

**INSTITUTO TÉCNICO DE SALINA CRUZ**

**REDES DE COMPUTADORA**

**SEMESTRE FEBRERO-AGOSTO 2015**

**REPORTE DE PRÁCTICAS**

**PRACTICA N°: 3**

**UNIDAD: 4**

**FECHA: 12 DE MAYO DE 2015**

**NOMBRE: EDUARDO SALAZAR IRRIZARI**

### Objetivos:

- Analizar el resultado del router para ver si RIPv2 proporciona soporte para VLSM y CIDR.
- Identificar los comandos de verificación RIPv2 y los problemas de RIPv2 comunes.
- Configurar, verificar y resolver problemas de RIPv2 en laboratorios prácticos.

### Instrucciones:

- 1.- Realizar la tabla de ruteo.
- 2.- Realizar configuraciones iniciales.
- 3.- Identificar comandos a utilizar.
- 4.- Realizar configuraciones de RIP.

### Materiales:

- 1.- Computadoras.
- 2.- Cisco Packet Tracer.
- 3.- Silla.

Escenario.



Tabla de enrutamiento.

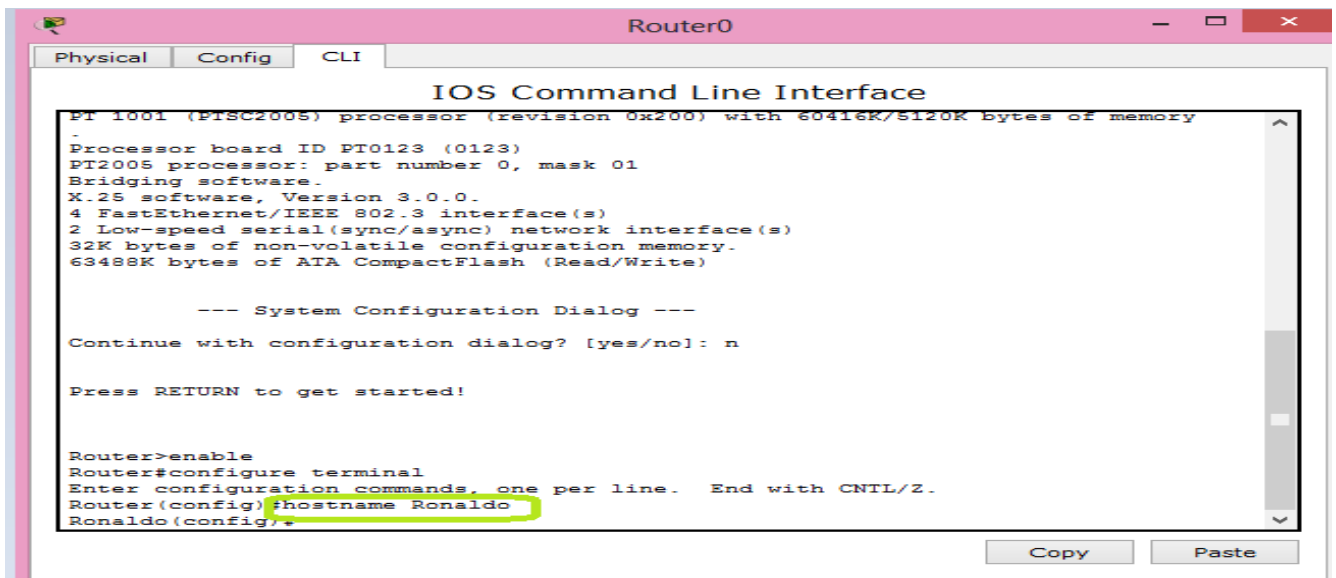
Dispositivo	Interfaz	Dirección IP	Mascara de subred	Gateway
Ronaldo (R1)	Fa0/0	172.30.1.1	255.255.0.0	No aplicable
	Fa1/0	172.31.1.1	255.255.0.0	
	S2/0	209.165.200.228	255.255.255.0	
Casillas (R2)	Fa0/0	10.1.0.1	255.0.0.0	No aplicable
	S2/0	209.165.200.229	255.255.255.0	
	S3/0	209.165.201.232	255.255.255.0	
Pirlo (R3)	Fa0/0	172.30.100.1	255.255.0.0	No aplicable
	S2/0	209.165.201.233	255.255.255.0	

### CONFIGURACIÓN INICIAL.

En este apartado es donde nosotros realizaremos configuraciones tales como: cambio de nombre, asignación de un password y asignación de un banner a cada uno de los routers.

R1 (Ronaldo).

Cambio de nombre.



The screenshot shows the Router0 CLI interface. The title bar reads "Router0". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The output shows the system configuration dialog, including processor information and a prompt to continue with configuration. The user enters "enable" to enter privileged mode, then "configure terminal" to enter configuration mode. The command "hostname Ronaldo" is entered and highlighted with a yellow box. The prompt changes to "Ronaldo(config)#".

