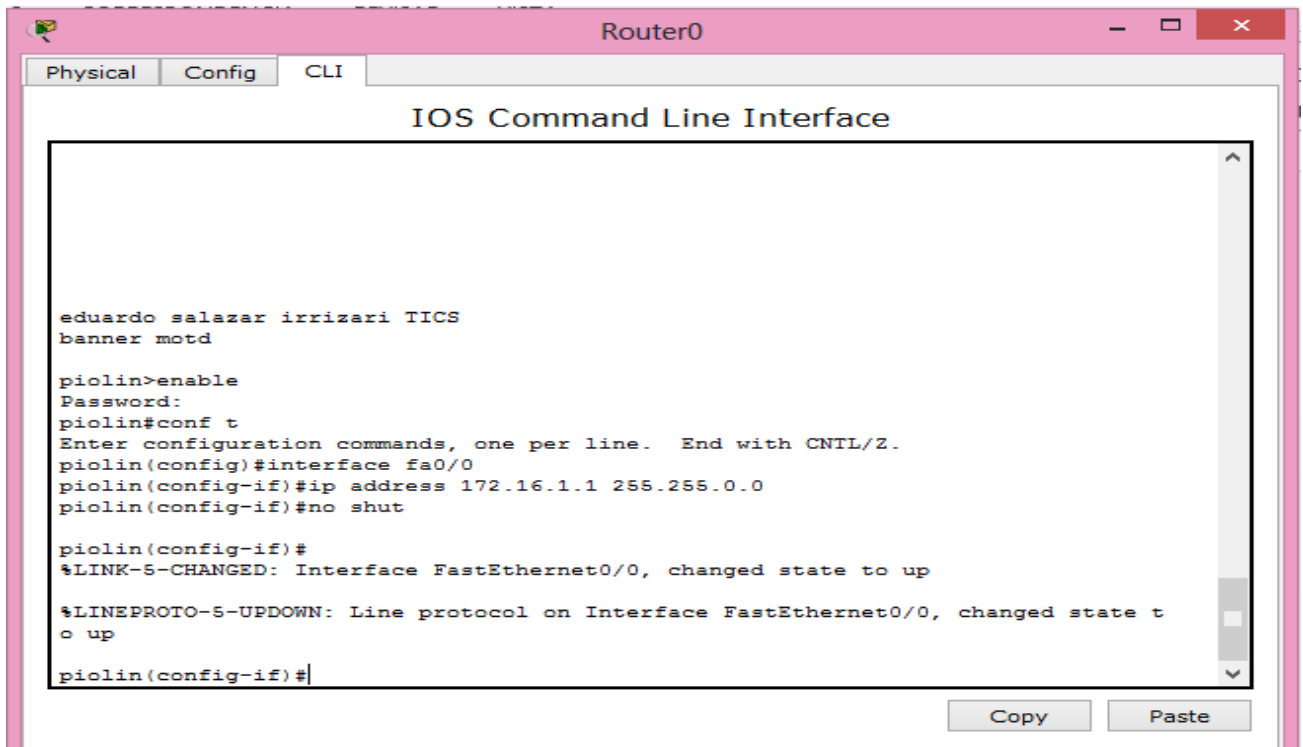
eduardo salazar irrizari TICS
banner motd

piolin>
```

Buttons for Copy and Paste are visible at the bottom right of the terminal window.

3. Levantar los puertos seriales y los FastEthernet

Posteriormente se levanta el puerto fa0/0.



The screenshot shows the Router0 CLI interface. The user has entered the following commands:

```
eduardo salazar irrizari TICS
banner motd

piolin>enable
Password:
piolin#conf t
Enter configuration commands, one per line. End with CNTL/Z.
piolin(config)#interface fa0/0
piolin(config-if)#ip address 172.16.1.1 255.255.0.0
piolin(config-if)#no shut

