

**INSTITUTO TÉCNICO DE SALINA CRUZ**

**REDES DE COMPUTADORA**

**SEMESTRE FEBRERO-AGOSTO 2015**

**REPORTE DE PRÁCTICAS**

**PRACTICA N°: 2**

**UNIDAD: 3**

**FECHA: 28 DE ABRIL DE 2015**

**NOMBRE: EDUARDO SALAZAR IRRIZARI**

Objetivo:

Identificar el concepto de enrutamiento vector-distancia. Implementar redes WAN.

Instrucciones.

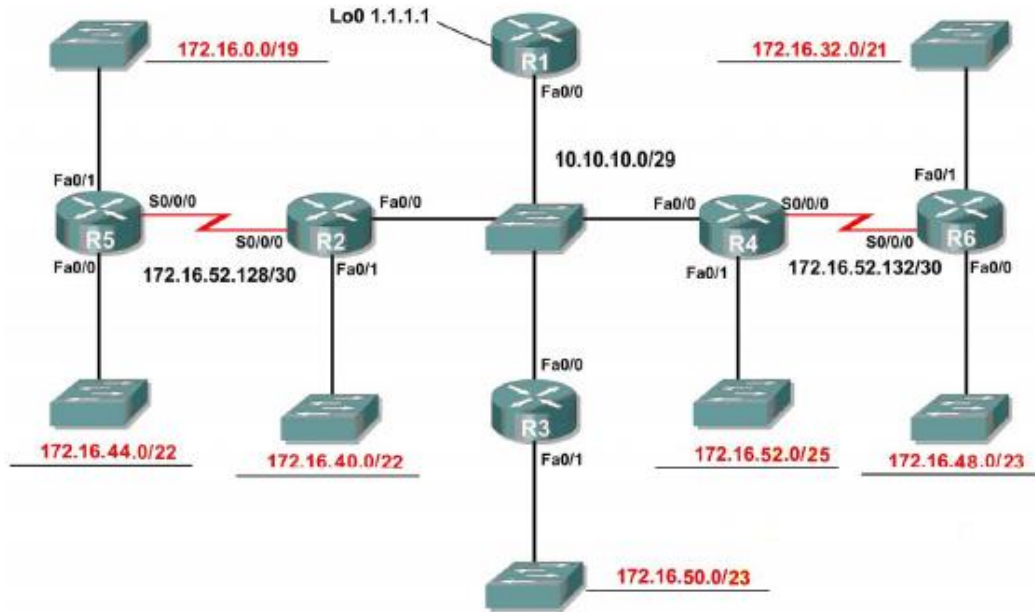
- 1.- Crear la tabla de enrutamiento de acuerdo a la imagen.
- 2.- realizar configuraciones iniciales a los routers.
- 3.- Comprobar las conexiones mediante ping.

Materiales.

- 1.- Computadora.
- 2.- Packet Tracert.
- 3.- Silla

Practica No.2 Unidad 3

Diagrama de topología



| Dispositivo | Interfaz     | Dirección IP   | Mascara de subred | Gateway      |
|-------------|--------------|----------------|-------------------|--------------|
| Corona(R1)  | Fa0/0        | 10.10.10.1     | 255.0.0.0         | No aplicable |
| Cata(R2)    | Fa0/0        | 10.10.10.2     | 255.0.0.0         | No aplicable |
|             | fa1/0        | 172.16.40.1    | 255.255.0.0       |              |
| Maza(R3)    | Sa2/0        | 192.16.52.128  | 255.255.0.0       | No aplicable |
|             | Fa0/0        | 10.10.10.10.3  | 255.0.0.0         |              |
| Torrado(R4) | Fa1/0        | 172.16.50.1    | 255.255.0.0       | No aplicable |
|             | Fa0/0        | 10.10.10.4     | 255.0.0.0         |              |
|             | S2/0         | 192.16.52.1    | 255.255.0.0       |              |
| Chaco(R5)   | Fa1/0        | 172.16.44.1    | 255.255.0.0       | No aplicable |
|             | Fa0/0        | 172.16.0.1     | 255.255.0.0       |              |
|             | S2/0         | 172.168.52.129 | 255.255.0.0       |              |
| Roque(R6)   | Fa1/0        | 172.16.32.1    | 255.255.0.0       | No aplicable |
|             | Fa0/0        | 172.16.48.1    | 255.255.0.0       |              |
|             | S2/0         | 192.16.52.2    | 255.255.0.0       |              |
| PC1         | No aplicable | 172.16.0.10    | 255.255.0.0       | 172.16.0.1   |
| PC2         | No aplicable | 172.16.0.11    | 255.255.0.0       | 172.16.0.1   |

|      |              |              |             |             |
|------|--------------|--------------|-------------|-------------|
| PC3  | No aplicable | 172.16.44.10 | 255.255.0.0 | 172.16.44.1 |
| PC4  | No aplicable | 172.16.44.11 | 255.255.0.0 | 172.16.44.1 |
| PC5  | No aplicable | 172.16.40.10 | 255.255.0.0 | 172.16.40.1 |
| PC6  | No aplicable | 172.16.40.11 | 255.255.0.0 | 172.16.40.1 |
| PC7  | No aplicable | 172.16.50.10 | 255.255.0.0 | 172.16.50.1 |
| PC8  | No aplicable | 172.16.50.11 | 255.255.0.0 | 172.16.50.1 |
| PC9  | No aplicable | 172.16.52.10 | 255.255.0.0 | 172.16.52.1 |
| PC10 | No aplicable | 172.16.52.11 | 255.255.0.0 | 172.16.52.1 |
| PC11 | No aplicable | 172.16.48.10 | 255.255.0.0 | 172.16.48.1 |
| PC12 | No aplicable | 172.16.48.11 | 255.255.0.0 | 172.16.48.1 |
| PC13 | No aplicable | 172.16.32.10 | 255.255.0.0 | 172.16.32.1 |
| PC14 | No aplicable | 172.16.32.11 | 255.255.0.0 | 172.16.32.1 |

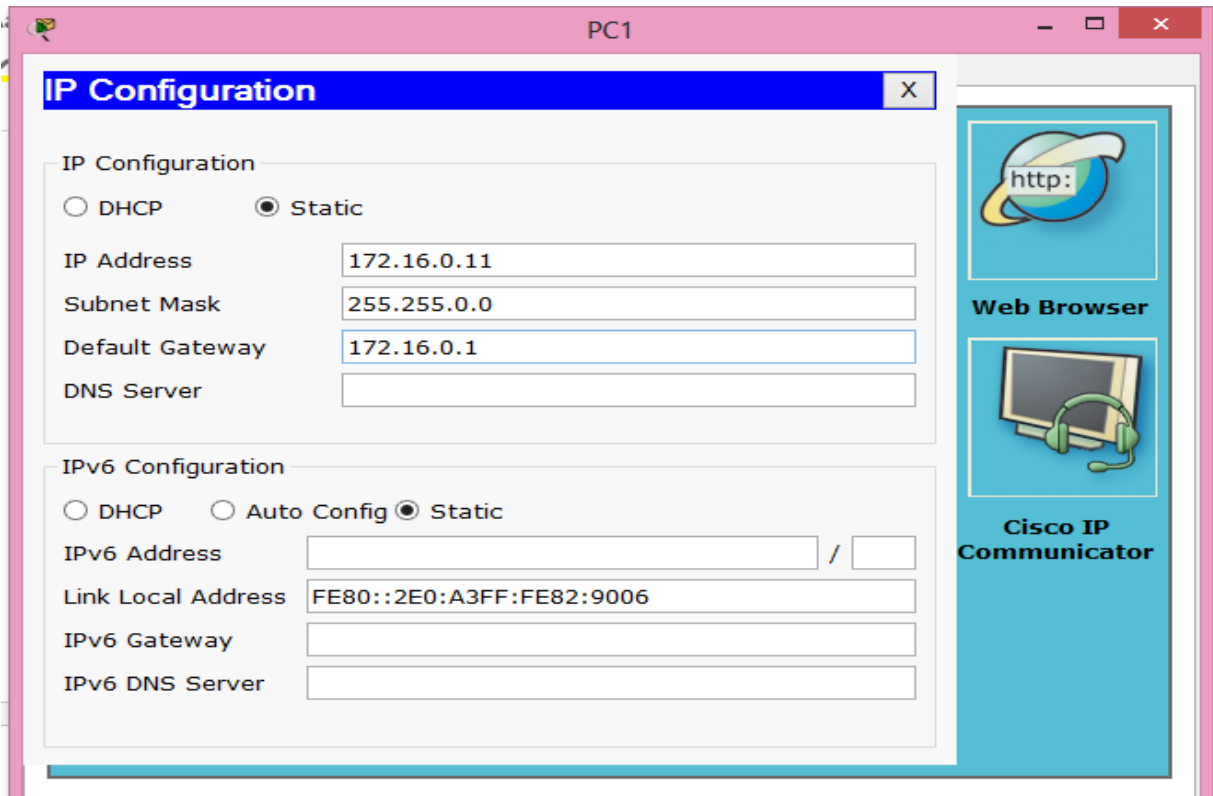
## PASO 2 CONFIGURACIÓN INICIAL

### A) HOST

PC1

The screenshot shows the 'IP Configuration' window for PC0. The window is titled 'PC0' and has a blue header bar with 'IP Configuration' and a close button. The main content area is divided into two sections: 'IP Configuration' and 'IPv6 Configuration'. In the 'IP Configuration' section, the 'Static' radio button is selected. The 'IP Address' field contains '172.16.0.10', the 'Subnet Mask' field contains '255.255.0.0', and the 'Default Gateway' field contains '172.16.0.1'. The 'DNS Server' field is empty. In the 'IPv6 Configuration' section, the 'Static' radio button is selected. The 'IPv6 Address' field is empty, the 'Link Local Address' field contains 'FE80::2E0:8FFF:FEC6:88D1', and the 'IPv6 Gateway' and 'IPv6 DNS Server' fields are empty. On the right side of the window, there are two application icons: 'Web Browser' with an 'http:' icon and 'Cisco IP Communicator' with a headset icon.

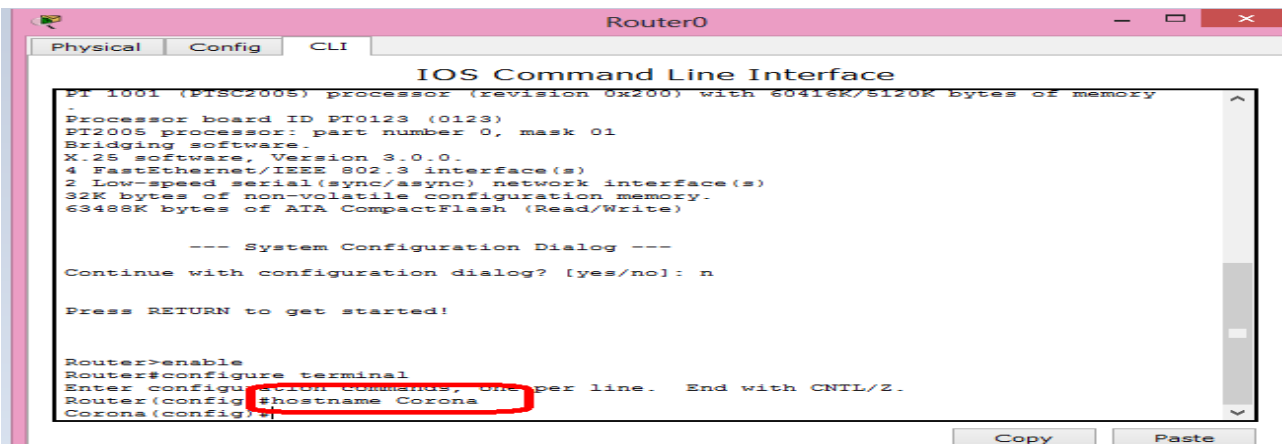
PC2



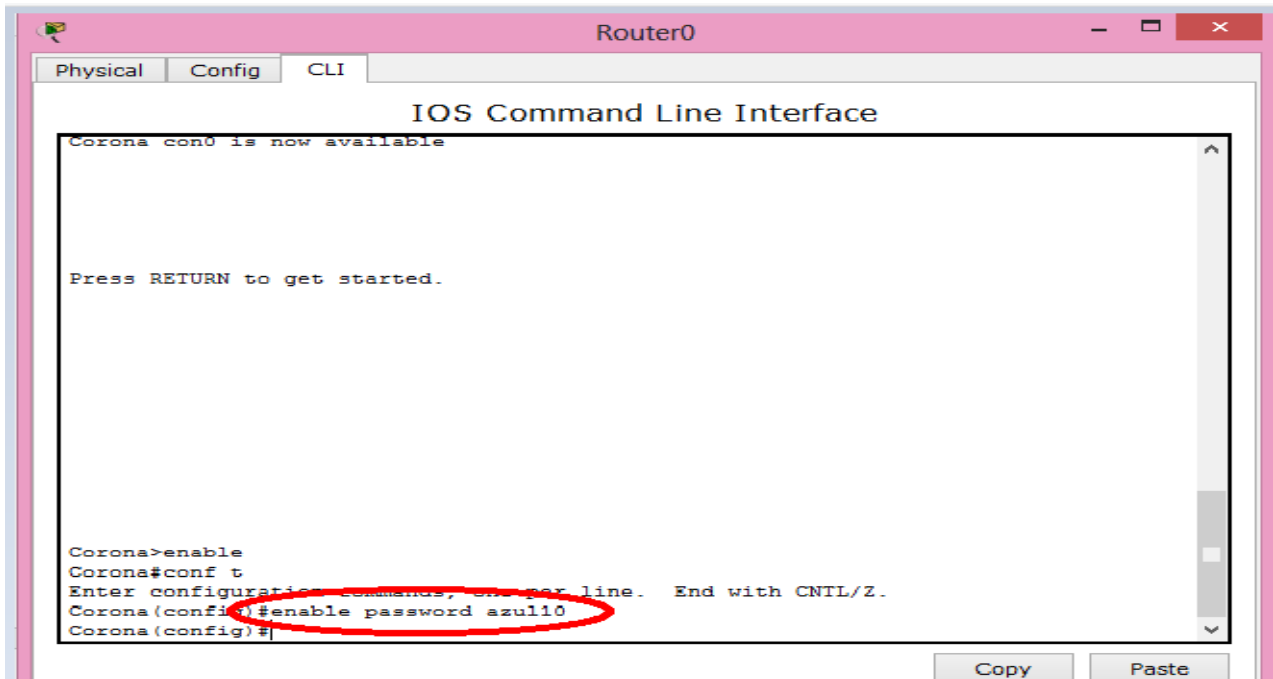
En este apartado es la asignación de las direcciones IP de cada una de las maquinas, como sabes son muchas máquinas y es estar repitiendo lo mismo, más que nada las direcciones están especificadas en la tabla de ruteo.

Posteriormente es necesario llevar a cabo una serie de pasos, las cuales son asignación de nombre, asignación de password, asignación de un banner a cada uno de los routers, que nosotros lo conocemos como configuraciones iniciales.

## CORONA (R1)



Asignación de password.