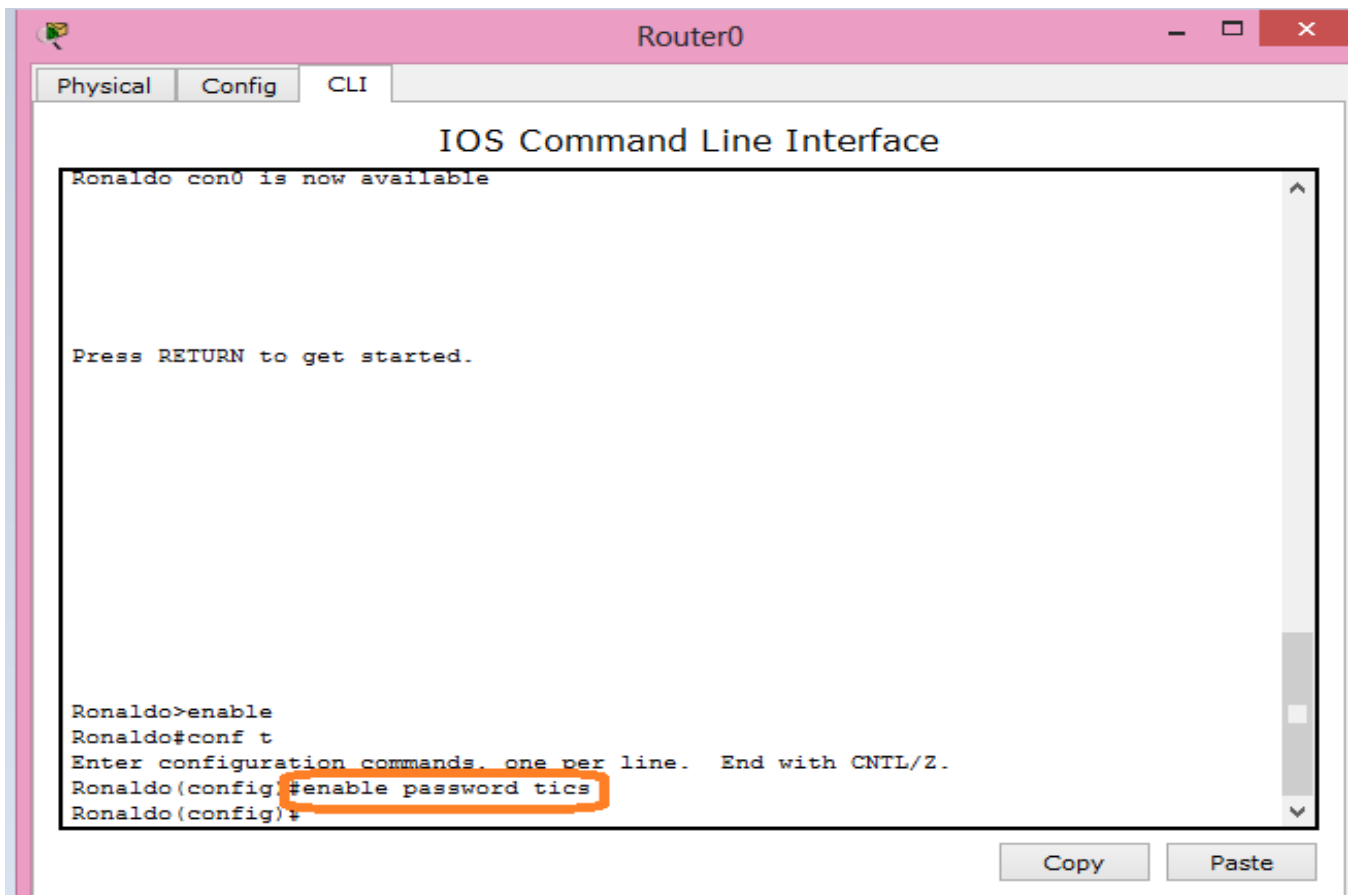
```
Router0
Physical Config CLI
IOS Command Line Interface
PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
-
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
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 Ronaldo
Ronaldo(config)#
```

Asignación de una contraseña.