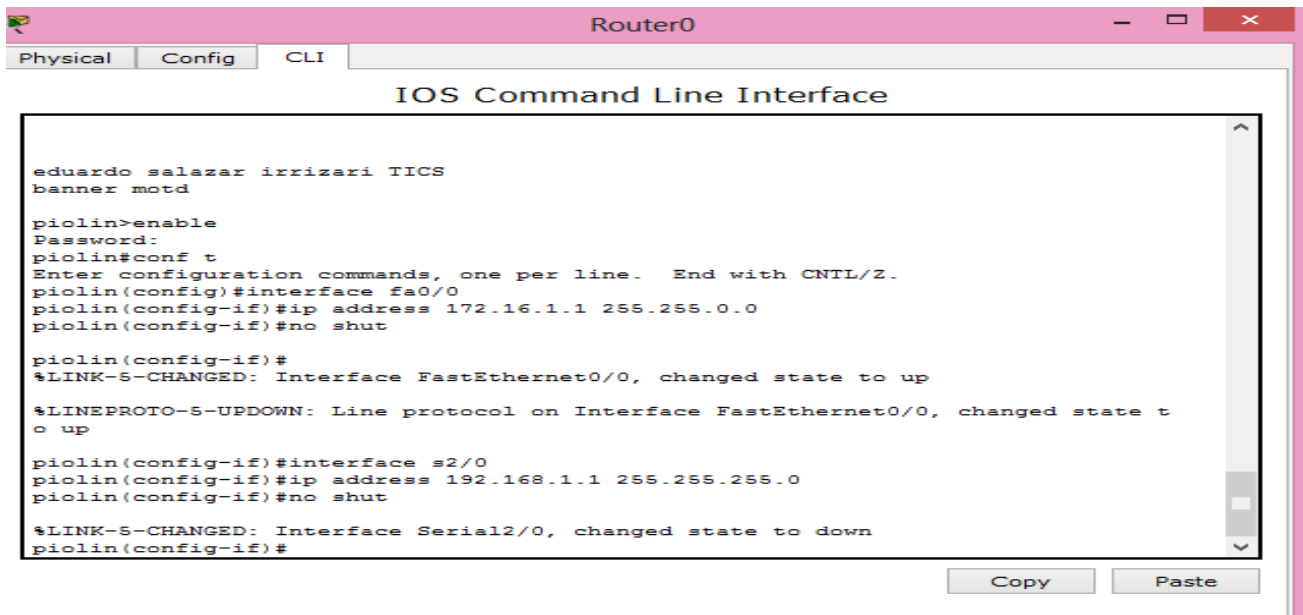
piolin(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

piolin(config-if)#
```

Buttons for Copy and Paste are visible at the bottom right of the terminal window.

Después levantamos los seriales 2/0.



The screenshot shows the Router0 CLI interface. The user has entered the following commands:

```
eduardo salazar irrizari TICS
banner motd

piolin>enable
Password:
piolin#conf t
Enter configuration commands, one per line. End with CNTL/Z.
piolin(config)#interface fa0/0
piolin(config-if)#ip address 172.16.1.1 255.255.0.0
piolin(config-if)#no shut