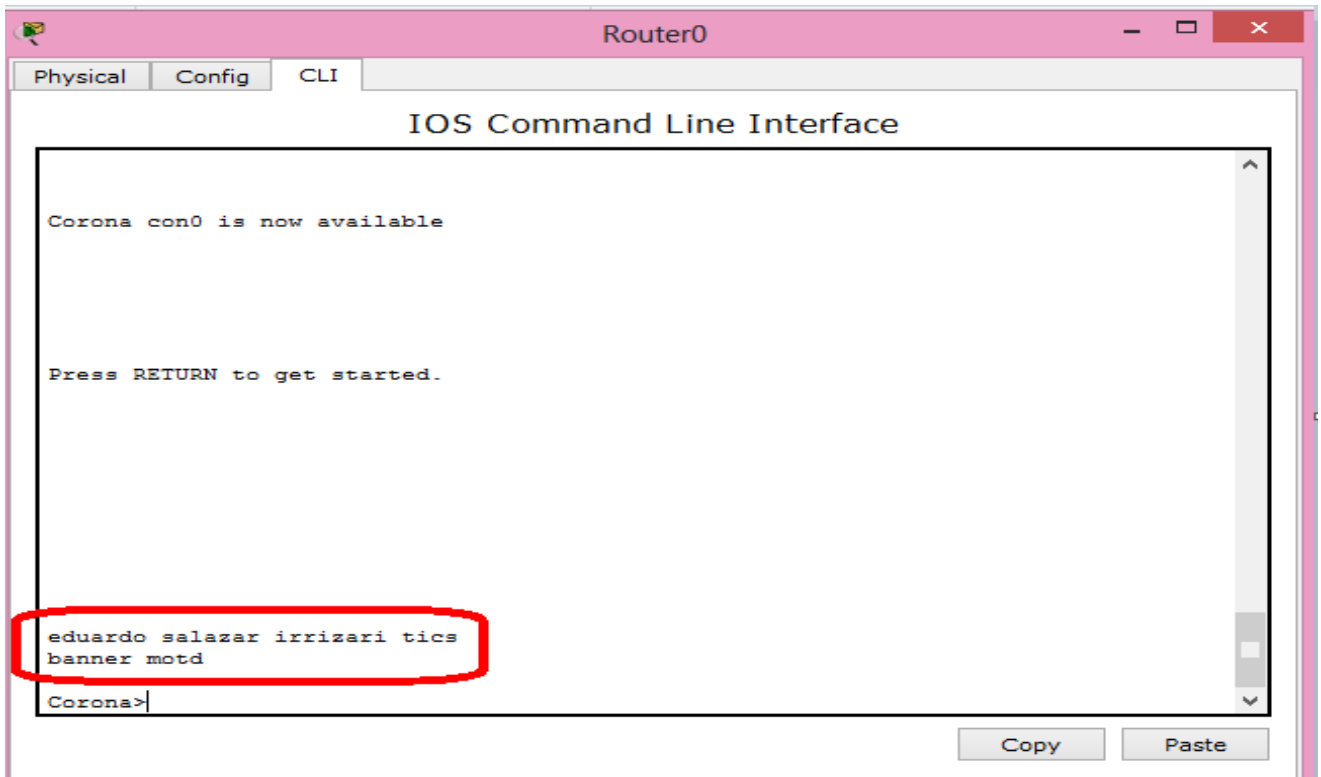
The screenshot shows the Router0 CLI interface. The command `enable password azul10` is entered and highlighted with a red circle. The output shows the router is in configuration mode and the password is being set.

```
Corona con0 is now available

Press RETURN to get started.

Corona>enable
Corona#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Corona(config)#enable password azul10
Corona(config)#
```

A continuación se le asigna un banner al router,



The screenshot shows the Router0 CLI interface. The command `banner motd` is entered and highlighted with a red circle. The output shows the router is in configuration mode and the banner is being set.

```
Corona con0 is now available

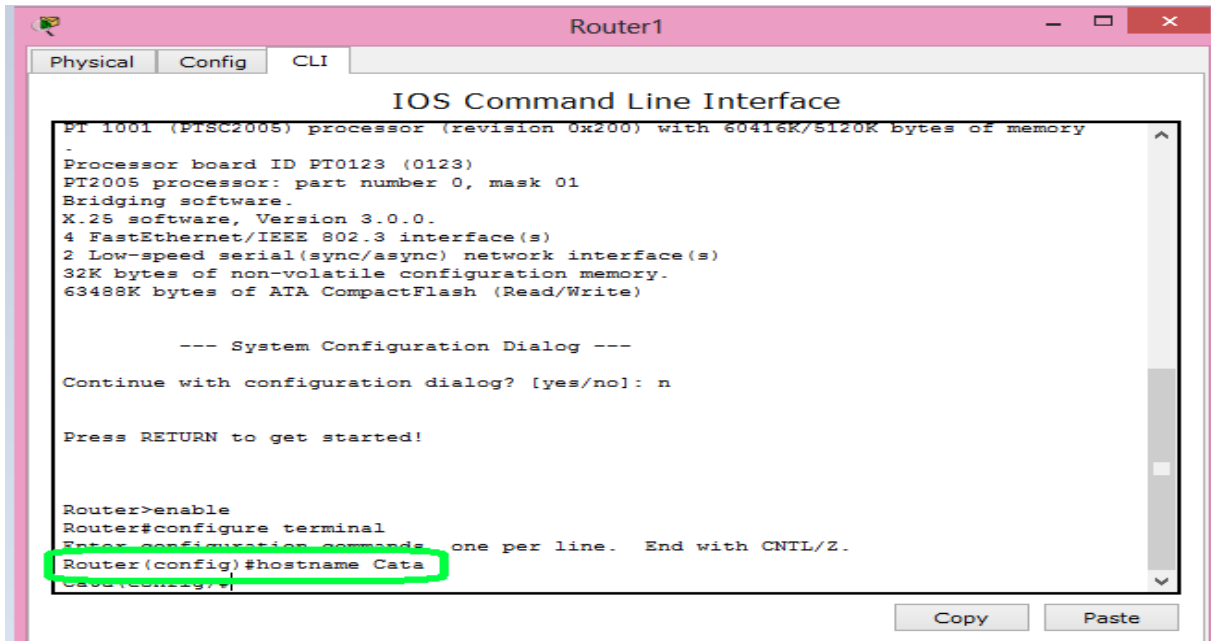
Press RETURN to get started.

eduardo salazar irrizari tics
banner motd

Corona>
```

## CATA (R2).

De igual forma se le asigna un nombre al router.



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 displays system information for PT 1001, including processor details, memory, and interfaces. A "System Configuration Dialog" is shown, asking to continue with configuration. The user enters 'n' to skip it. The prompt is "Router>enable", followed by "Router#configure terminal". The user enters "Router(config)#hostname Cata", which is highlighted with a green box. The prompt then changes to "Cata(config)#".

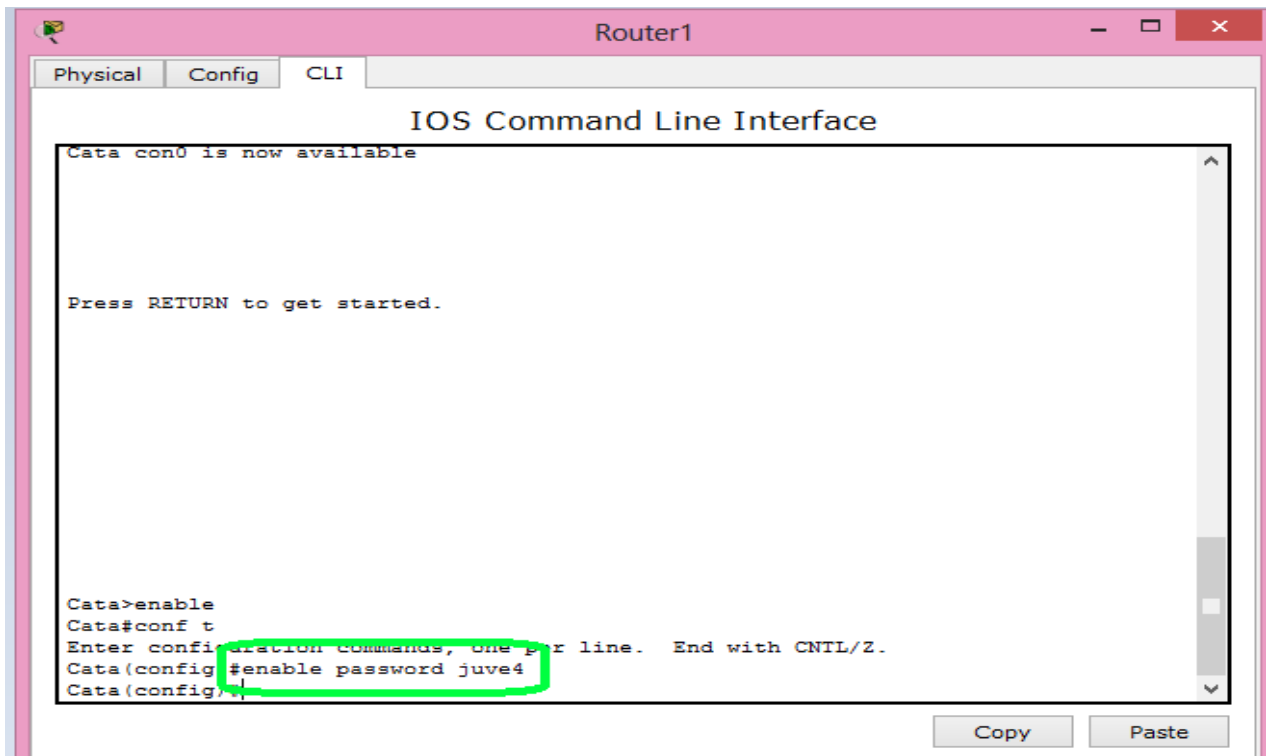
```
Router1
Physical Config CLI
IOS Command Line Interface
PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
.
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
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 Cata
Cata(config)#
```

Posteriormente se le debe asignar una contraseña.



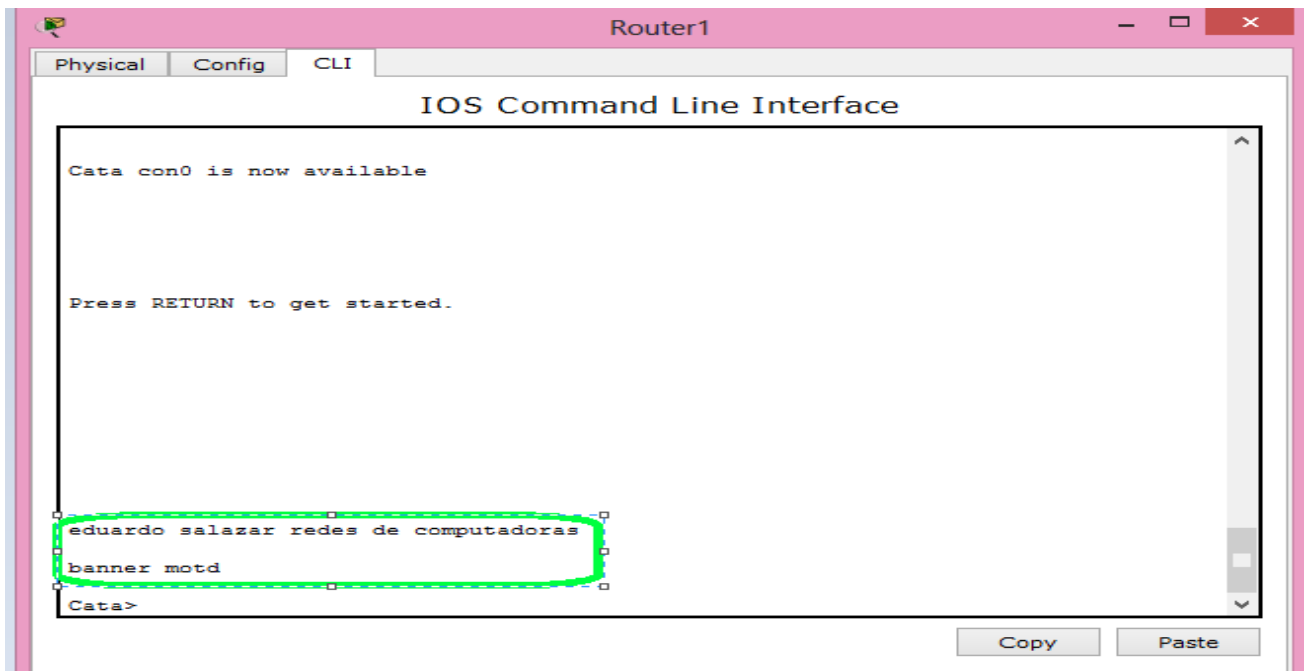
The screenshot shows the Router1 CLI interface. The title bar reads "Router1". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The terminal output shows "Cata con0 is now available" and "Press RETURN to get started.". The user enters "Cata>enable", followed by "Cata#conf t". The user enters "Cata(config)#enable password juve4", which is highlighted with a green box. The prompt then changes to "Cata(config)#".

```
Router1
Physical Config CLI
IOS Command Line Interface
Cata con0 is now available

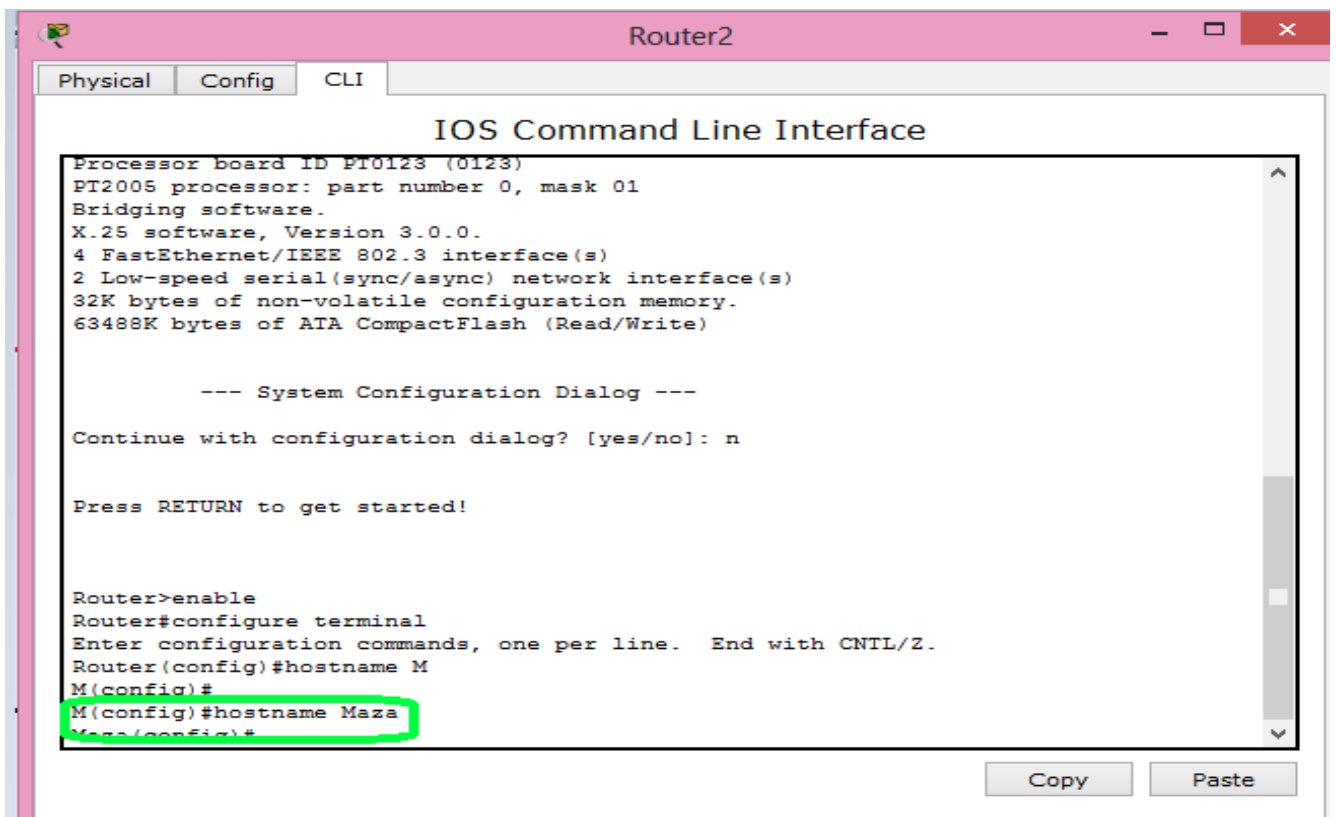
Press RETURN to get started.

Cata>enable
Cata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Cata(config)#enable password juve4
Cata(config)#
```

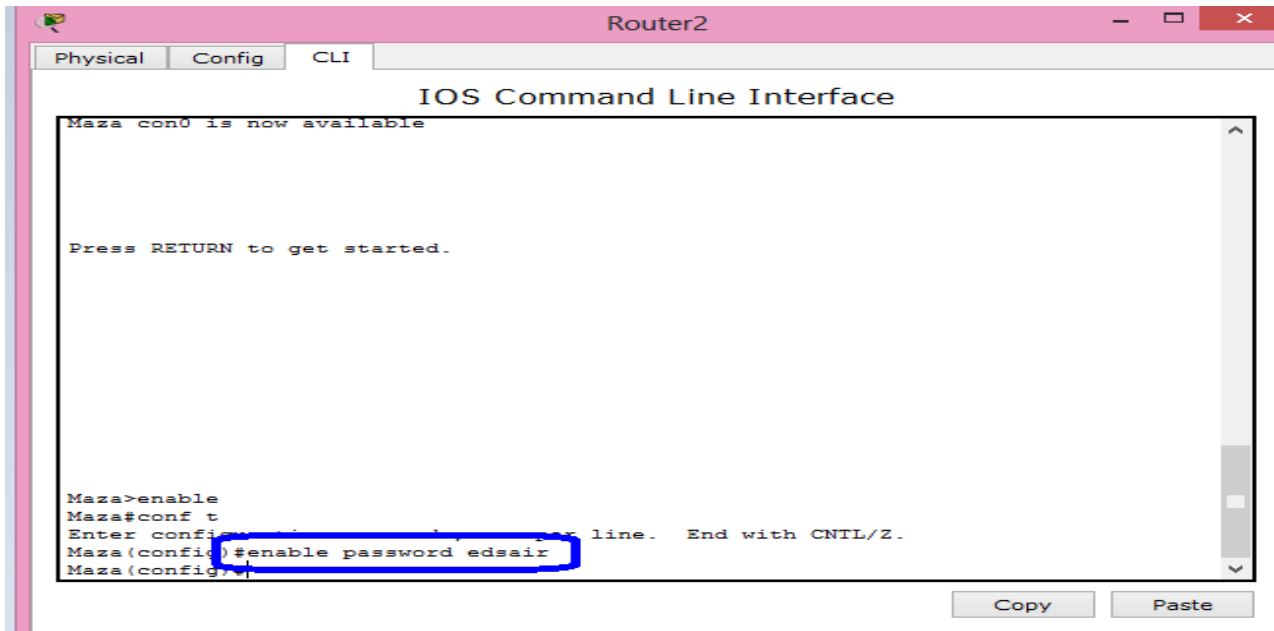
Después es necesario concederle un banner.



MAZA (R3).



Posteriormente se le asigna una contraseña.