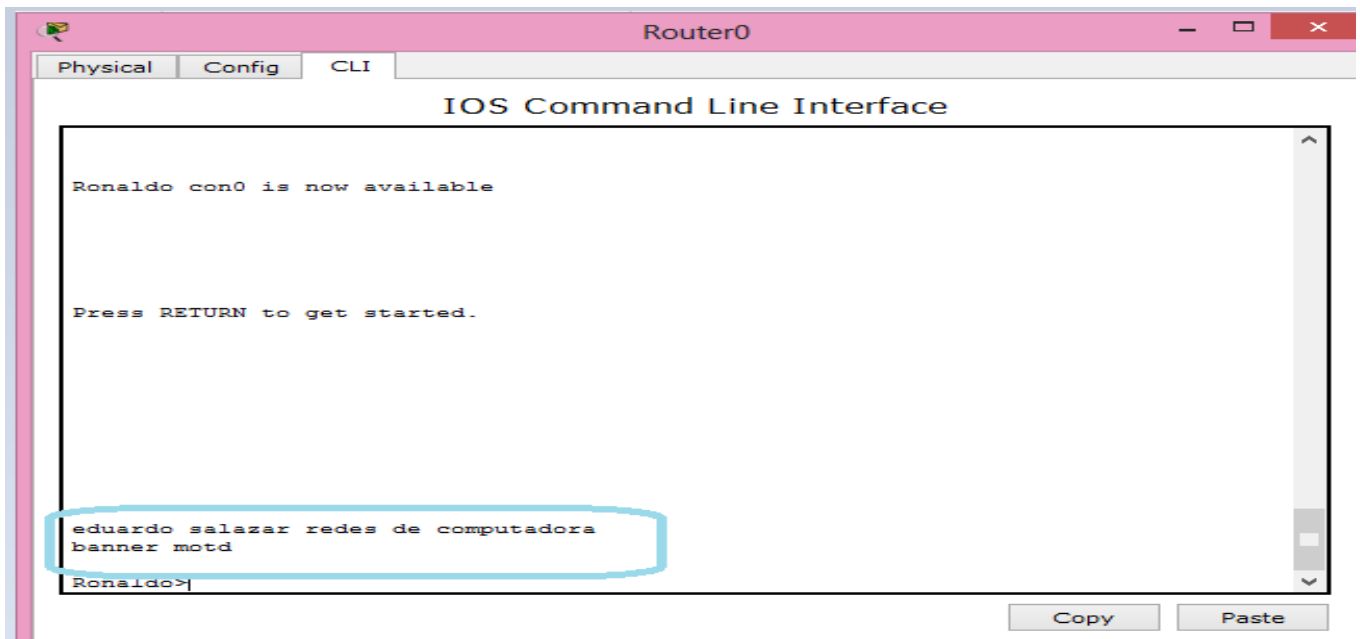
The screenshot shows the Router0 CLI interface. The title bar reads "Router0". Below the title bar are tabs for "Physical", "Config", and "CLI". The main window is titled "IOS Command Line Interface". The output shows the message "Ronaldo con0 is now available" and a prompt to press RETURN to get started. The user enters "enable" to enter privileged mode, then "conf t" to enter configuration mode. The command "enable password tics" is entered and highlighted with an orange box. The prompt changes to "Ronaldo(config)#".

```
Router0
Physical Config CLI
IOS Command Line Interface
Ronaldo con0 is now available

Press RETURN to get started.

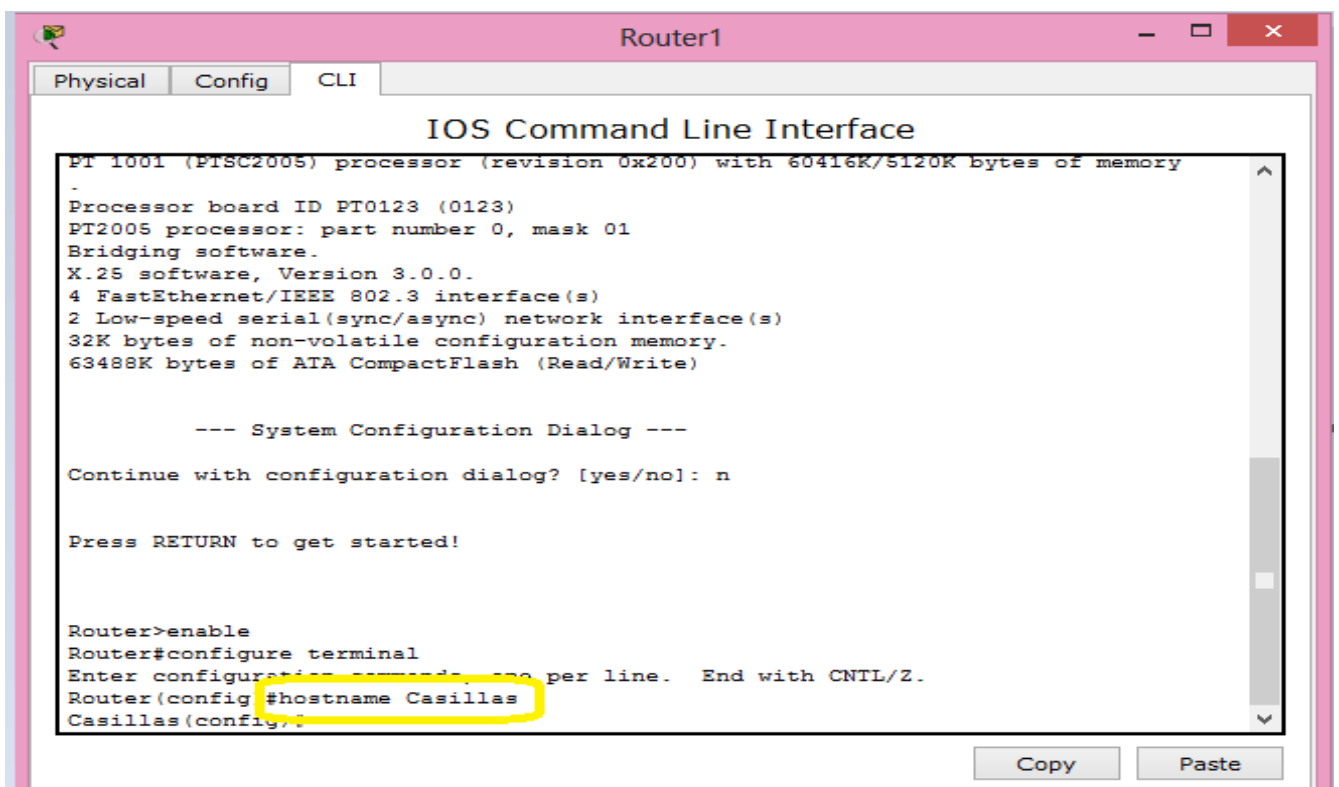
Ronaldo>enable
Ronaldo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Ronaldo(config)#enable password tics
Ronaldo(config)#
```

Asignación de un banner.