piolin(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

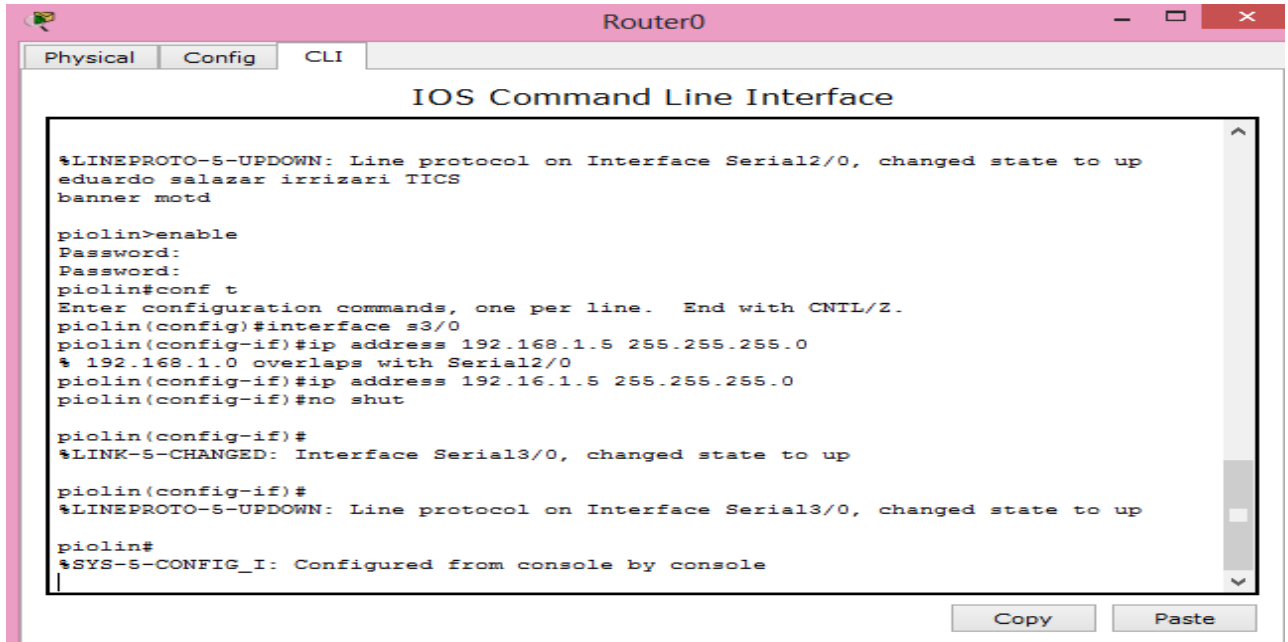
piolin(config-if)#interface s2/0
piolin(config-if)#ip address 192.168.1.1 255.255.255.0
piolin(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down

piolin(config-if)#
```

Buttons for Copy and Paste are visible at the bottom right of the terminal window.

Para poder realizar la conexión con el otro router es necesario levantar el serial 3/0, como se muestra.



```
Router0
Physical Config CLI
IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
eduardo salazar irrizari TICS
banner motd

piolin>enable
Password:
Password:
piolin#conf t
Enter configuration commands, one per line. End with CNTL/Z.
piolin(config)#interface s3/0
piolin(config-if)#ip address 192.168.1.5 255.255.255.0
% 192.168.1.0 overlaps with Serial2/0
piolin(config-if)#ip address 192.16.1.5 255.255.255.0
piolin(config-if)#no shut

piolin(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

piolin(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up

piolin#
%SYS-5-CONFIG_I: Configured from console by console
```

Luego realizamos lo mismo con el router 3.

Cambiamos el nombre del dispositivo.

The screenshot shows the Router2 CLI interface with the following text:

```
PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
-
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname eskipex
eskipex(config)#
```

Buttons for Copy and Paste are visible at the bottom right.

Posteriormente le asignamos una contraseña.

The screenshot shows the Router2 CLI interface with the following text:

```
Continue with configuration dialog? [yes/no]: n

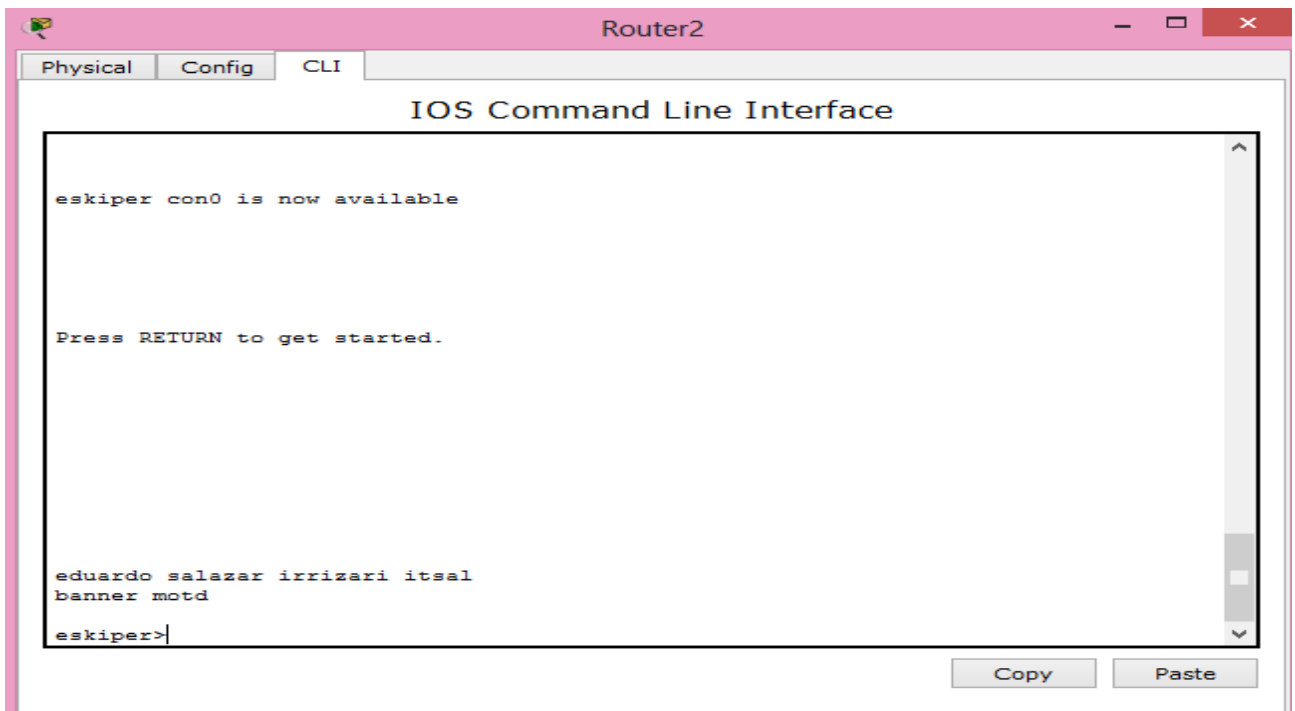
Press RETURN to get started!

Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname eskipex
eskipex(config)#enable password tics
eskipex(config)#exit
eskipex#
%SYS-5-CONFIG_I: Configured from console by console