The screenshot shows the Router2 CLI interface. The title bar reads "Router2". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The text in the window is as follows:

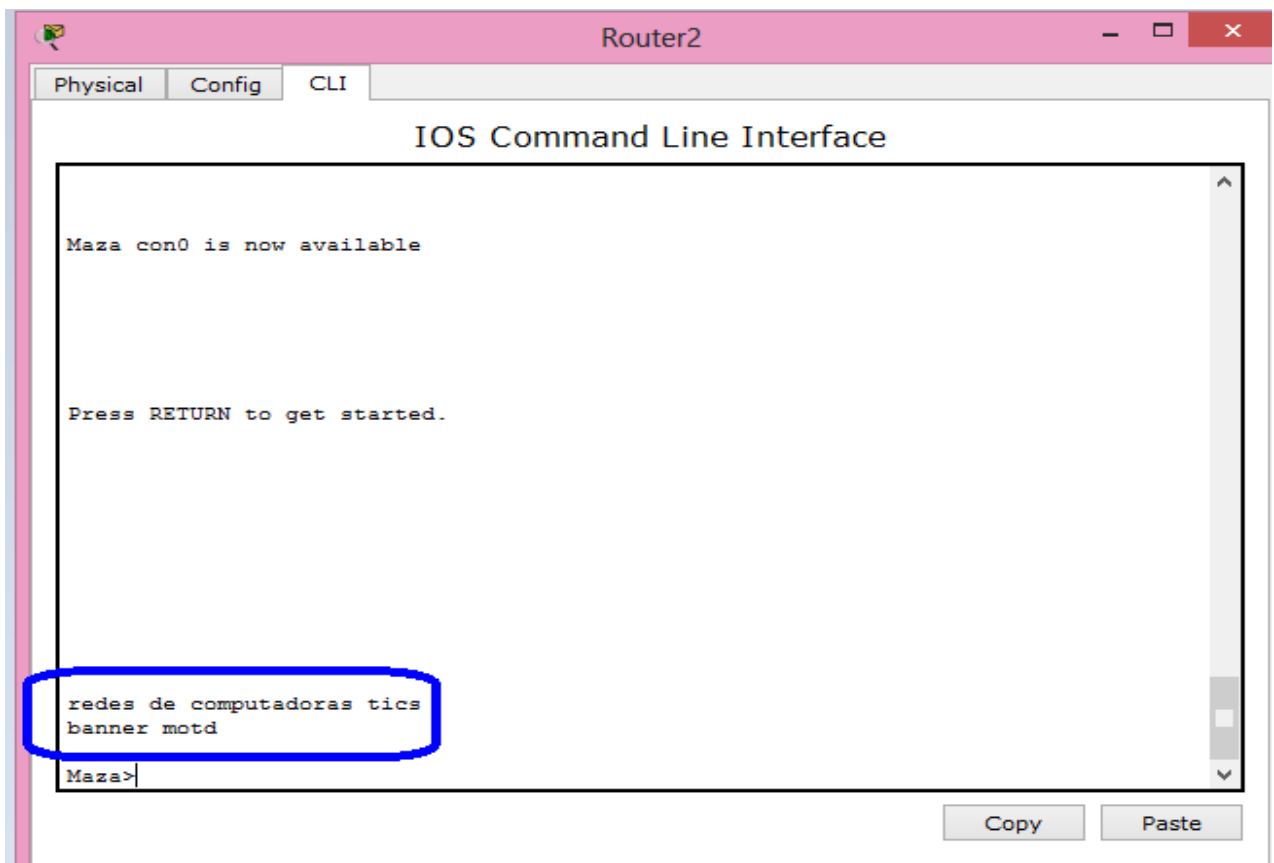
```
Maza con0 is now available

Press RETURN to get started.

Maza>enable
Maza#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Maza(config)#enable password edsair
Maza(config)#
```

The command `#enable password edsair` is highlighted with a blue box. At the bottom right of the window are "Copy" and "Paste" buttons.

Por último se le asigna un banner.



The screenshot shows the Router2 CLI interface. The title bar reads "Router2". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The text in the window is as follows:

```
Maza con0 is now available

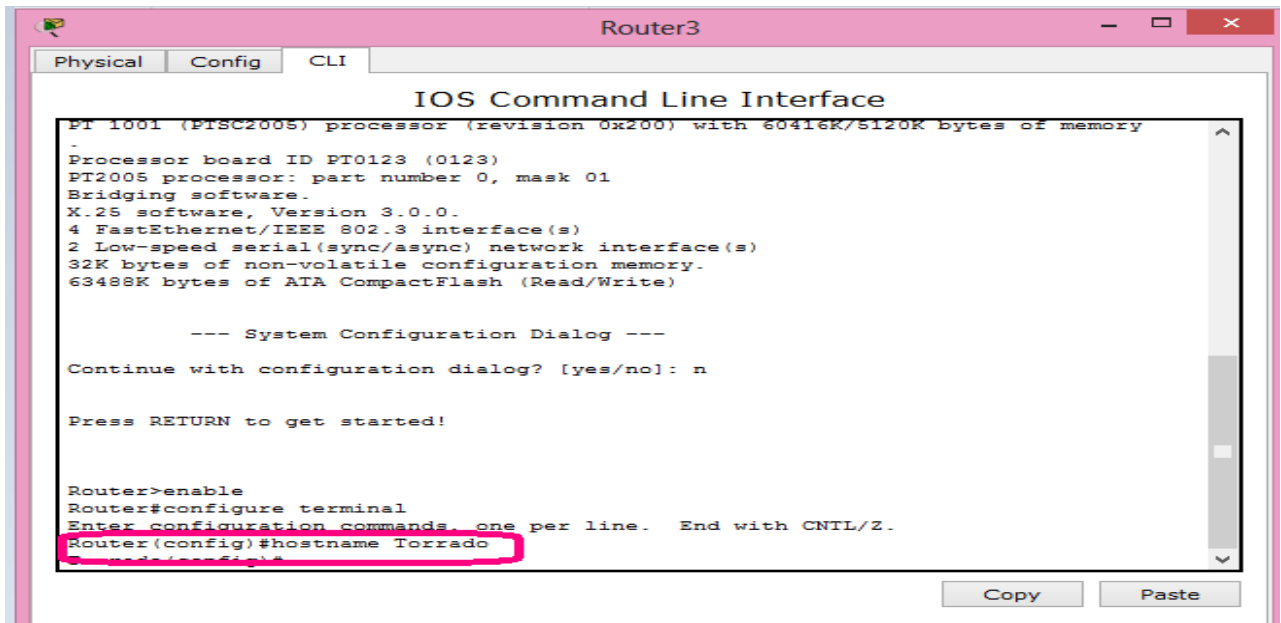
Press RETURN to get started.

redes de computadoras tics
banner motd

Maza>
```

The banner configuration `redes de computadoras tics` and `banner motd` is highlighted with a blue box. At the bottom right of the window are "Copy" and "Paste" buttons.

## TORRADO (R4).



The screenshot shows the Router3 CLI interface. The window title is "Router3". The tabs are "Physical", "Config", and "CLI". The main content is the "IOS Command Line Interface". The text displayed is:

```
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)

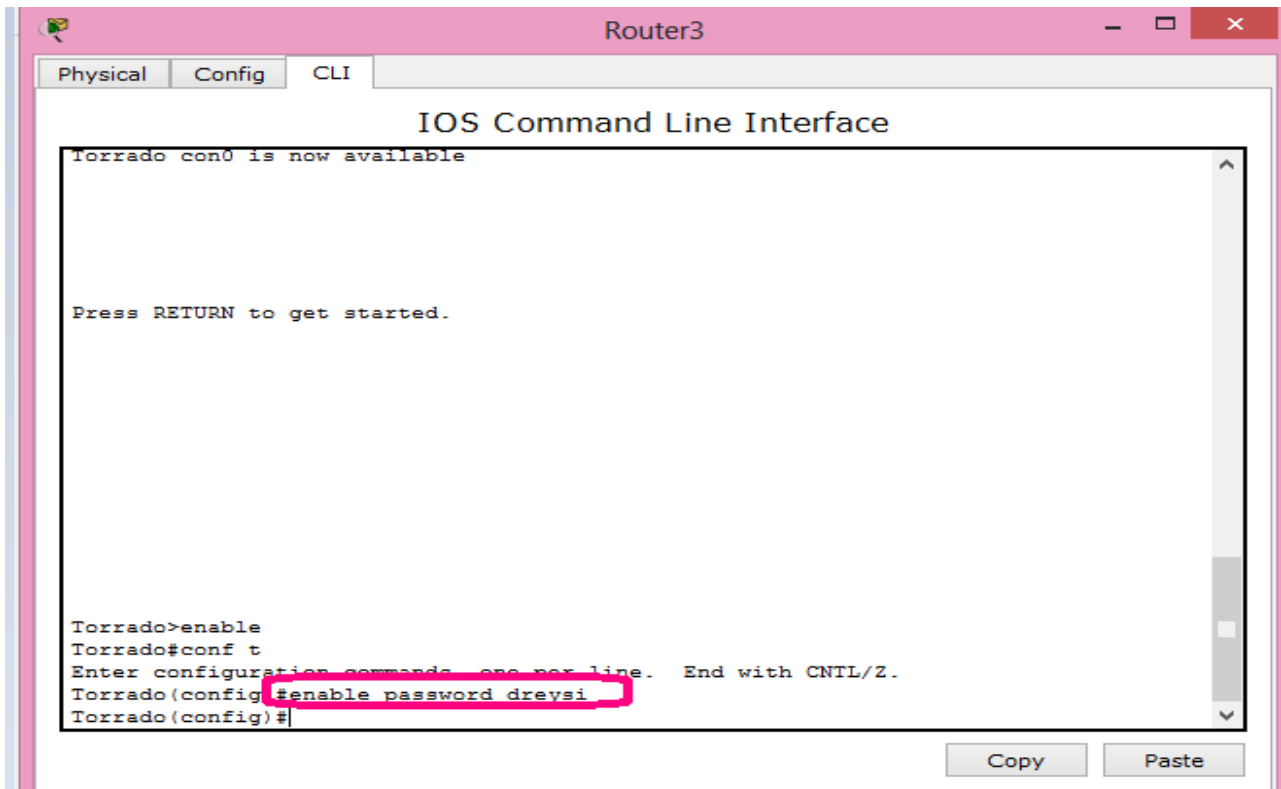
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

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

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

A continuación se le debe asignar una contraseña.



The screenshot shows the Router3 CLI interface. The window title is "Router3". The tabs are "Physical", "Config", and "CLI". The main content is the "IOS Command Line Interface". The text displayed is:

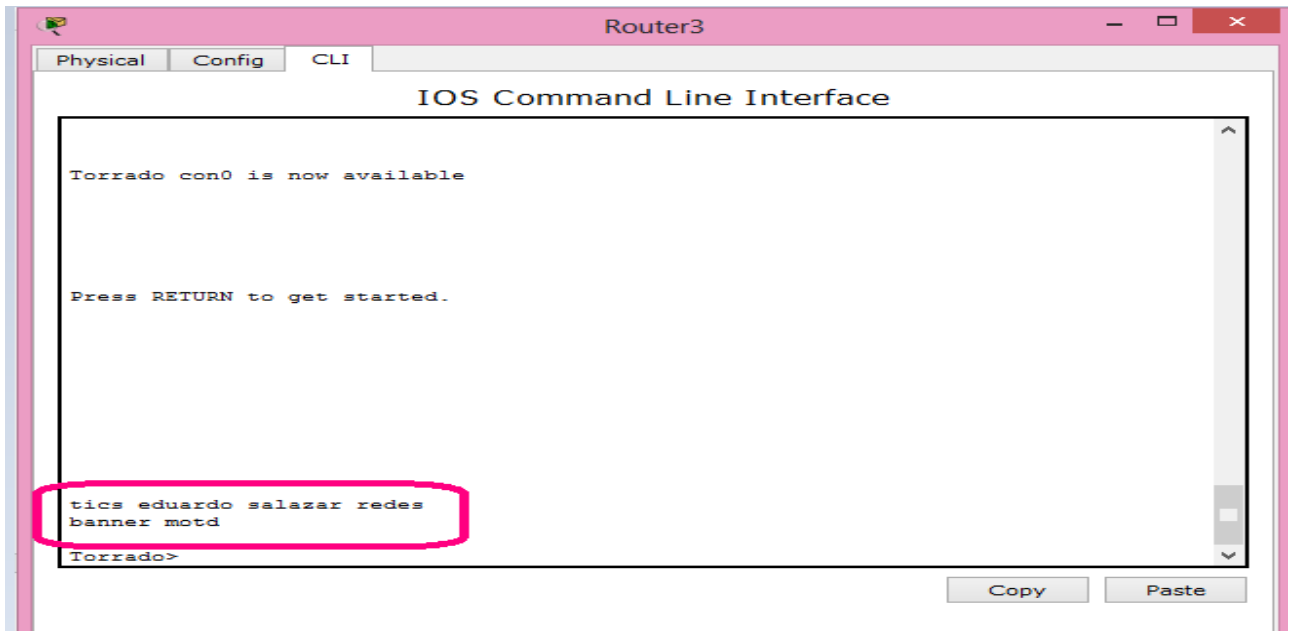
```
Torrado con0 is now available

Press RETURN to get started.

Torrado>enable
Torrado#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Torrado(config)#enable password dreysi
Torrado(config)#
```

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

De igual forma se le asignara un banner.



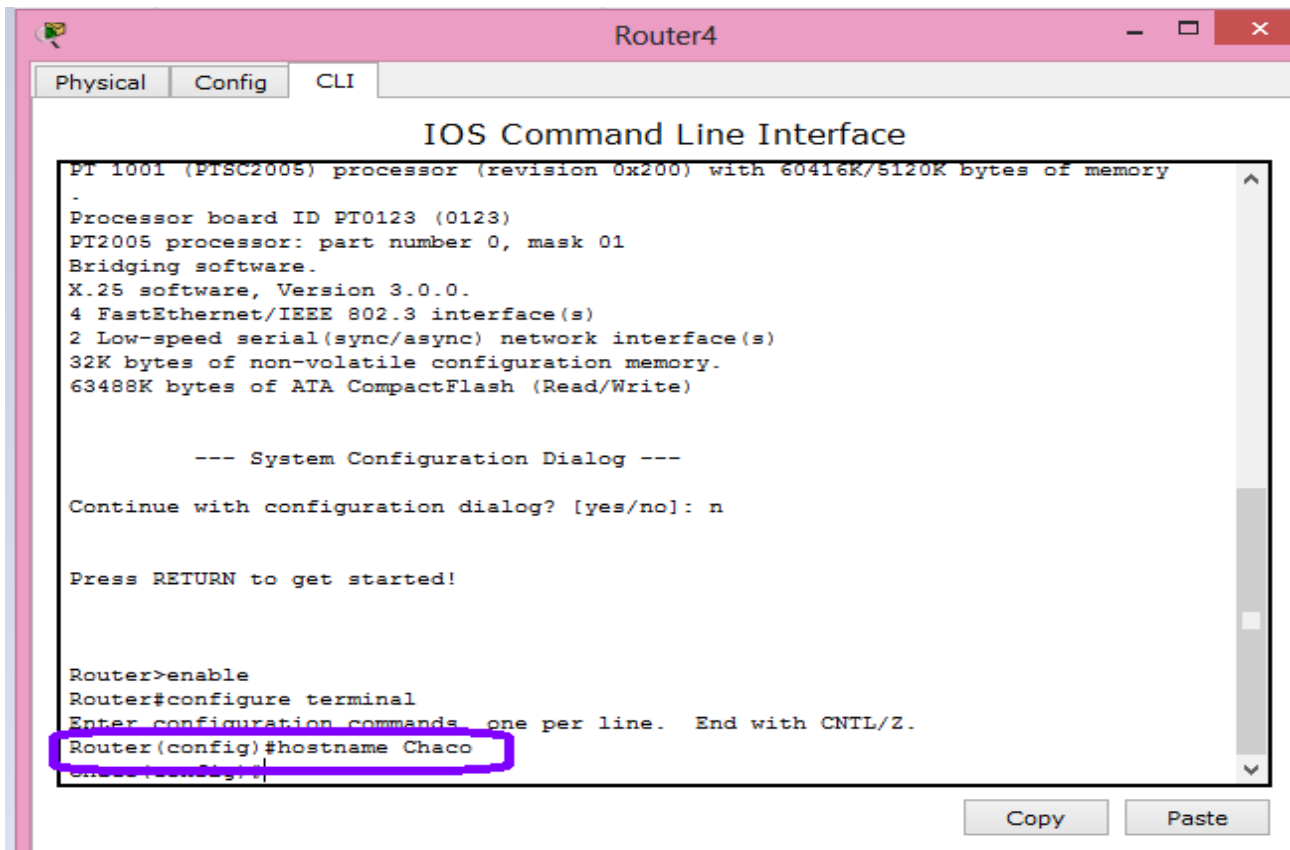
The screenshot shows the CLI interface of Router3. The prompt is 'Torrado>'. The user has entered the command 'banner motd' followed by a new line and the text 'tics eduardo salazar redes'. The prompt is now 'Torrado>'. The text 'tics eduardo salazar redes' is highlighted with a red box.

```
Torrado con0 is now available

Press RETURN to get started.

tics eduardo salazar redes
banner motd
Torrado>
```

## CHACO (R5)



The screenshot shows the CLI interface of Router4. The prompt is 'Router>'. The user has entered the command 'enable', then 'configure terminal', and finally 'hostname Chaco'. The prompt is now 'Router(config)#'. The text 'Router(config)#hostname Chaco' is highlighted with a red box.