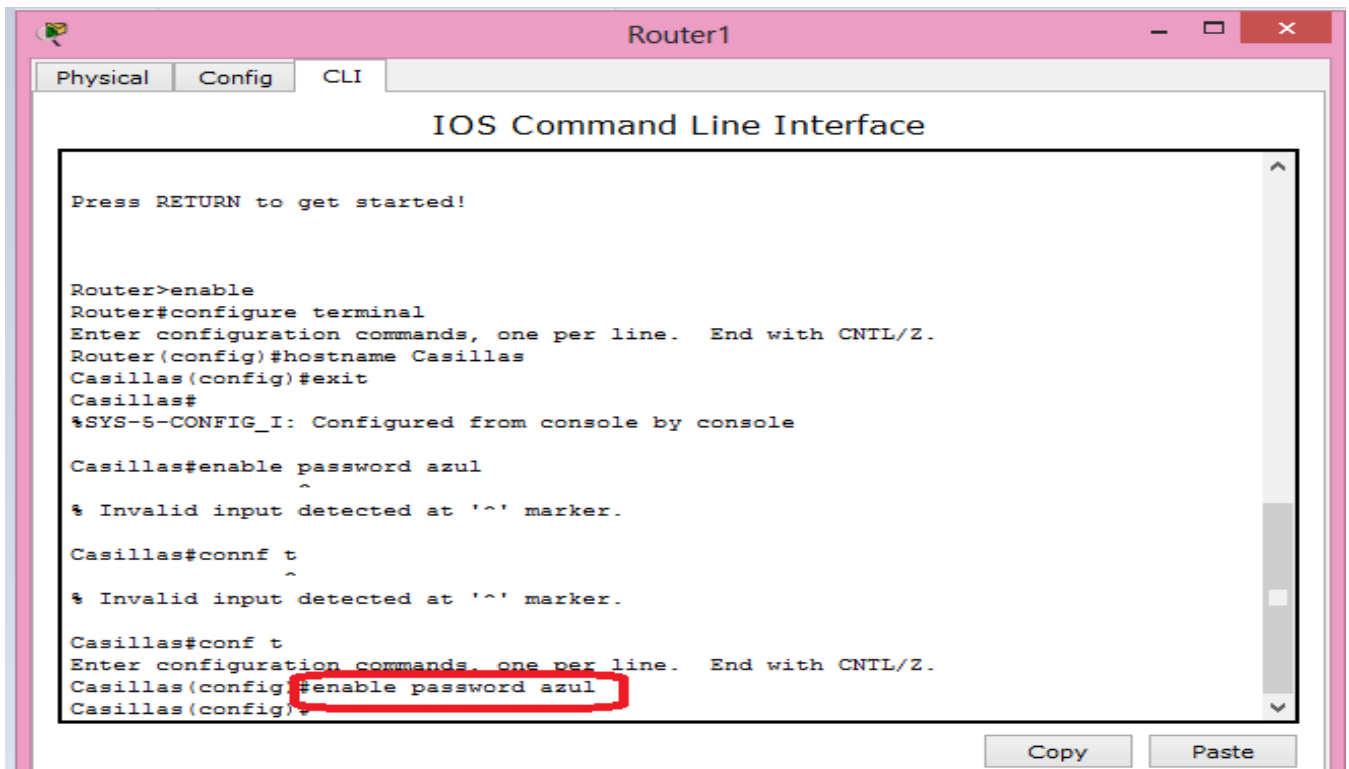


**R2 (Casillas).**

Cambio de nombre.



Asignación de la contraseña.



The screenshot shows the Router1 CLI interface. The user has entered the following commands:

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

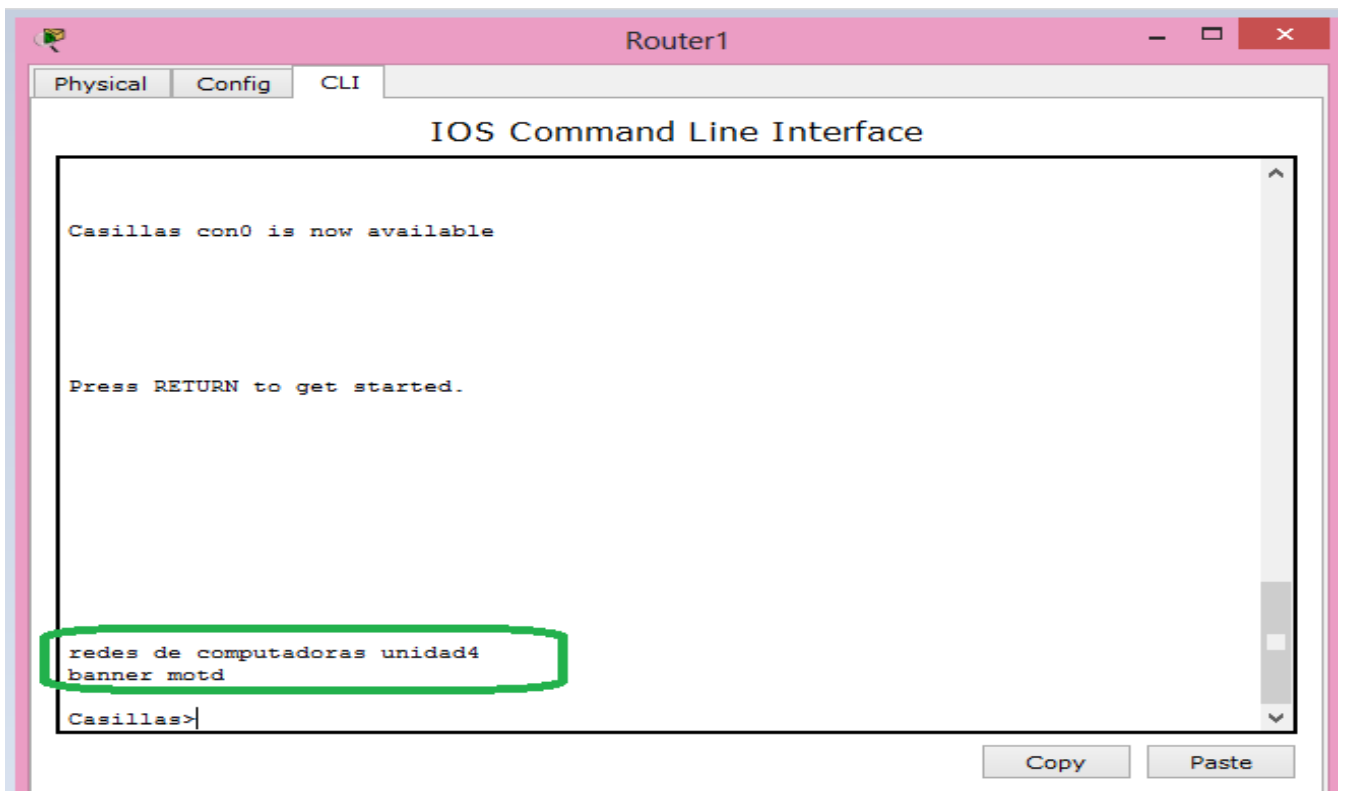
Casillas#enable password azul
^
% Invalid input detected at '^' marker.