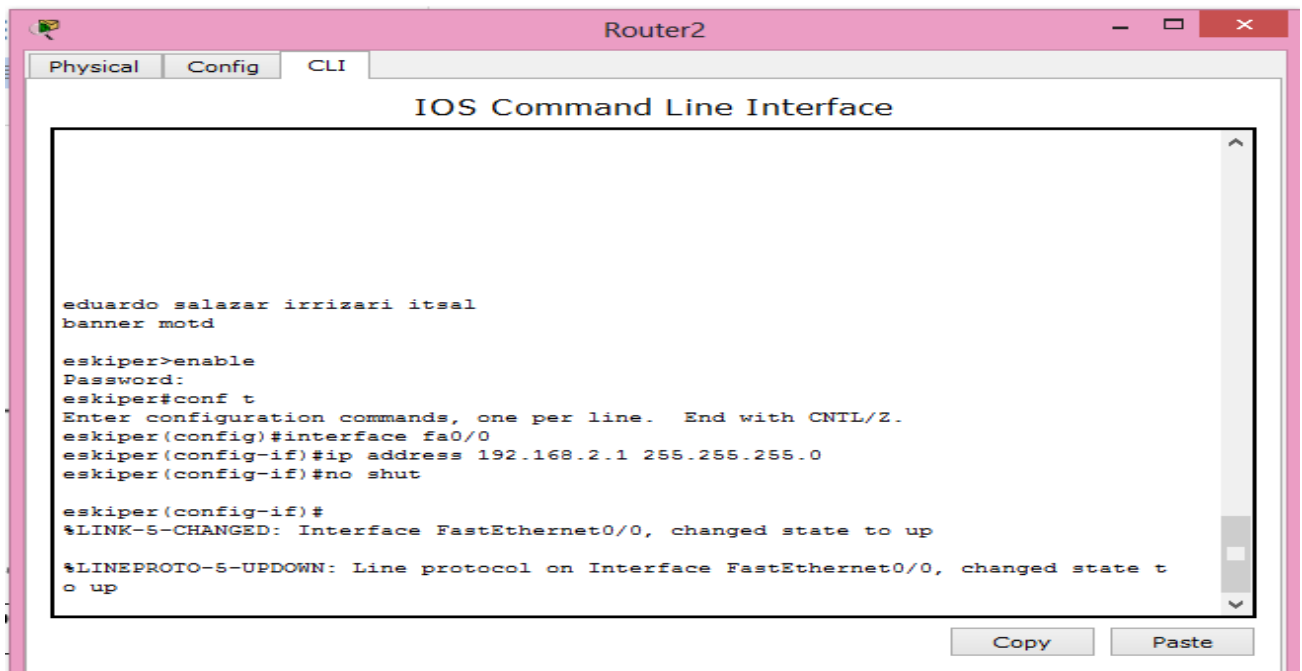
eskipex#exit
```

Buttons for Copy and Paste are visible at the bottom right.

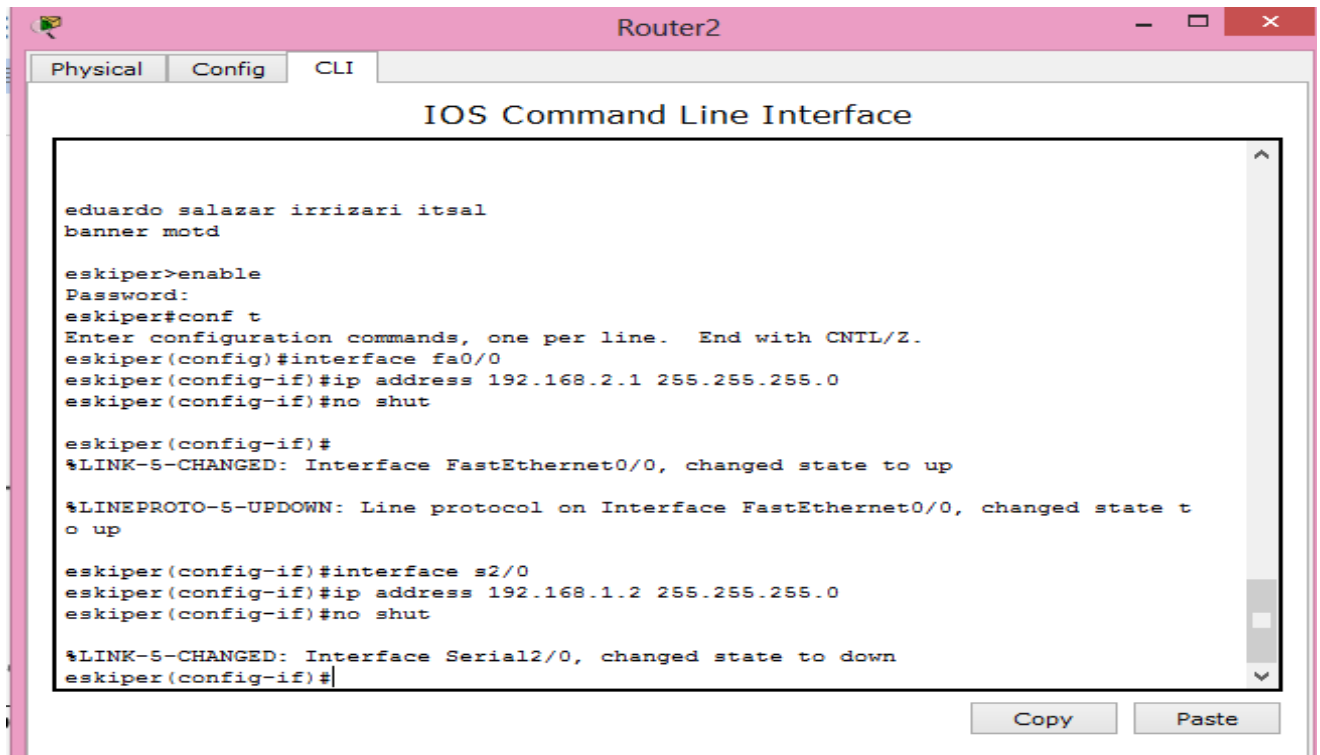
Después le agregamos un banner.



Posteriormente procedemos a levantar el puerto fa0/0.



Después levantamos el serial 2/0.



The screenshot shows a terminal window titled "Router2" with tabs for "Physical", "Config", and "CLI". The main content is the "IOS Command Line Interface" showing the following commands and output:

```
eduardo salazar irrizari itsal
banner motd

eskipper>enable
Password:
eskipper#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
eskipper(config)#interface fa0/0
eskipper(config-if)#ip address 192.168.2.1 255.255.255.0
eskipper(config-if)#no shut

eskipper(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

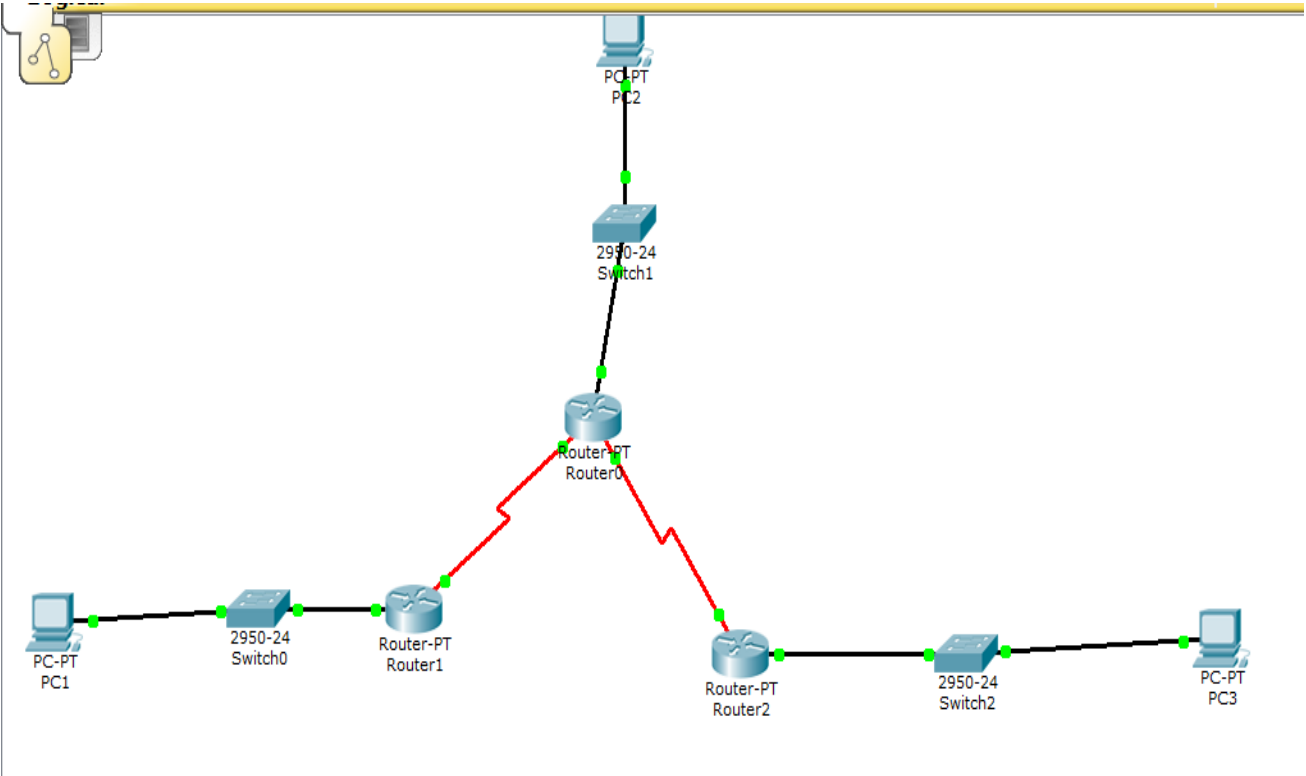
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

eskipper(config-if)#interface s2/0
eskipper(config-if)#ip address 192.168.1.2 255.255.255.0
eskipper(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
eskipper(config-if)#
```

At the bottom right of the terminal window, there are "Copy" and "Paste" buttons.

Terminando todo esto podemos observar como ya están en verde todos los dispositivos, por consiguiente están conectados.



CONCLUSIÓN

Básicamente esta práctica es algo que tenemos que seguir con la práctica anterior, ya que es lo mismo que se hizo anteriormente, es cuestión de estar levantando puertos para poder conectar los dispositivos. Cabe mencionar que en el router 2 es necesario levantar los dos seriales para que se conecten los 3 routers, si no se hace así solo conectara con uno.