```
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)

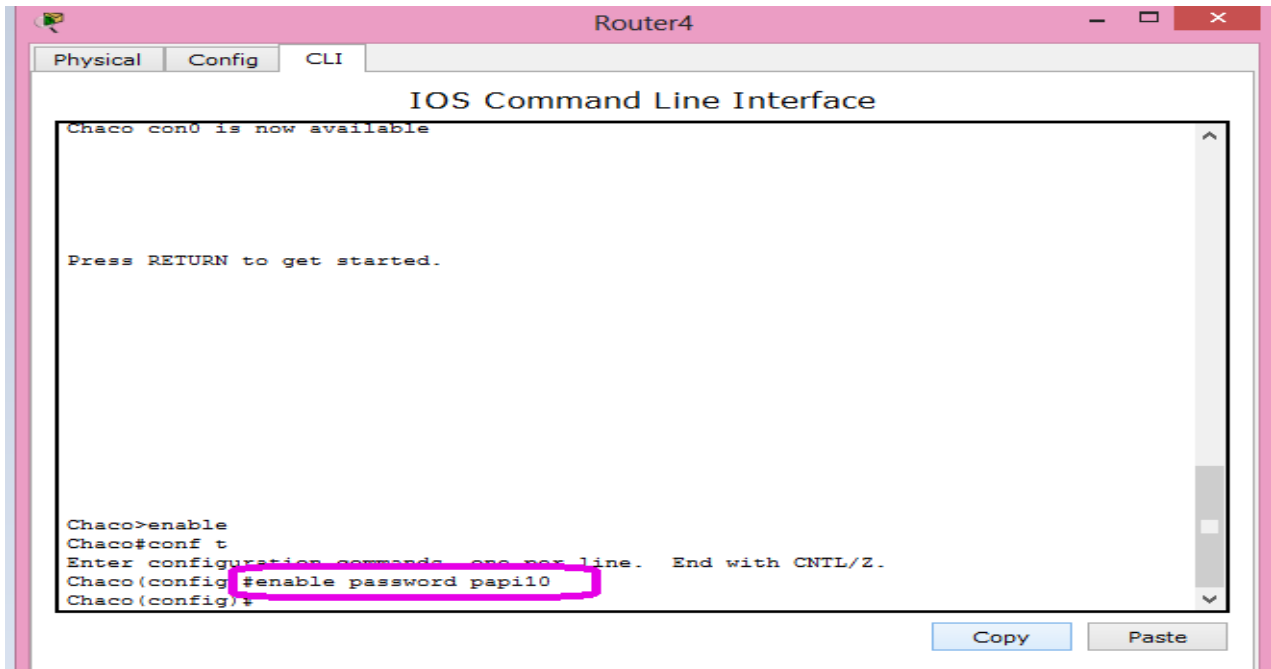
--- System Configuration Dialog ---

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 Chaco
```

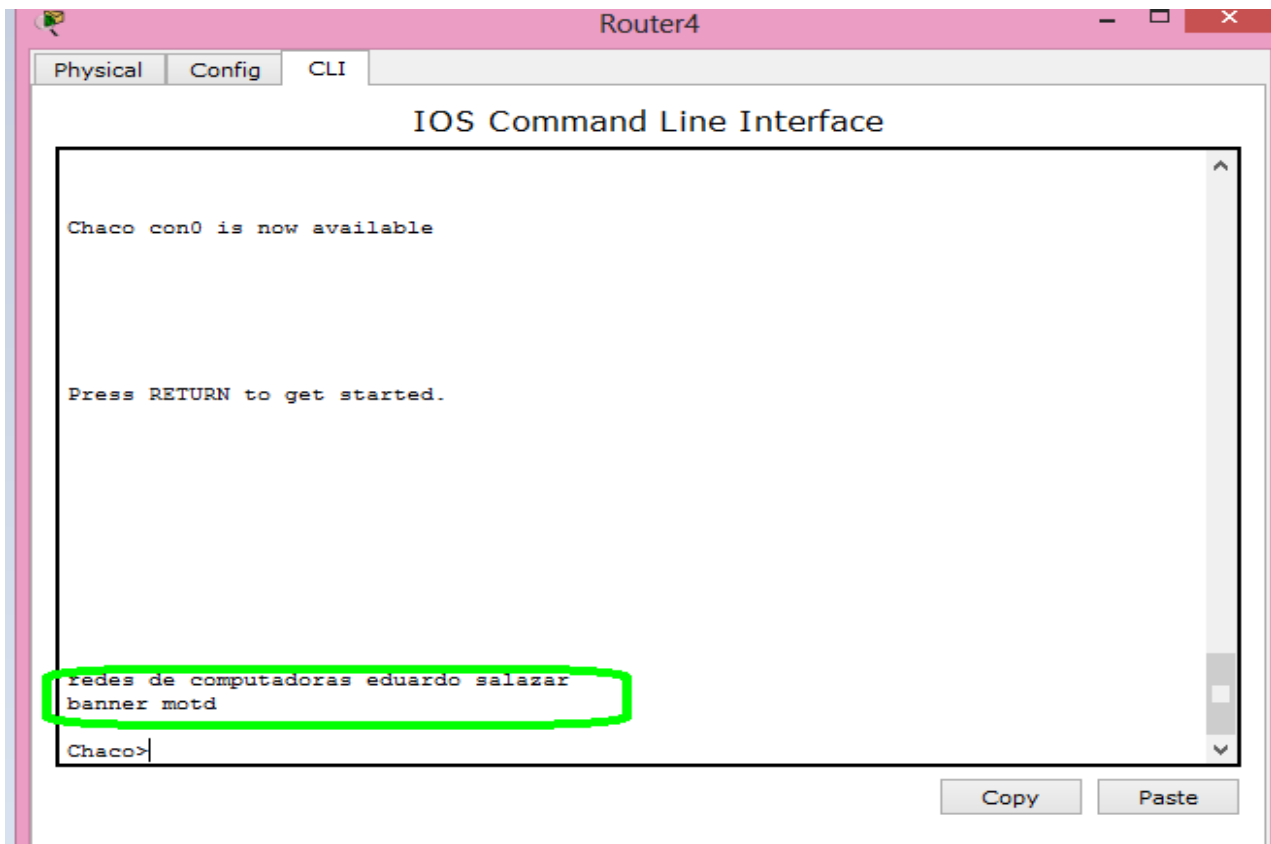
Posteriormente pasamos a asignarle una contraseña.



```
Router4
Physical Config CLI
IOS Command Line Interface
Chaco con0 is now available
Press RETURN to get started.
Chaco>enable
Chaco#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Chaco (config) #enable password pap10
Chaco (config) #
```

Copy Paste

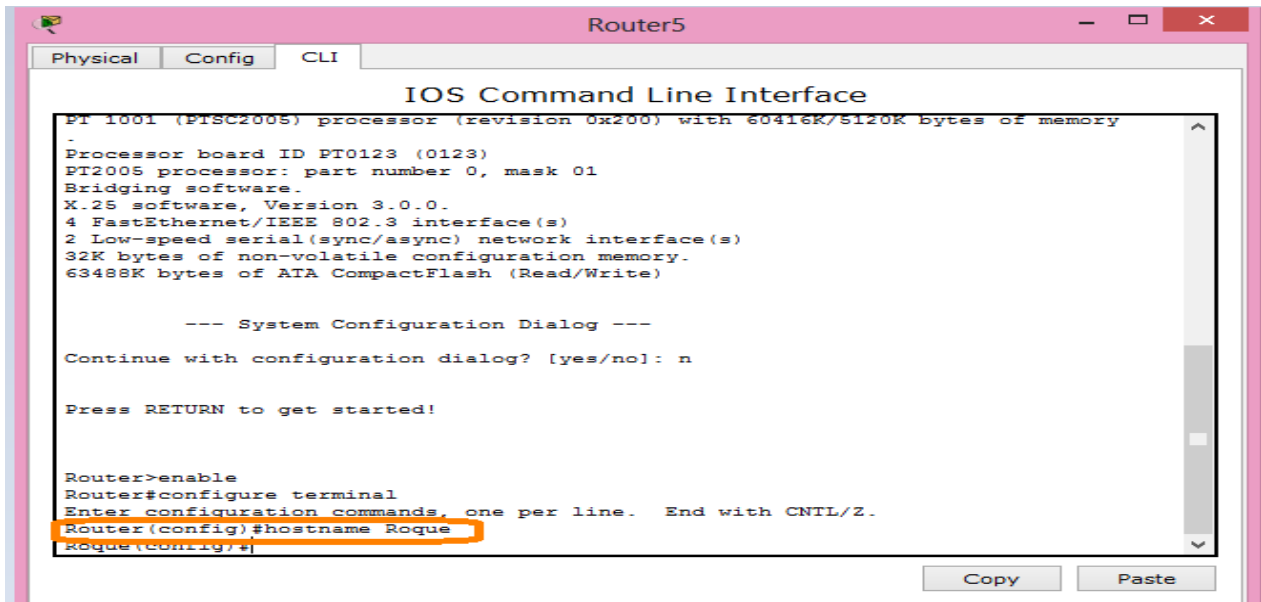
Al final se le asigna un banner como los demás.



```
Router4
Physical Config CLI
IOS Command Line Interface
Chaco con0 is now available
Press RETURN to get started.
Chaco (config) #enable password pap10
Chaco (config) #
Chaco (config) #banner motd
redes de computadoras eduardo salazar
Chaco (config) #
```

Copy Paste

## ROQUE (R6)



The screenshot shows the Router5 CLI interface. The window title is "Router5". The tabs are "Physical", "Config", and "CLI". The main content is titled "IOS Command Line Interface". It displays system information for a PT 1001 (PTSC2005) processor with 60416K/5120K bytes of memory. The processor board ID is PT0123 (0123). The processor is PT2005, part number 0, mask 01. The software is X.25, version 3.0.0. There are 4 FastEthernet/IEEE 802.3 interfaces and 2 Low-speed serial(sync/async) network interfaces. The configuration memory is 32K bytes, and the ATA CompactFlash is 63488K bytes. A system configuration dialog asks to continue with configuration dialog? [yes/no]: n. The user presses RETURN to get started. The user enters 'enable' to enter privileged mode. The user enters 'configure terminal' to enter configuration mode. The user enters 'hostname Roque' to set the router's name. The prompt changes from 'Router#' to 'Roque#'.

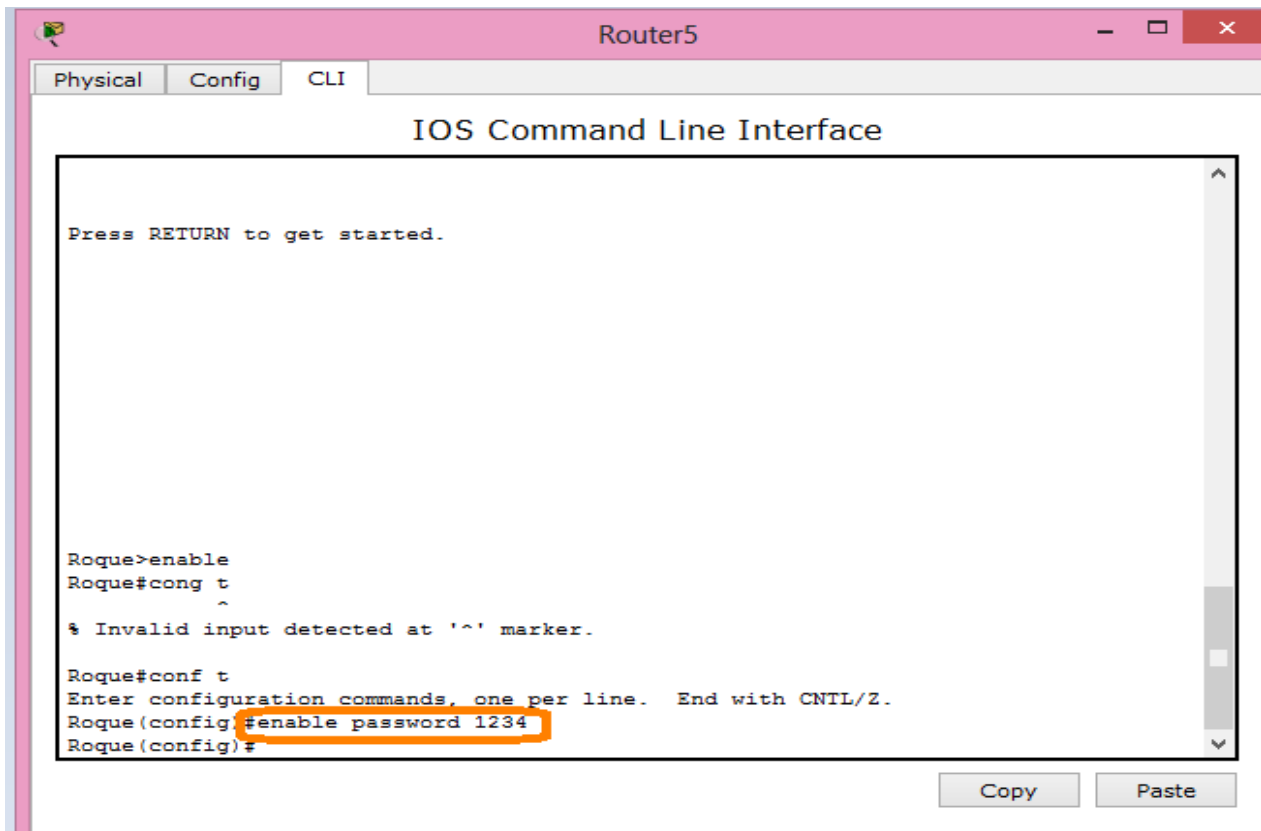
```
PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
-
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K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

Luego pasamos a asignarle una contraseña así como a los demás routers.

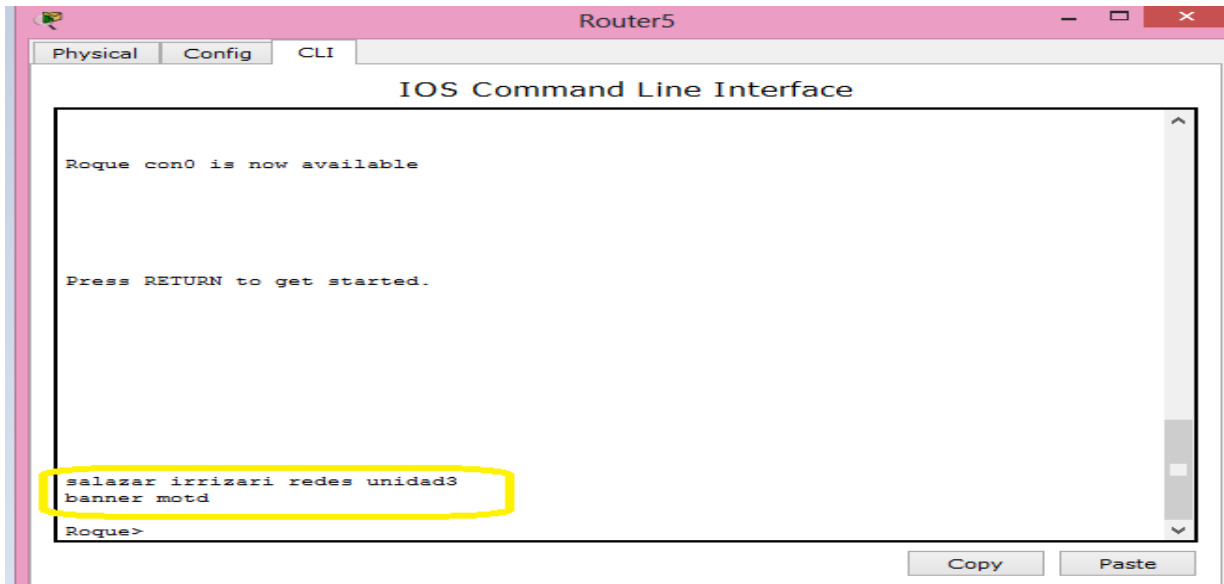


The screenshot shows the Router5 CLI interface. The window title is "Router5". The tabs are "Physical", "Config", and "CLI". The main content is titled "IOS Command Line Interface". It displays the prompt 'Roque#' after the user has entered 'enable'. The user enters 'conf t' to enter configuration mode. The user enters 'enable password 1234' to set the password. The prompt changes from 'Roque#' to 'Roque(config)#'.

```
Roque>enable
Roque#cong t
^
% Invalid input detected at '^' marker.

Roque#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Roque (config)#enable password 1234
Roque (config)#
```

Finalmente es necesario asignarle un banner.



The screenshot shows the CLI interface of Router5. The window title is "Router5". The tabs are "Physical", "Config", and "CLI". The main area displays the "IOS Command Line Interface". The text in the terminal is as follows:

```
Roque con0 is now available

Press RETURN to get started.

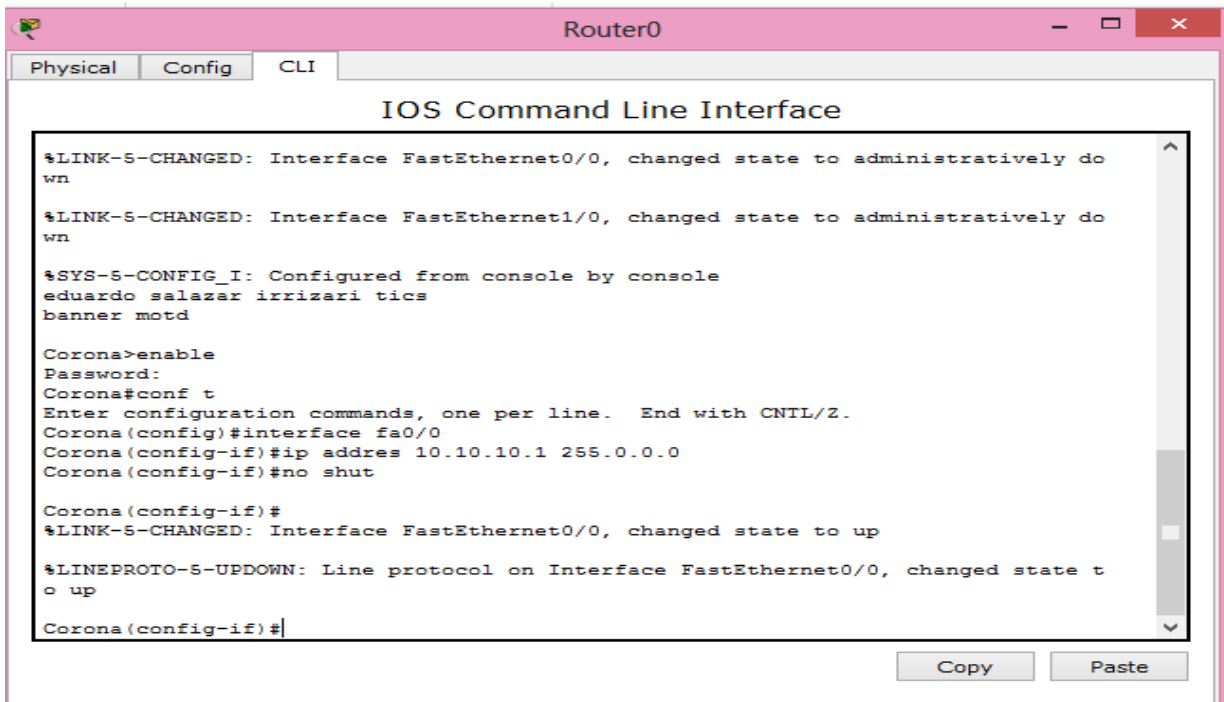
salazar irrizari redes unidad3
banner motd
Roque>
```

The last two lines of the configuration are highlighted with a yellow box. At the bottom right, there are "Copy" and "Paste" buttons.