Casillas#conf t
^
% Invalid input detected at '^' marker.

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

The command `enable password azul` is highlighted with a red box. Below the terminal window are "Copy" and "Paste" buttons.

Configuración del banner.



The screenshot shows the Router1 CLI interface. The user has entered the following commands:

```
Casillas con0 is now available

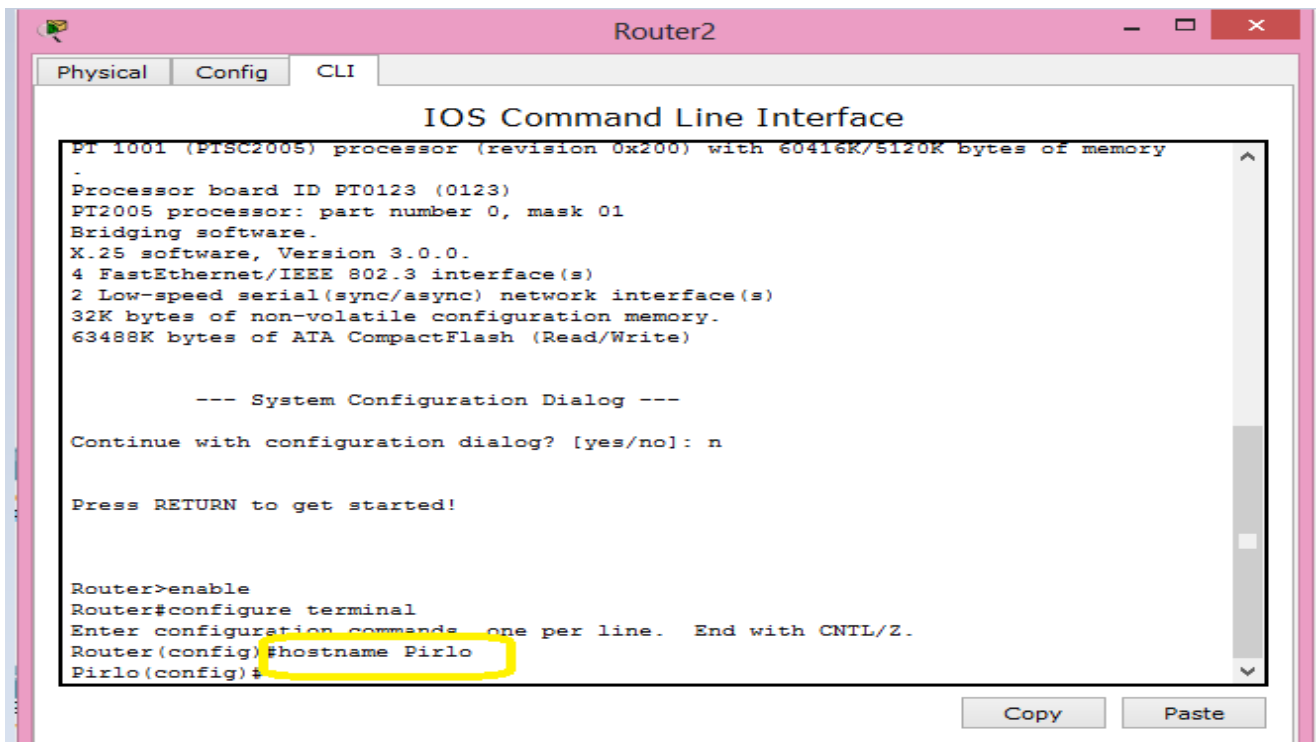
Press RETURN to get started.

redes de computadoras unidad4
banner motd
Casillas>
```

The commands `redes de computadoras unidad4` and `banner motd` are highlighted with a green box. Below the terminal window are "Copy" and "Paste" buttons.

### R3 (Pirlo).

Cambio de nombre.



```
Router2
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)

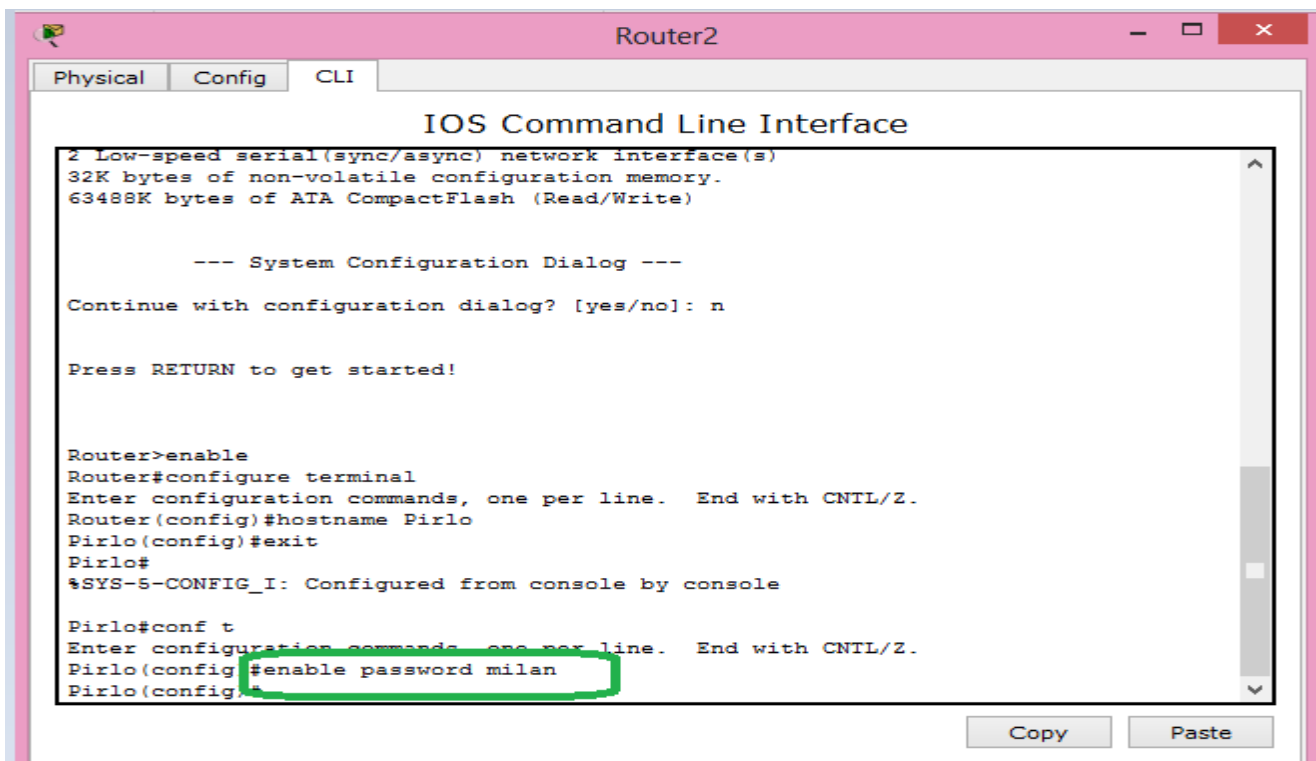
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

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

Copy Paste

Configuración de la contraseña.



```
Router2
Physical Config CLI
IOS Command Line Interface
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

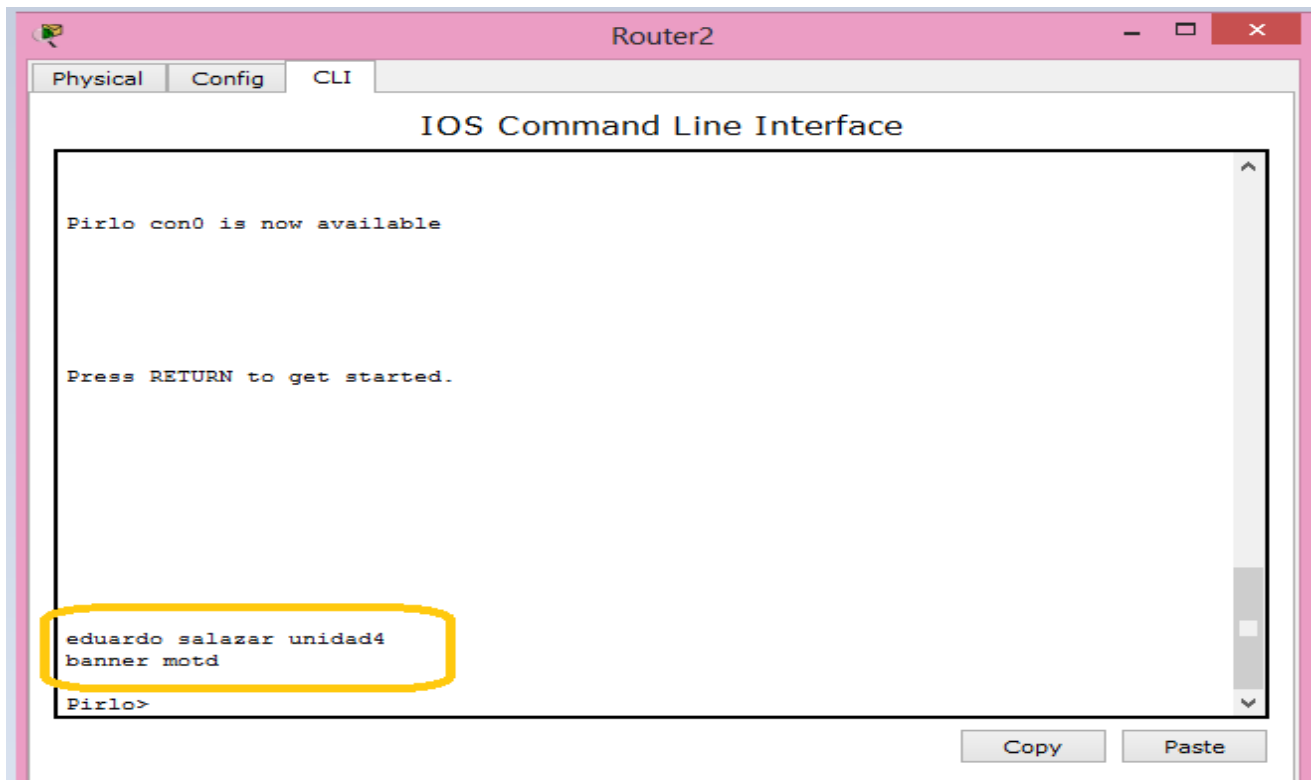
Press RETURN to get started!