Después de que se haya realizado estas configuraciones a cada uno de los routers, es necesario llevar a cabo el levantamiento de puertos para que tengan conexión, tanto de los fa y los seriales.

## Corona.

Puerto fa0/0



The screenshot shows the CLI interface of Router0. The window title is "Router0". The tabs are "Physical", "Config", and "CLI". The main area displays the "IOS Command Line Interface". The text in the terminal is as follows:

```
%LINK-S-CHANGED: Interface FastEthernet0/0, changed state to administratively do
wn
%LINK-S-CHANGED: Interface FastEthernet1/0, changed state to administratively do
wn
%SYS-S-CONFIG_I: Configured from console by console
eduardo salazar irrizari tics
banner motd

Corona>enable
Password:
Corona#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Corona(config)#interface fa0/0
Corona(config-if)#ip address 10.10.10.1 255.0.0.0
Corona(config-if)#no shut

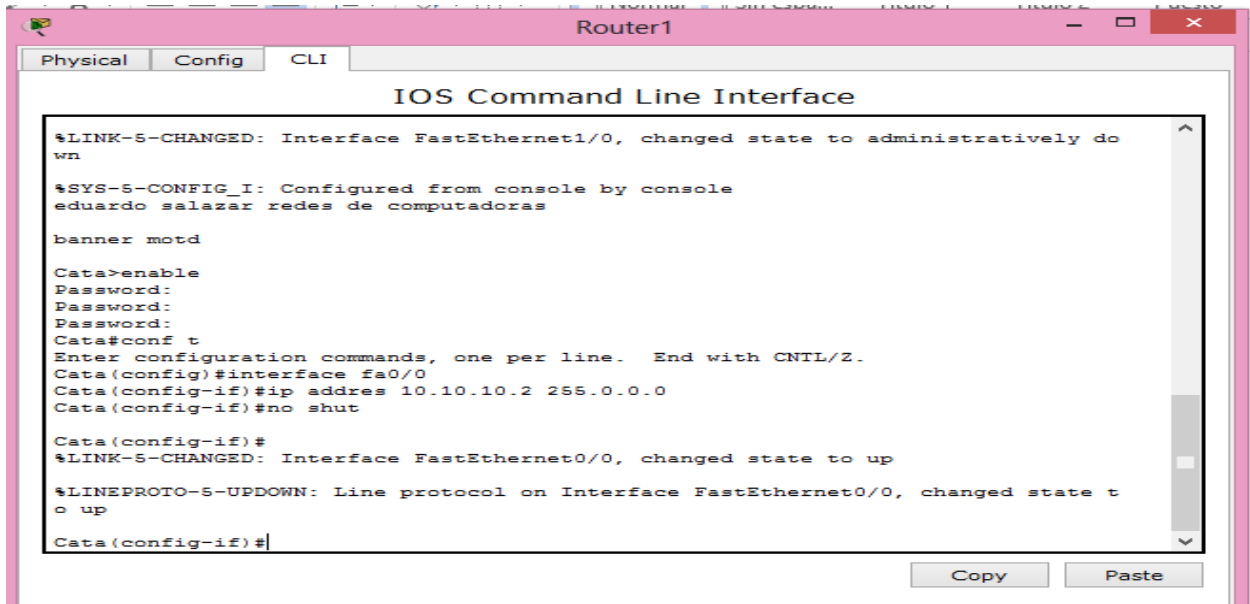
Corona(config-if)#
%LINK-S-CHANGED: Interface FastEthernet0/0, changed state to up
%LINEPROTO-S-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state t
o up
Corona(config-if)#
```

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

En este caso solo se lleva a cabo el levantamiento de un solo puerto ya que solo tiene conectado un solo dispositivo.

**Cata.**

Puerto fa0/0

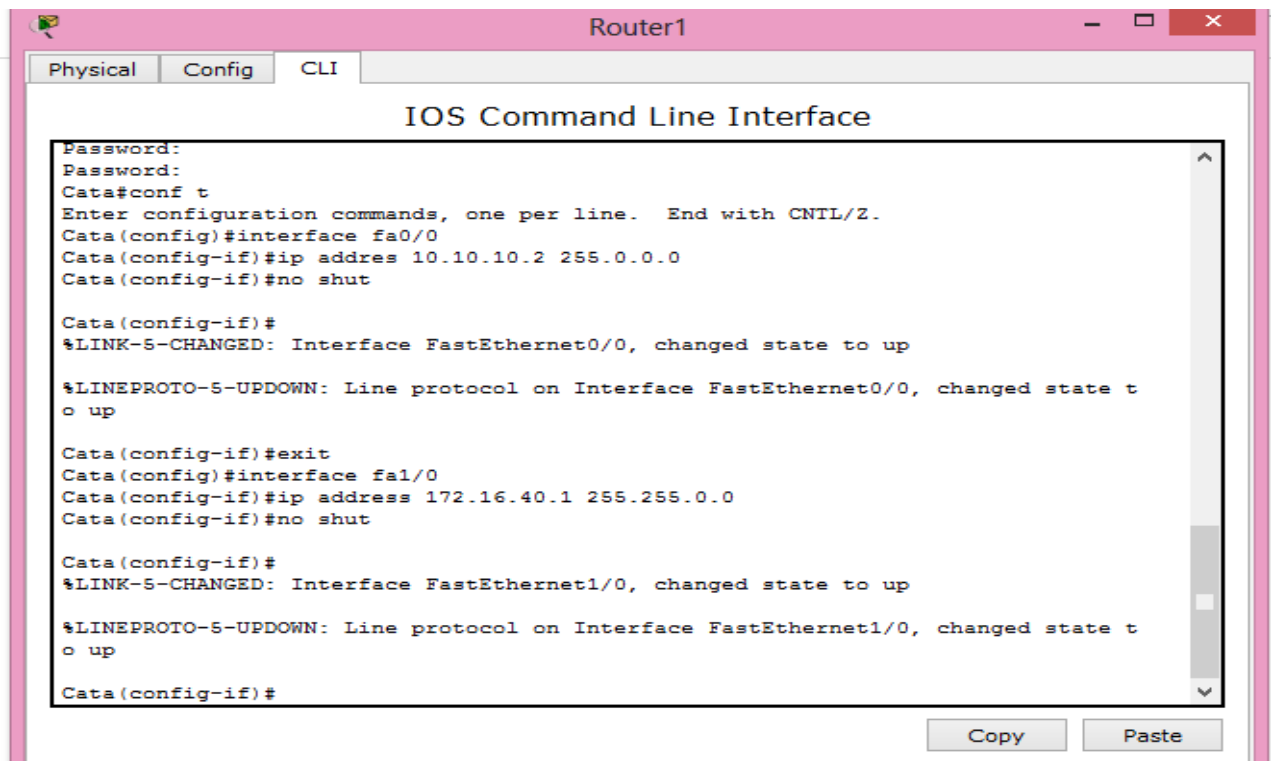


The screenshot shows the CLI of Router1. The window title is "Router1" and the active tab is "CLI". The main content is titled "IOS Command Line Interface". The terminal output shows the following sequence of commands and system messages:

```
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to administratively do
wn
%SYS-5-CONFIG_I: Configured from console by console
eduardo salazar redes de computadoras
banner motd
Cata>enable
Password:
Password:
Cata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Cata(config)#interface fa0/0
Cata(config-if)#ip address 10.10.10.2 255.0.0.0
Cata(config-if)#no shut
Cata(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
Cata(config-if)#
```

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

Posteriormente levantamos el otro puerto que es el fa1/0.



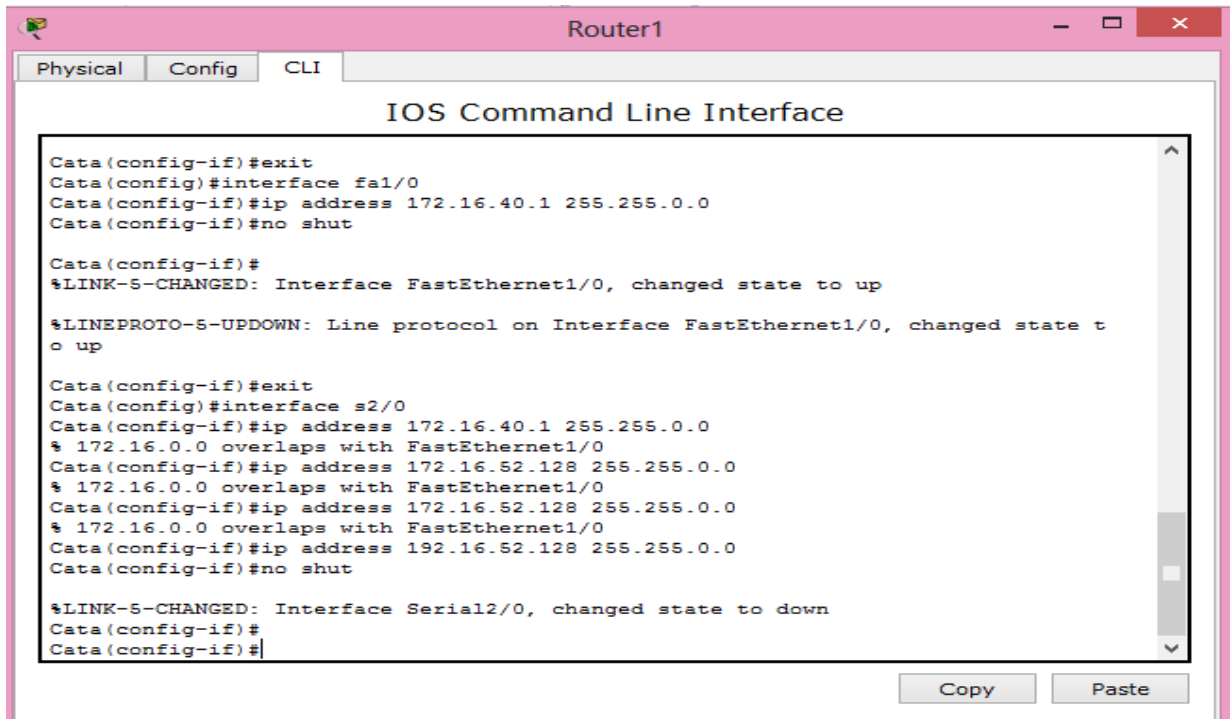
The screenshot shows the CLI of Router1. The window title is "Router1" and the active tab is "CLI". The main content is titled "IOS Command Line Interface". The terminal output shows the following sequence of commands and system messages:

```
Password:
Password:
Cata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Cata(config)#interface fa0/0
Cata(config-if)#ip address 10.10.10.2 255.0.0.0
Cata(config-if)#no shut
Cata(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
Cata(config-if)#exit
Cata(config)#interface fa1/0
Cata(config-if)#ip address 172.16.40.1 255.255.0.0
Cata(config-if)#no shut
Cata(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state t
o up
Cata(config-if)#
```

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

Ahora llevamos a cabo el levantamiento del serial del router.

S2/0



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

```
Cata(config-if)#exit
Cata(config)#interface fa1/0
Cata(config-if)#ip address 172.16.40.1 255.255.0.0
Cata(config-if)#no shut

Cata(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

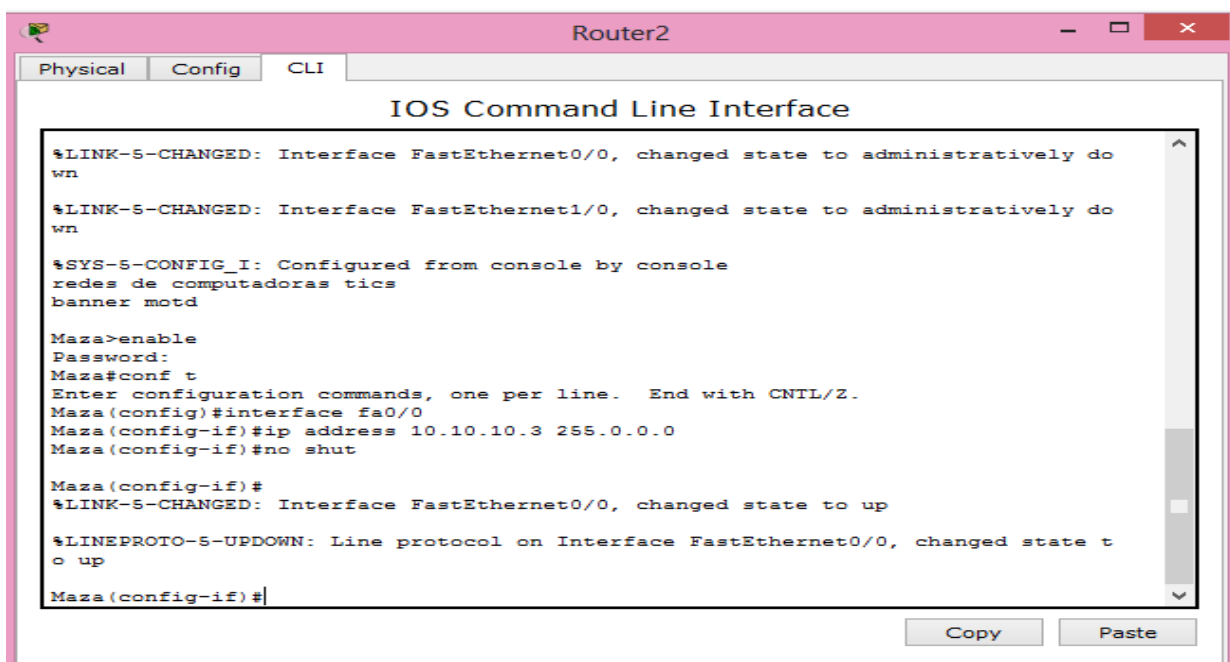
Cata(config-if)#exit
Cata(config)#interface s2/0
Cata(config-if)#ip address 172.16.40.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet1/0
Cata(config-if)#ip address 172.16.52.128 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet1/0
Cata(config-if)#ip address 172.16.52.128 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet1/0
Cata(config-if)#ip address 192.16.52.128 255.255.0.0
Cata(config-if)#no shut

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

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

Maza.

Puerto fa0/0



The screenshot shows the CLI of Router2. The window title is "Router2" and the tabs are "Physical", "Config", and "CLI". The main area is titled "IOS Command Line Interface". The terminal output shows the following commands and responses:

```
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to administratively down

%SYS-5-CONFIG_I: Configured from console by console
redes de computadoras tics
banner motd

Maza>enable
Password:
Maza#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Maza(config)#interface fa0/0
Maza(config-if)#ip address 10.10.10.3 255.0.0.0
Maza(config-if)#no shut

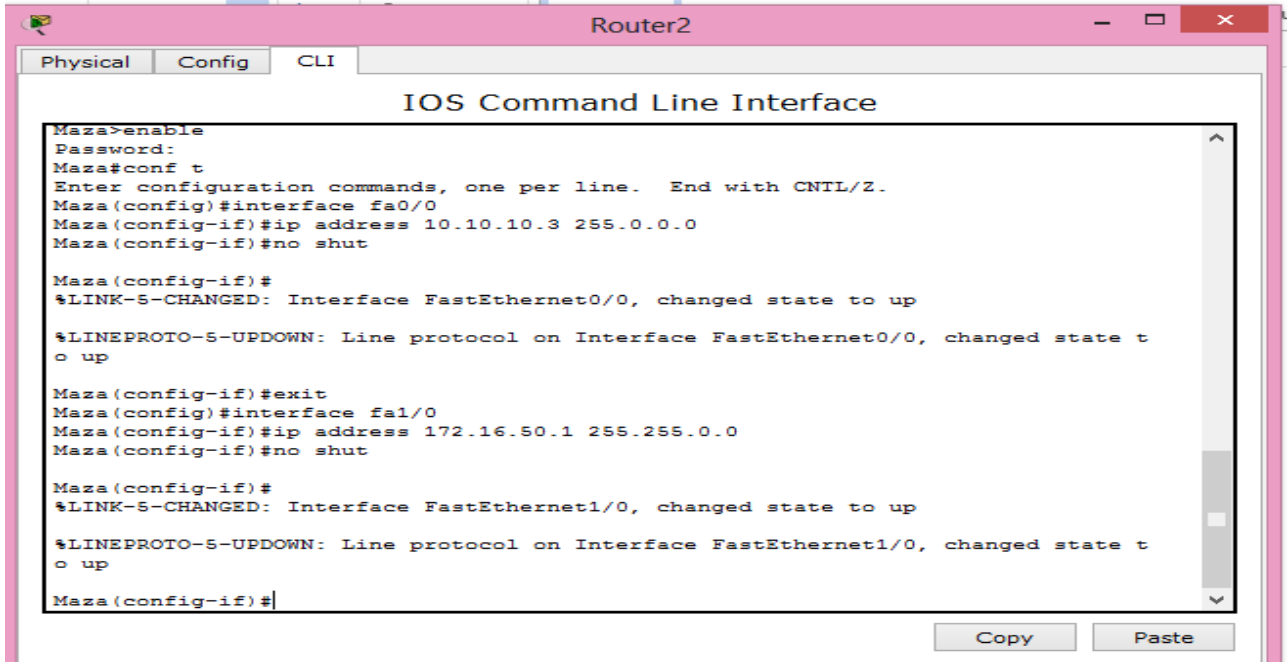
Maza(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

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

Maza(config-if)#
```

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

Puerto fa1/0.



```
Router2
Physical Config CLI
IOS Command Line Interface
Maza>enable
Password:
Maza#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Maza(config)#interface fa0/0
Maza(config-if)#ip address 10.10.10.3 255.0.0.0
Maza(config-if)#no shut

Maza(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

Maza(config-if)#exit
Maza(config)#interface fa1/0
Maza(config-if)#ip address 172.16.50.1 255.255.0.0
Maza(config-if)#no shut

Maza(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

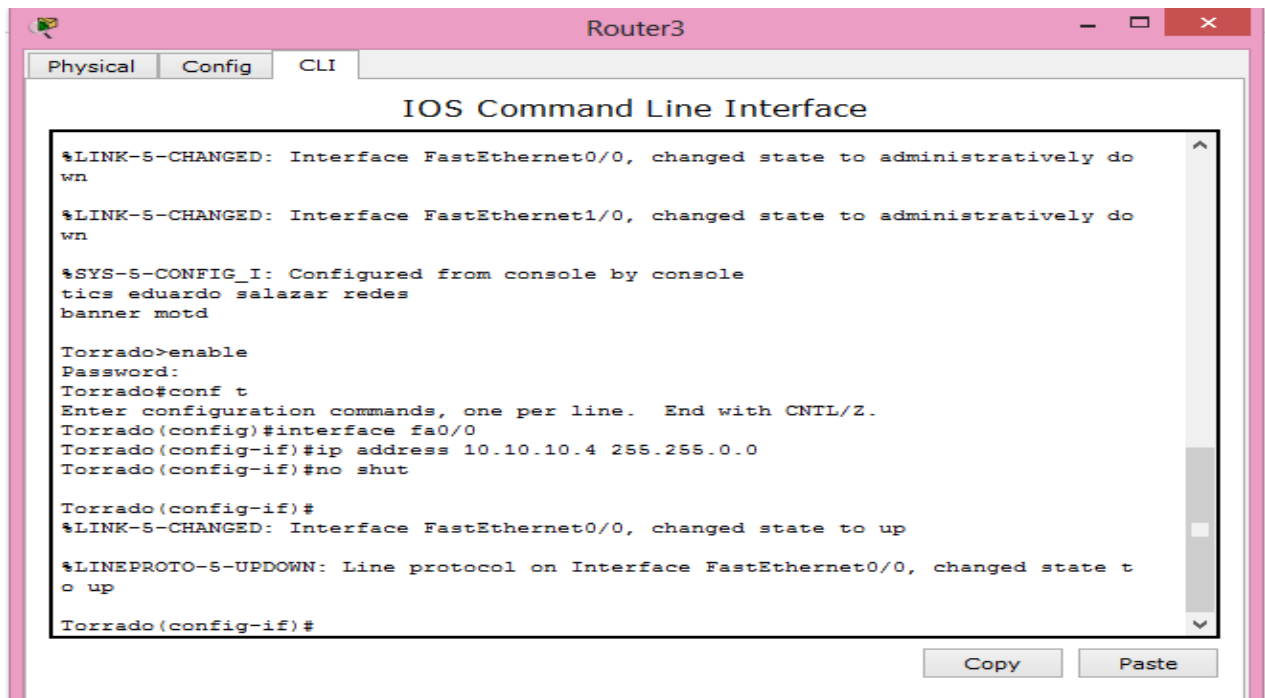
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

Maza(config-if)#
```

En este router solo se encendieron los puertos fa y no los seriales, ya que no está conectado directamente con otro router.

**Torrado.**

Puerto fa0/0.



```
Router3
Physical Config CLI
IOS Command Line Interface

%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to administratively do
wn

%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to administratively do
wn

%SYS-5-CONFIG_I: Configured from console by console
tics eduardo salazar redes
banner motd

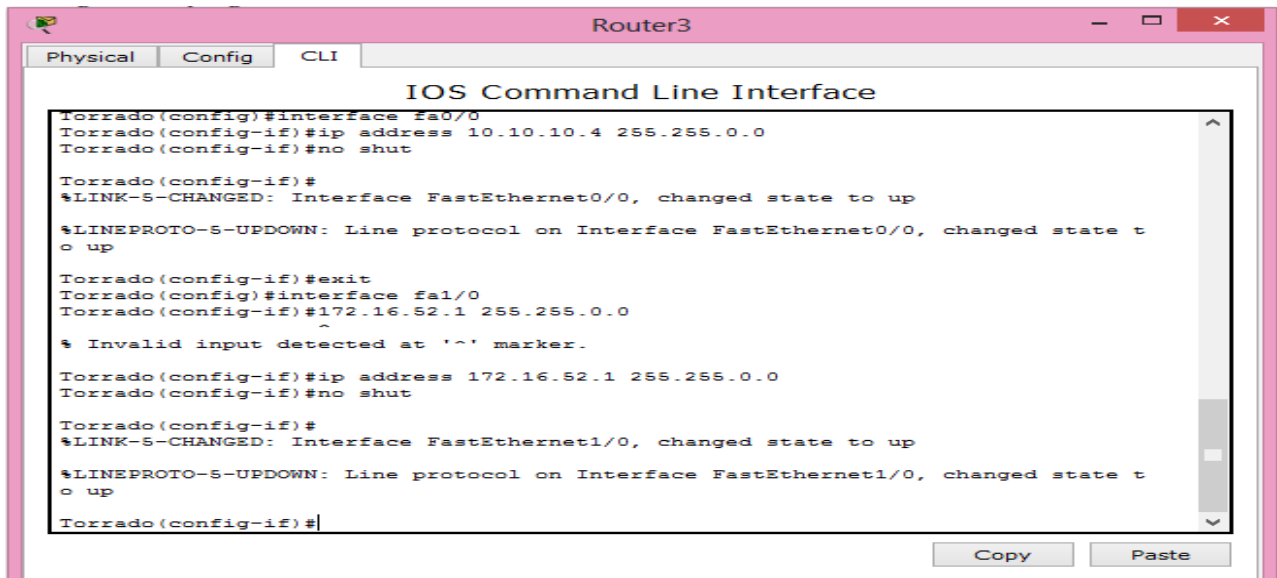
Torrado>enable
Password:
Torrado#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Torrado(config)#interface fa0/0
Torrado(config-if)#ip address 10.10.10.4 255.255.0.0
Torrado(config-if)#no shut

Torrado(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

Torrado(config-if)#
```

Puerto fa1/0.



The screenshot shows the Router3 CLI interface with the following text:

```
Router3
Physical Config CLI
IOS Command Line Interface
Torrado(config)#interface fa0/0
Torrado(config-if)#ip address 10.10.10.4 255.255.0.0
Torrado(config-if)#no shut

Torrado(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

Torrado(config-if)#exit
Torrado(config)#interface fa1/0
Torrado(config-if)#172.16.52.1 255.255.0.0
^
% Invalid input detected at '^' marker.

Torrado(config-if)#ip address 172.16.52.1 255.255.0.0
Torrado(config-if)#no shut

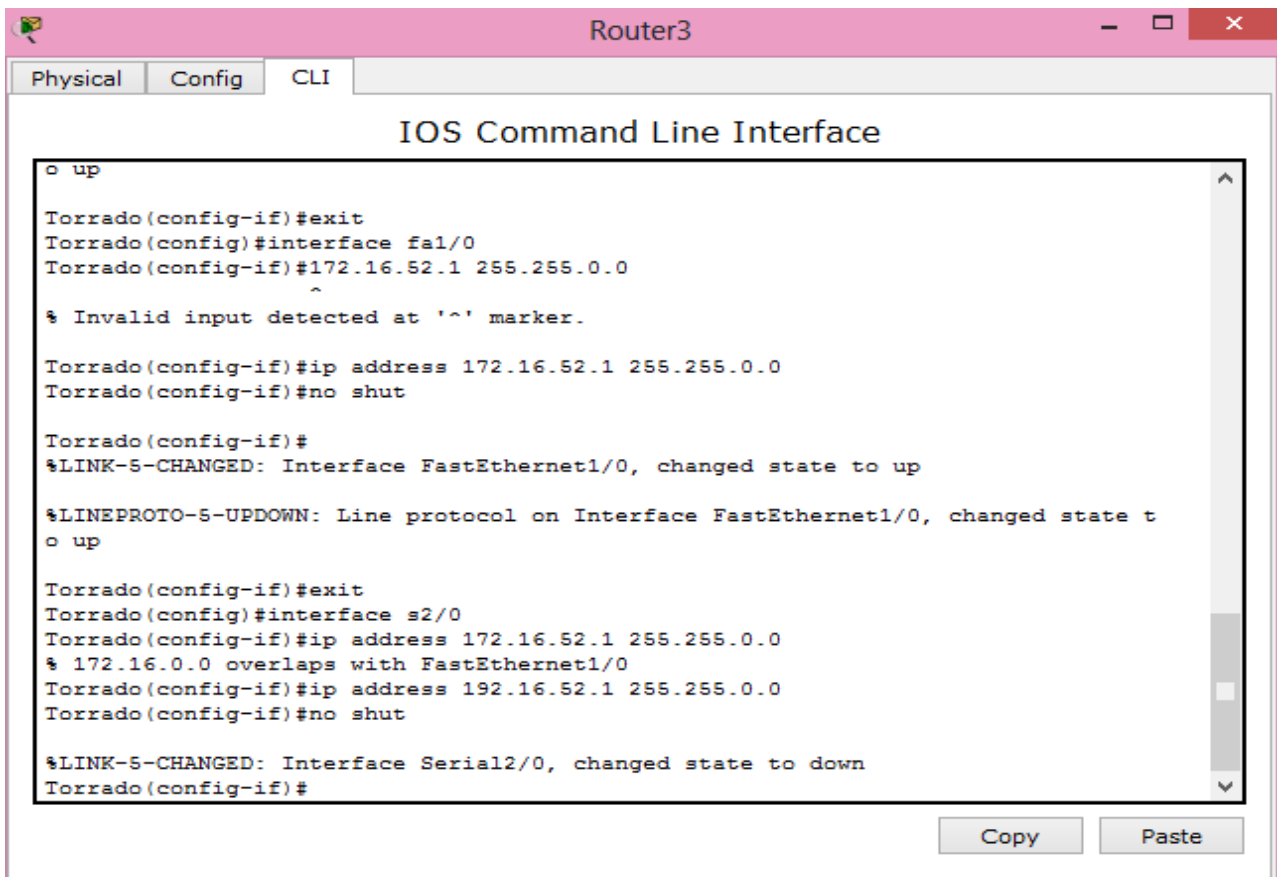
Torrado(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

Torrado(config-if)#
```

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

Serial2/0.



The screenshot shows the Router3 CLI interface with the following text:

```
Router3
Physical Config CLI
IOS Command Line Interface
o up

Torrado(config-if)#exit
Torrado(config)#interface fa1/0
Torrado(config-if)#172.16.52.1 255.255.0.0
^
% Invalid input detected at '^' marker.

Torrado(config-if)#ip address 172.16.52.1 255.255.0.0
Torrado(config-if)#no shut

Torrado(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up

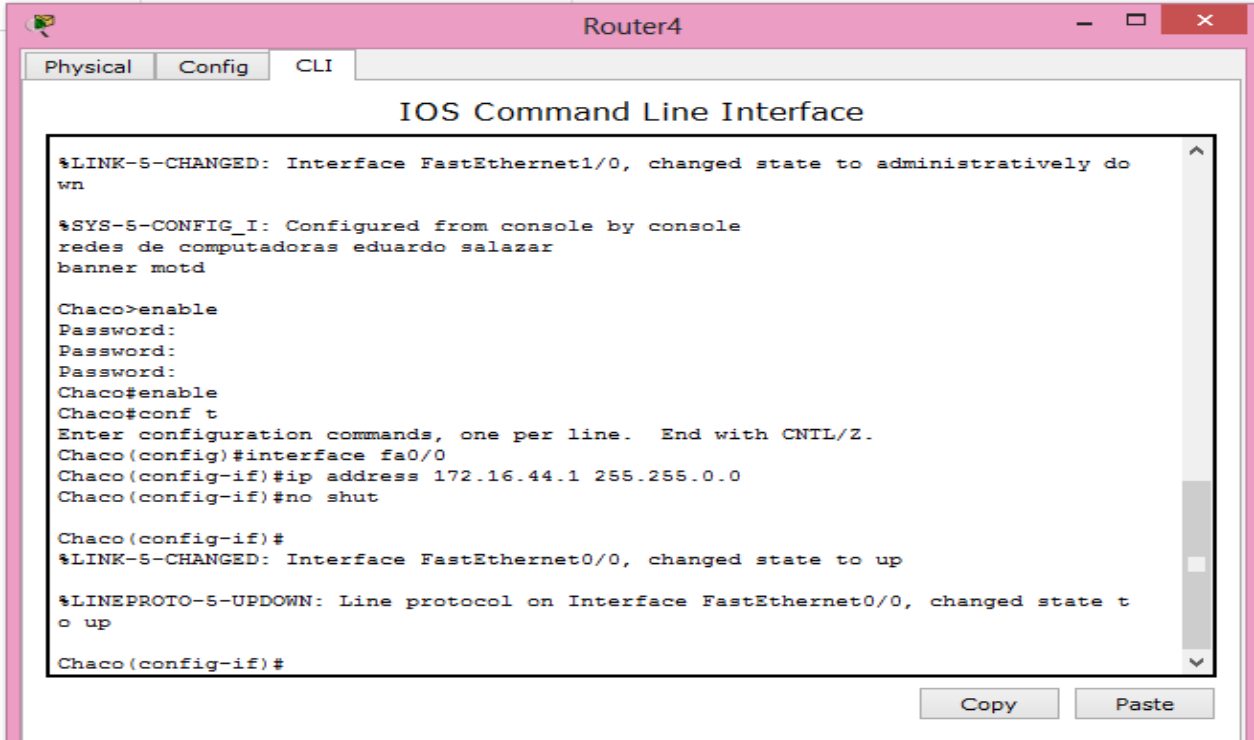
Torrado(config-if)#exit
Torrado(config)#interface s2/0
Torrado(config-if)#ip address 172.16.52.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet1/0
Torrado(config-if)#ip address 192.16.52.1 255.255.0.0
Torrado(config-if)#no shut

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

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

## Chaco.

Puerto fa0/0



The screenshot shows the Router4 CLI interface with the following text:

```
Router4
Physical Config CLI
IOS Command Line Interface

%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to administratively do
wn

%SYS-5-CONFIG_I: Configured from console by console
redes de computadoras eduardo salazar
banner motd

Chaco>enable
Password:
Password:
Password:
Chaco#enable
Chaco#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Chaco(config)#interface fa0/0
Chaco(config-if)#ip address 172.16.44.1 255.255.0.0
Chaco(config-if)#no shut

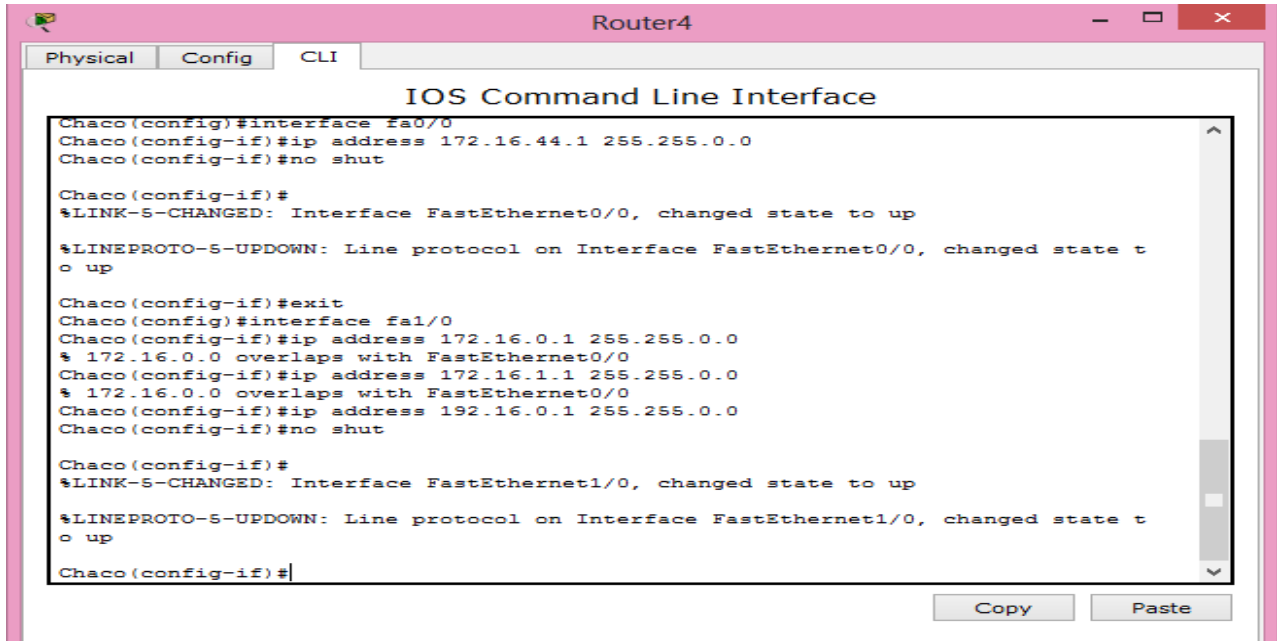
Chaco(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

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

Chaco(config-if)#
```

Copy Paste

Puerto fa1/0.