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

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

Copy Paste

Asignación de un banner.



The screenshot shows the CLI interface of Router2. The window title is "Router2". The tabs are "Physical", "Config", and "CLI". The main area is titled "IOS Command Line Interface". The output shows a banner message: "Pirlo con0 is now available" followed by "Press RETURN to get started." Below this, the command "eduardo salazar unidad4" is entered, and the prompt changes to "Pirlo>". The command "banner motd" is also visible, indicating the configuration of a MOTD banner. A yellow box highlights the command "eduardo salazar unidad4 banner motd".

```
Pirlo con0 is now available

Press RETURN to get started.

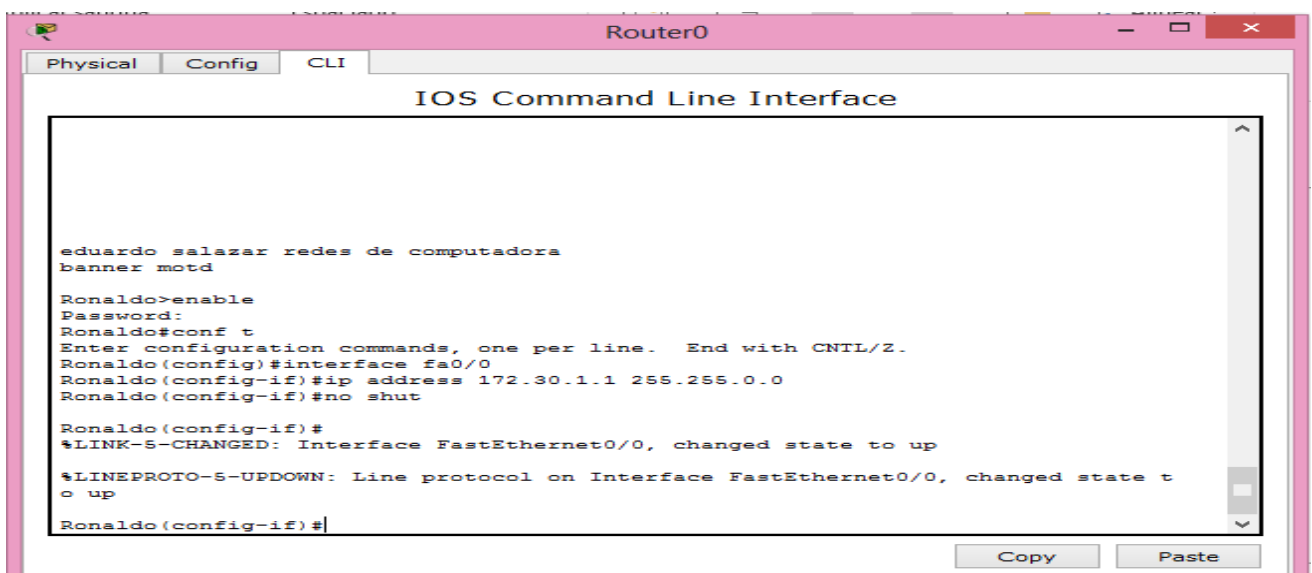
eduardo salazar unidad4
banner motd

Pirlo>
```

Después de todas estas configuraciones pasamos al levantamiento o habilitación de puertos, tanto de Fa como seriales, esto con el fin de que se pueda llevar a cabo las conexiones.

**Ronaldo (R1).**

Puerto fa0/0.