The screenshot shows the Router4 CLI interface with the following text:

```
Router4
Physical Config CLI
IOS Command Line Interface

Chaco(config)#interface fa0/0
Chaco(config-if)#ip address 172.16.44.1 255.255.0.0
Chaco(config-if)#no shut

Chaco(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

Chaco(config-if)#exit
Chaco(config)#interface fa1/0
Chaco(config-if)#ip address 172.16.0.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Chaco(config-if)#ip address 172.16.1.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Chaco(config-if)#ip address 192.16.0.1 255.255.0.0
Chaco(config-if)#no shut

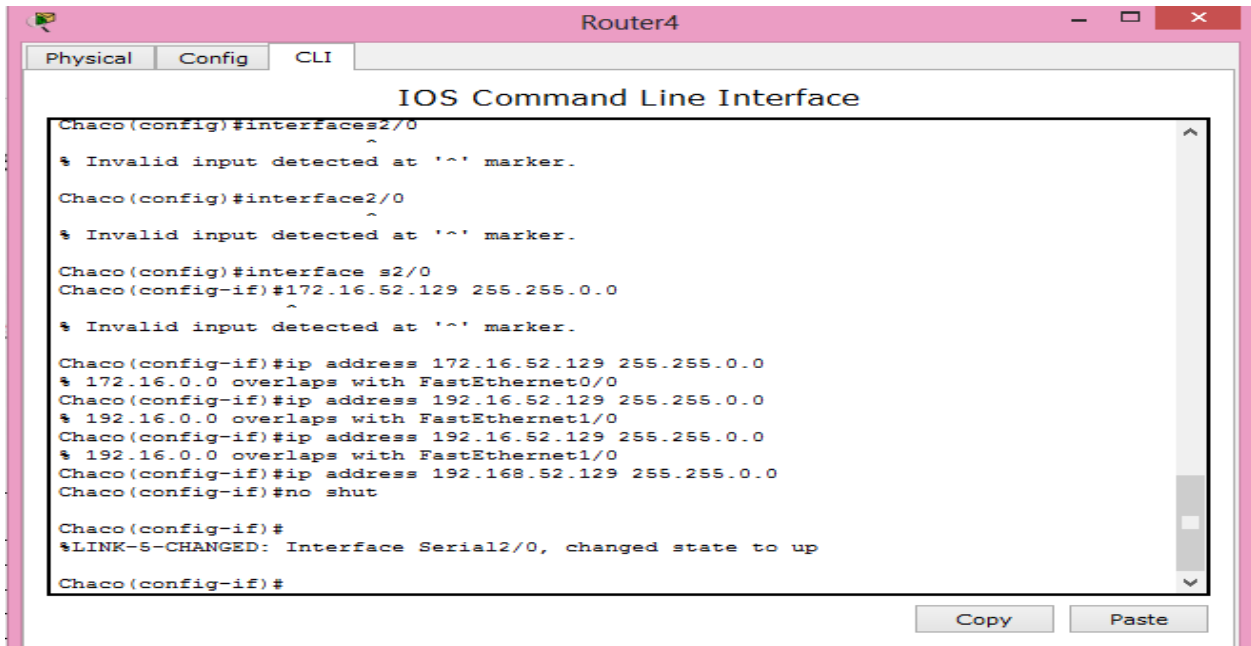
Chaco(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state t
o up

Chaco(config-if)#
```

Copy Paste

Serial2/0.

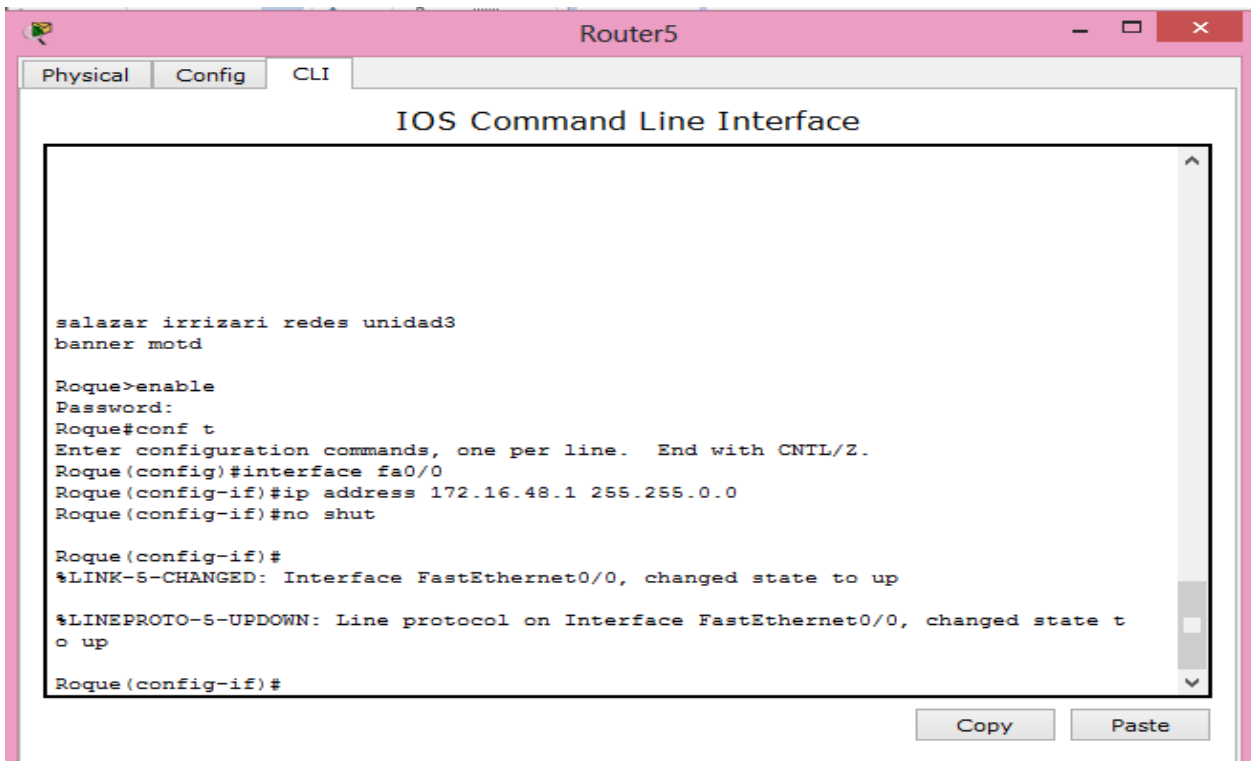


The screenshot shows the CLI of Router4. The user is in configuration mode. They attempt to enter 's2/0' as an interface name, which is rejected as invalid. They then enter 's2/0' with a space before the slash, which is also rejected. Finally, they enter 's2/0' correctly. They then configure the IP address as 172.16.52.129 with a 255.255.0.0 mask. Several overlapping IP address warnings are shown. The interface is then shut down and brought back up, resulting in a 'LINK-5-CHANGED' message.

```
Router4
Physical Config CLI
IOS Command Line Interface
Chaco(config)#interface s2/0
^
% Invalid input detected at '^' marker.
Chaco(config)#interface2/0
^
% Invalid input detected at '^' marker.
Chaco(config)#interface s2/0
Chaco(config-if)#172.16.52.129 255.255.0.0
^
% Invalid input detected at '^' marker.
Chaco(config-if)#ip address 172.16.52.129 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Chaco(config-if)#ip address 192.16.52.129 255.255.0.0
% 192.16.0.0 overlaps with FastEthernet1/0
Chaco(config-if)#ip address 192.16.52.129 255.255.0.0
% 192.16.0.0 overlaps with FastEthernet1/0
Chaco(config-if)#ip address 192.168.52.129 255.255.0.0
Chaco(config-if)#no shut
Chaco(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Chaco(config-if)#
```

Roque

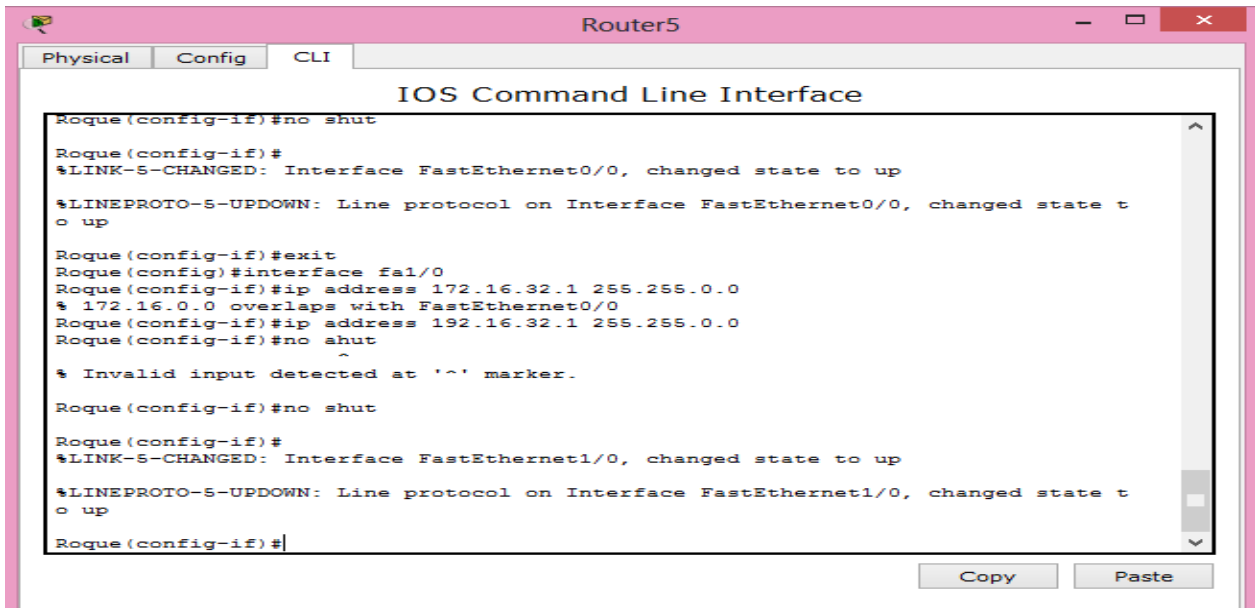
Puerto fa0/0



The screenshot shows the CLI of Router5. The user is in configuration mode. They enter 'salazar irrizari redes unidad3' and 'banner motd'. They then enter 'enable' and provide a password. They enter 'conf t' to enter configuration mode. They configure the interface 'fa0/0' with the IP address 172.16.48.1 and a 255.255.0.0 mask. The interface is then shut down and brought back up, resulting in 'LINK-5-CHANGED' and 'LINEPROTO-5-UPDOWN' messages.

```
Router5
Physical Config CLI
IOS Command Line Interface
salazar irrizari redes unidad3
banner motd
Roque>enable
Password:
Roque#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Roque(config)#interface fa0/0
Roque(config-if)#ip address 172.16.48.1 255.255.0.0
Roque(config-if)#no shut
Roque(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
Roque(config-if)#
```

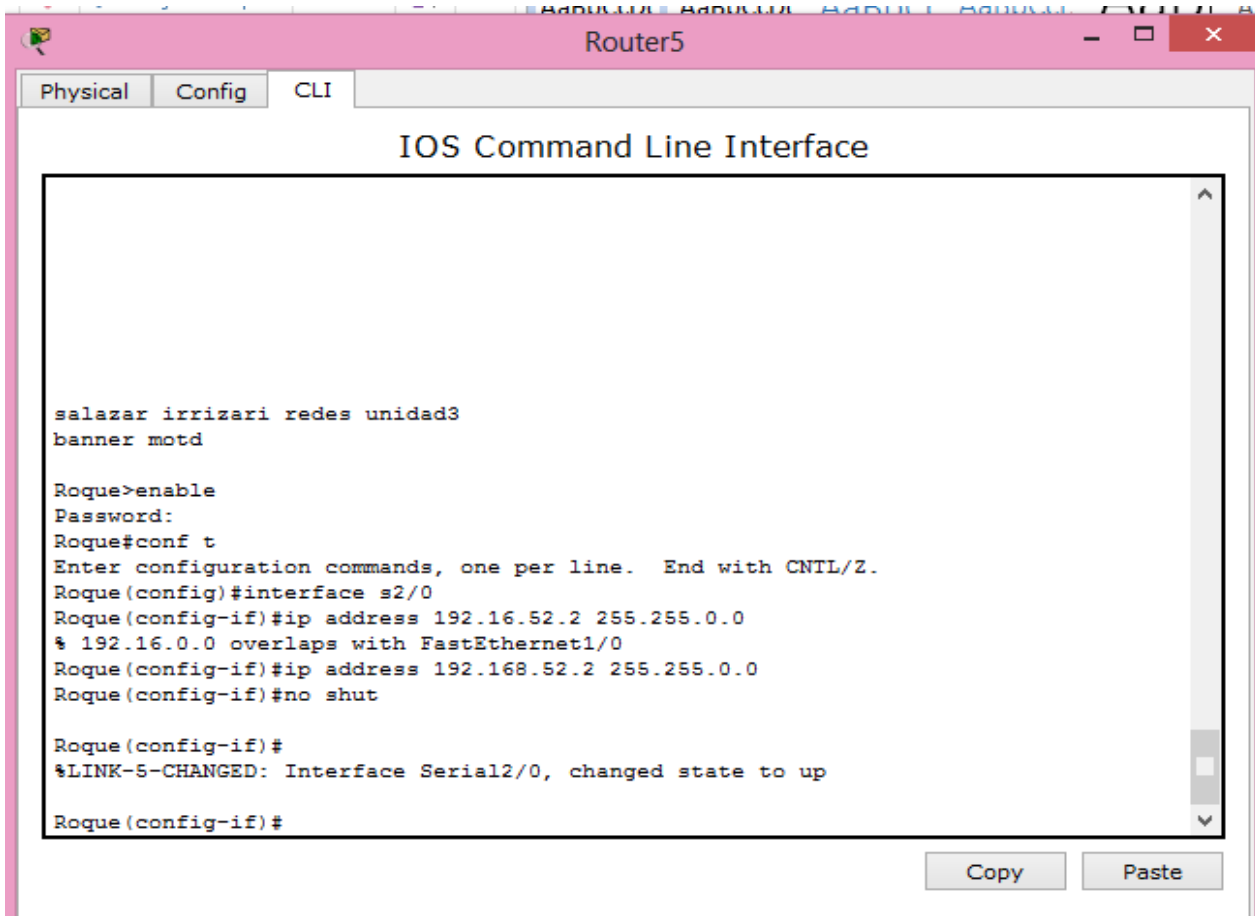
## Puerto fa1/0



The screenshot shows the Router5 CLI interface with the following text:

```
Roque(config-if)#no shut
Roque(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
Roque(config-if)#exit
Roque(config)#interface fa1/0
Roque(config-if)#ip address 172.16.32.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Roque(config-if)#ip address 192.16.32.1 255.255.0.0
Roque(config-if)#no shut
^
% Invalid input detected at '^' marker.
Roque(config-if)#no shut
Roque(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
Roque(config-if)#|
```

## Serial2/0



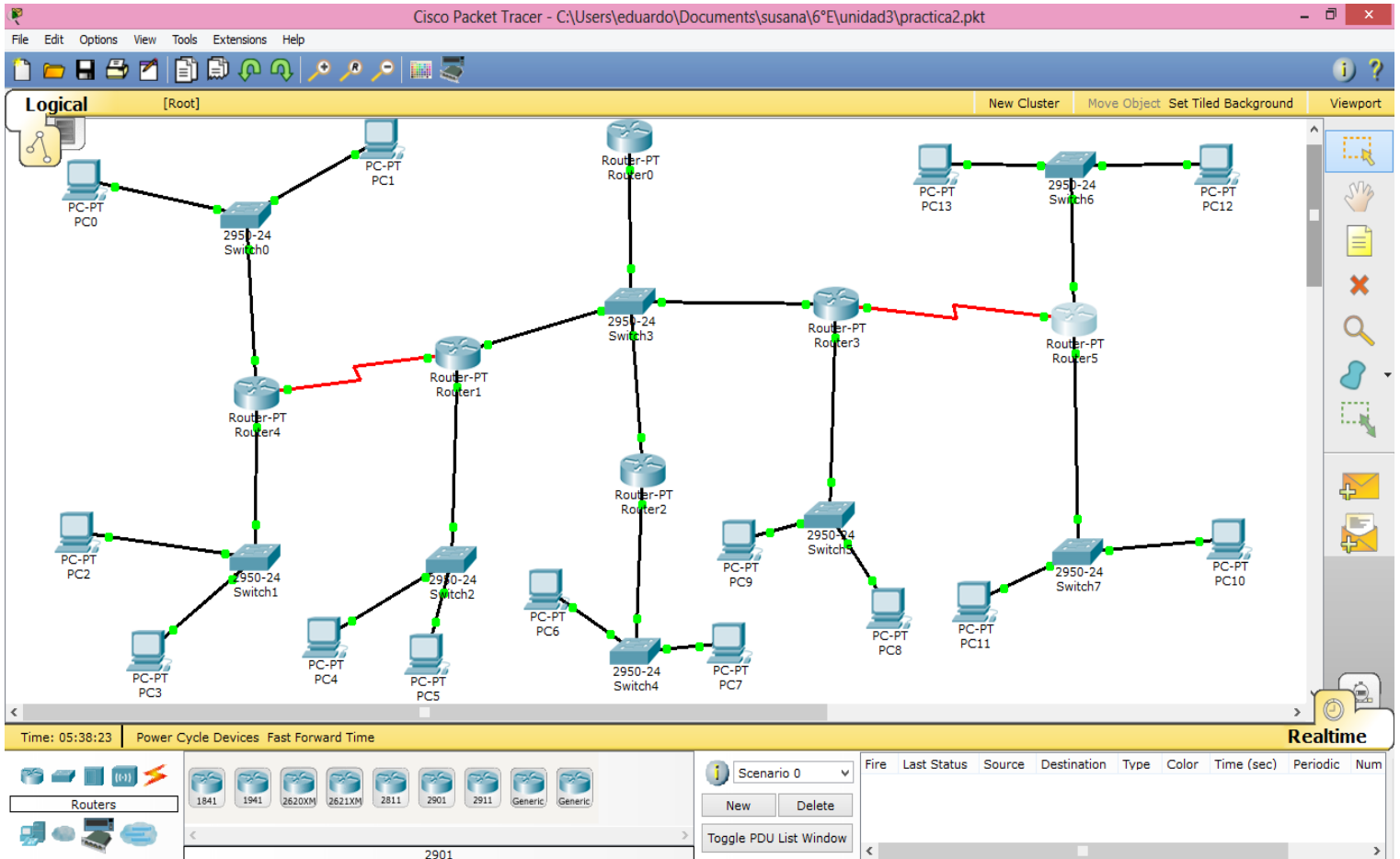
The screenshot shows the Router5 CLI interface with the following text:

```
salazar irrizari redes unidad3
banner motd

Roque>enable
Password:
Roque#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Roque(config)#interface s2/0
Roque(config-if)#ip address 192.16.52.2 255.255.0.0
% 192.16.0.0 overlaps with FastEthernet1/0
Roque(config-if)#ip address 192.168.52.2 255.255.0.0
Roque(config-if)#no shut

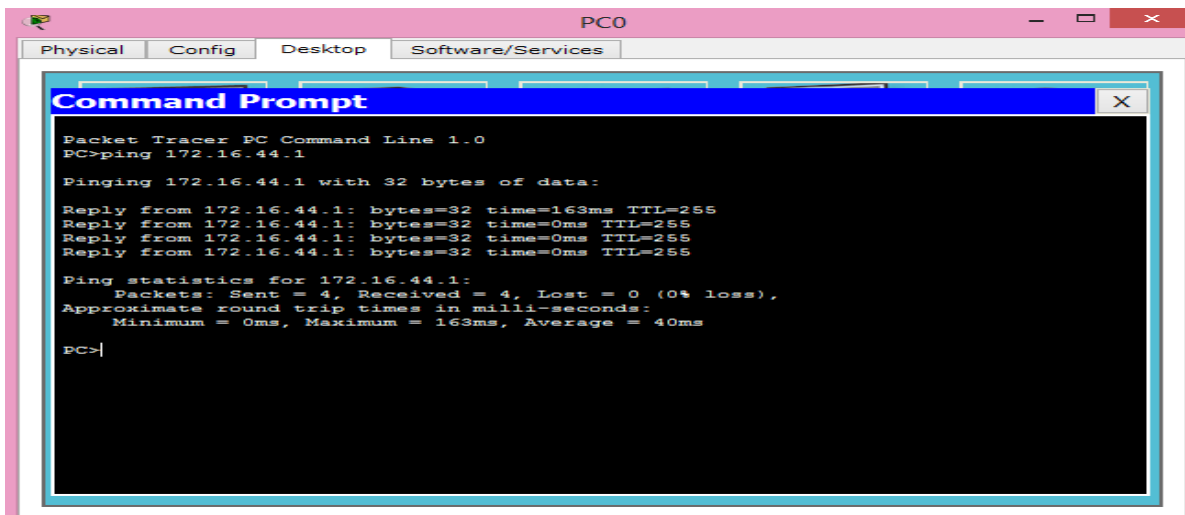
Roque(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
Roque(config-if)#
```

Después de esto nosotros podemos visualizar en nuestro simulador que las conexiones de los dispositivos están en verde, esto quiere decir que ya están bien levantado los puertos.



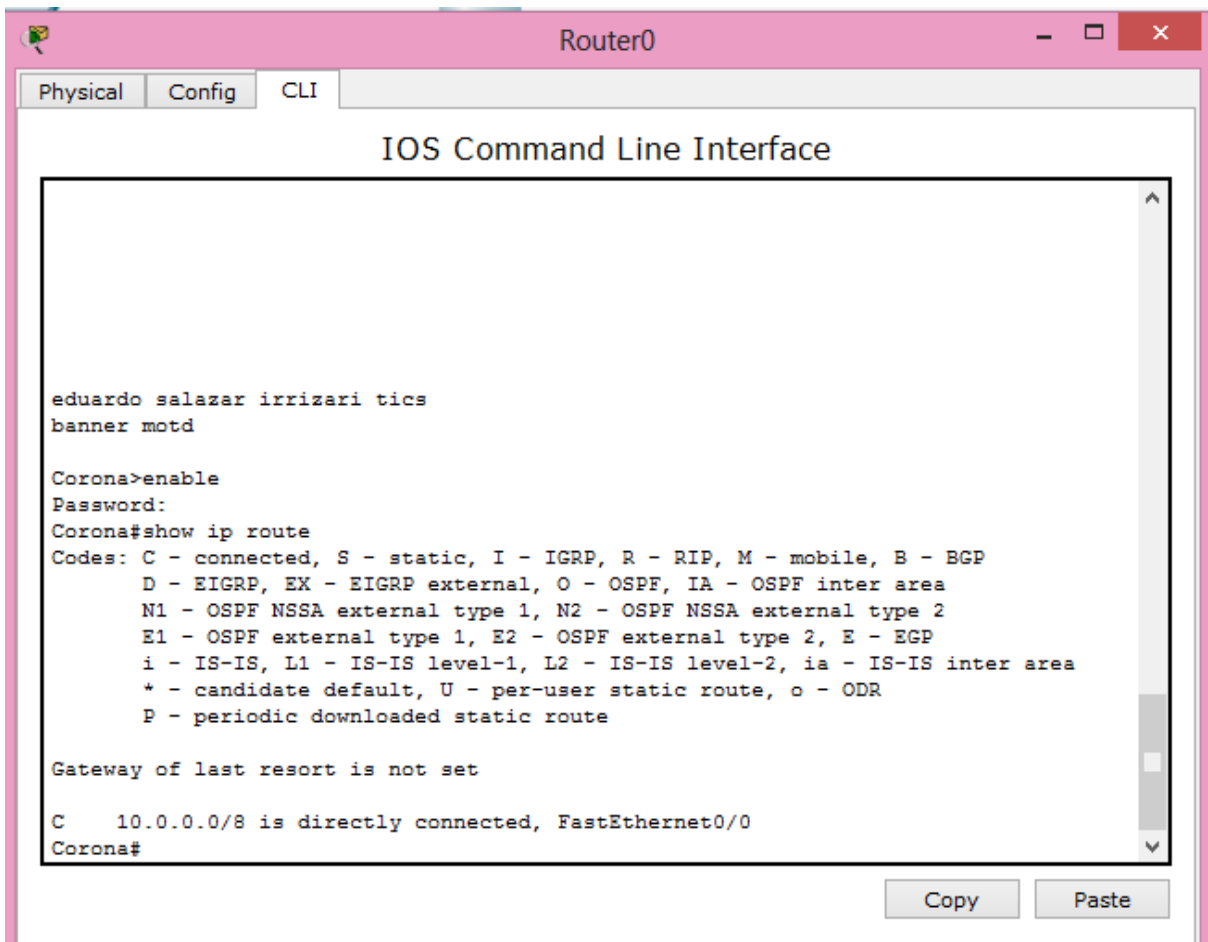
Como sabemos hay varias formas de poder comprobar estas conexiones, en este caso le daremos ping de las pc's a los routers que estén conectados.

Le damos ping de la PC1 a router5

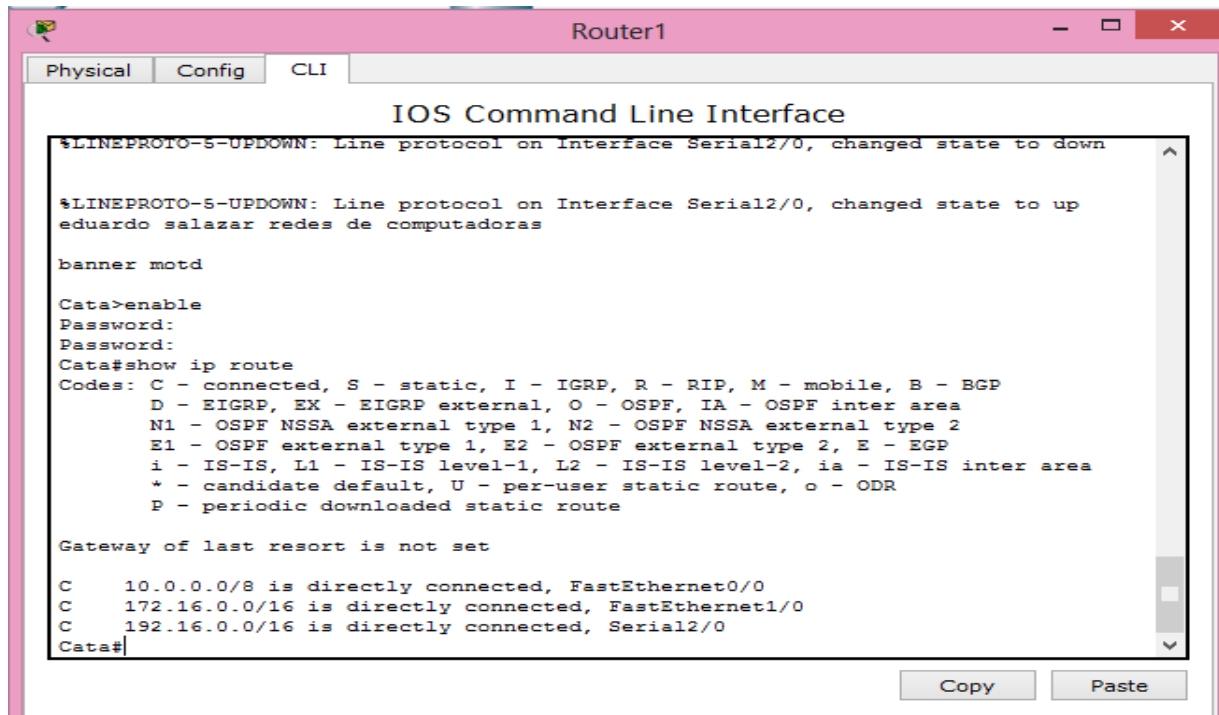


Además de eso podemos mostrar una tabla con la instrucción show ip route.

R1.



R2.



The screenshot shows the CLI interface of Router1. The window title is "Router1". The tabs are "Physical", "Config", and "CLI". The main content area is titled "IOS Command Line Interface". The text in the terminal is as follows:

```
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
eduardo salazar redes de computadoras

banner motd

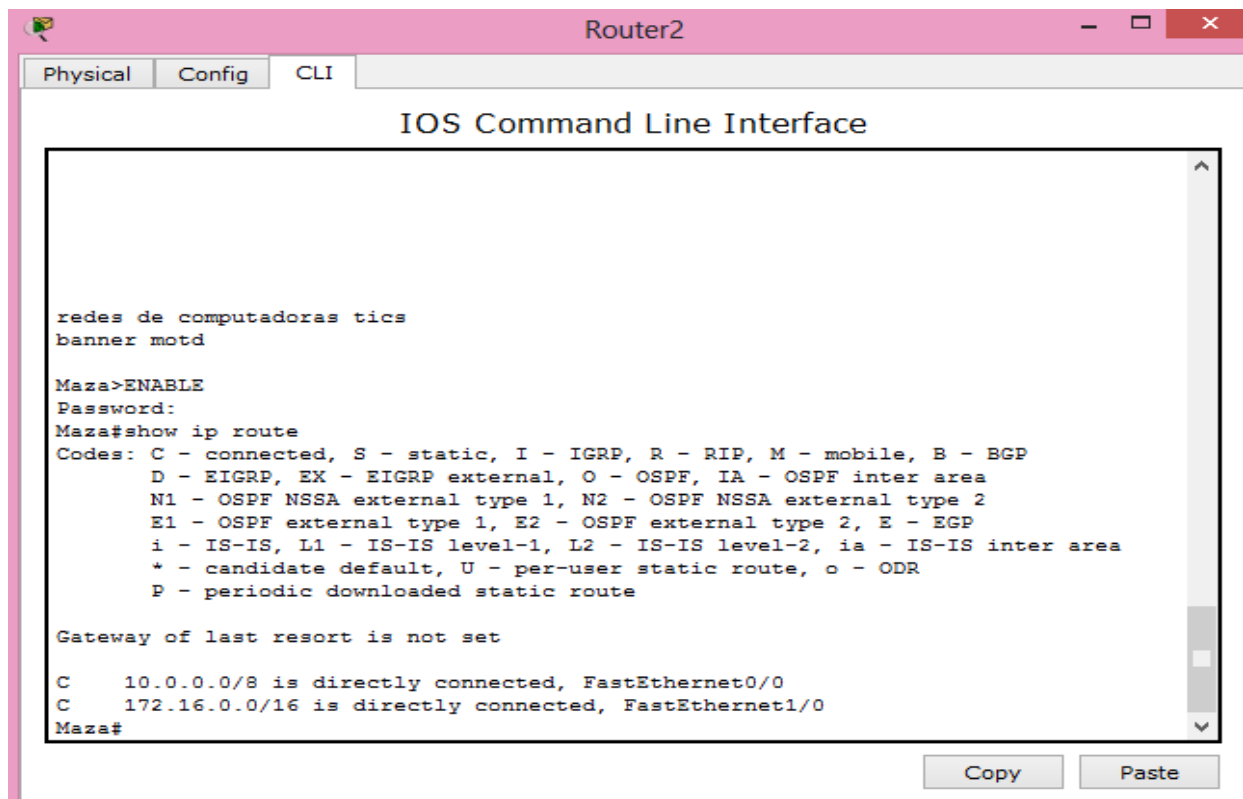
Cata>enable
Password:
Password:
Cata#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    172.16.0.0/16 is directly connected, FastEthernet1/0
C    192.16.0.0/16 is directly connected, Serial2/0
Cata#
```

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

R3.



The screenshot shows the CLI interface of Router2. The window title is "Router2". The tabs are "Physical", "Config", and "CLI". The main content area is titled "IOS Command Line Interface". The text in the terminal is as follows:

```
redes de computadoras tics
banner motd

Maza>ENABLE
Password:
Maza#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    172.16.0.0/16 is directly connected, FastEthernet1/0
Maza#
```

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

R4.

The screenshot shows the CLI interface of Router3. The window title is "Router3" and the tabs are "Physical", "Config", and "CLI". The main title is "IOS Command Line Interface". The terminal output shows the following:

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

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

Torrado>enable
Password:
Torrado#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

      10.0.0.0/16 is subnetted, 1 subnets
C       10.10.0.0 is directly connected, FastEthernet0/0
C       172.16.0.0/16 is directly connected, FastEthernet1/0
C       192.16.0.0/16 is directly connected, Serial2/0
Torrado#
```

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

R5.

The screenshot shows the CLI interface of Router4. The window title is "Router4" and the tabs are "Physical", "Config", and "CLI". The main title is "IOS Command Line Interface". The terminal output shows the following:

```
Password:
% Bad secrets

Chaco>enable
Password:
Password:
Password:
% Bad secrets

Chaco>enable
Password:
Chaco#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C       172.16.0.0/16 is directly connected, FastEthernet0/0
C       192.16.0.0/16 is directly connected, FastEthernet1/0
C       192.168.0.0/16 is directly connected, Serial2/0
Chaco#
```

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

R6.

```
Router5
Physical Config CLI
IOS Command Line Interface

salazar irrizari redes unidad3
banner motd

Roque>enable
Password:
Roque#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    172.16.0.0/16 is directly connected, FastEthernet0/0
C    192.16.0.0/16 is directly connected, FastEthernet1/0
C    192.168.0.0/16 is directly connected, Serial2/0
Roque#
```

## CONCLUSIÓN

Puedo decir que en esta práctica solo era necesario analizar la imagen que se nos proporcionó ya que de ahí íbamos a obtener las direcciones IP de cada uno de los dispositivos, además de que se les realizó configuraciones iniciales, como, el cambio de nombre, cambio de contraseña, etc., de igual forma fue necesario levantar los puertos tanto los puertos fa como los seriales de cada router, esto con el fin de que hagan conexión los dispositivos, pues más que nada no se hizo algo nuevo.

Cabe mencionar que en algunos casos era necesario el cambio de dirección, ya que la que venía en la imagen no lo aceptaba por tal motivo era necesario un cambio de ella.