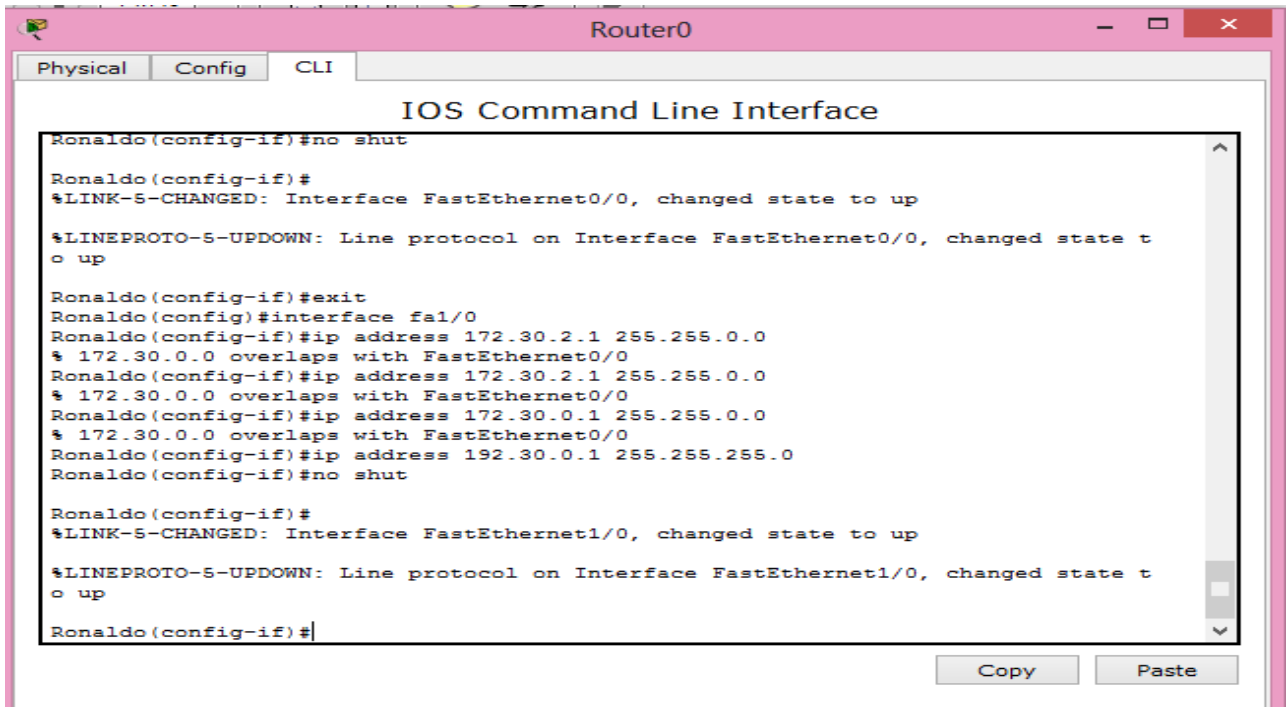
The screenshot shows the CLI interface of Router0. The window title is "Router0". The tabs are "Physical", "Config", and "CLI". The main area is titled "IOS Command Line Interface". The output shows the configuration of the fa0/0 interface. The command "eduardo salazar redes de computadora" is entered, and the prompt changes to "Ronaldo>". The command "enable" is entered, and the prompt changes to "Ronaldo#". The command "conf t" is entered, and the prompt changes to "Ronaldo(config)#". The command "interface fa0/0" is entered, and the prompt changes to "Ronaldo(config-if)#". The command "ip address 172.30.1.1 255.255.0.0" is entered, and the prompt changes to "Ronaldo(config-if)#". The command "no shut" is entered, and the prompt changes to "Ronaldo(config-if)#". The output shows the interface state changing to up: "%LINK-S-CHANGED: Interface FastEthernet0/0, changed state to up" and "%LINEPROTO-S-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up".

```
eduardo salazar redes de computadora
banner motd

Ronaldo>enable
Password:
Ronaldo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Ronaldo(config)#interface fa0/0
Ronaldo(config-if)#ip address 172.30.1.1 255.255.0.0
Ronaldo(config-if)#no shut

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

Puerto fa1/0.

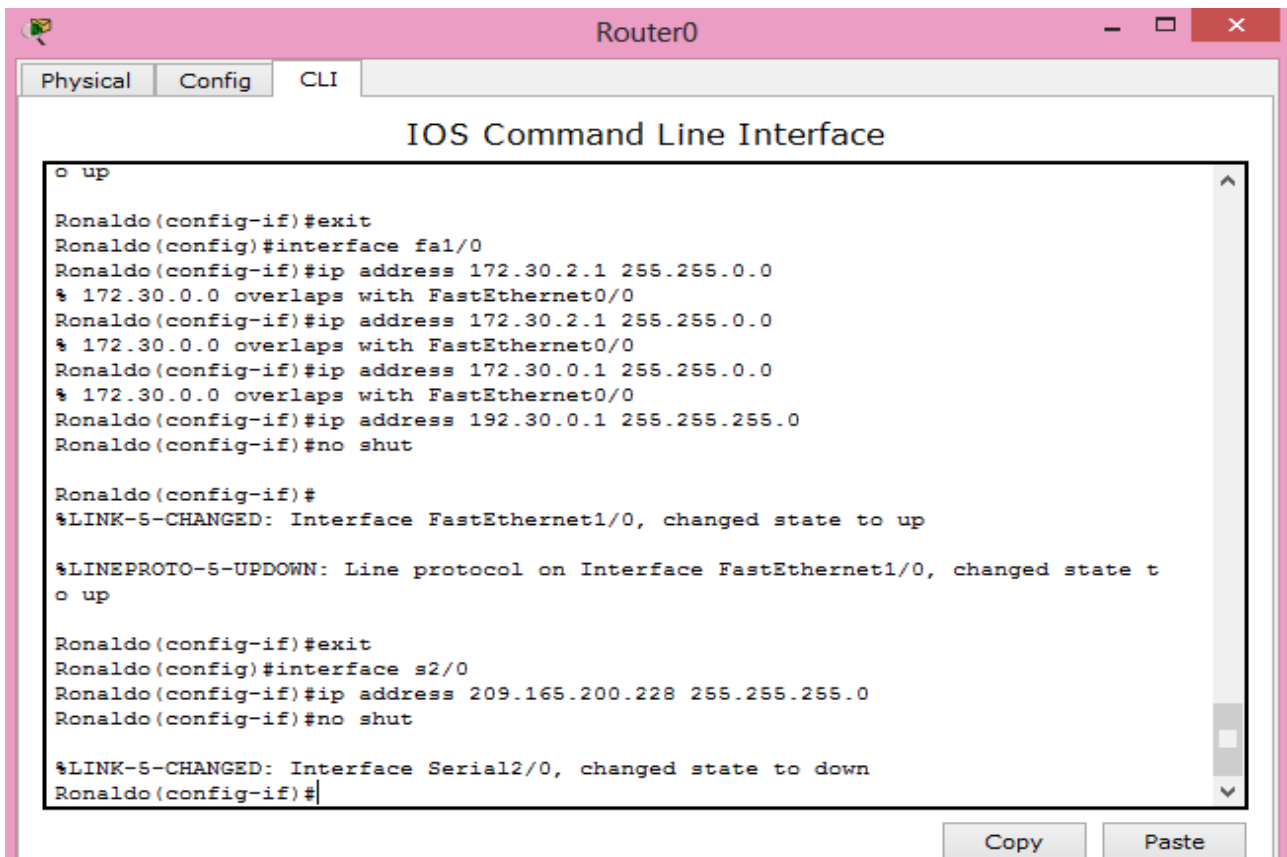


The screenshot shows the Router0 CLI interface with the 'Config' tab selected. The terminal output displays the following commands and responses:

```
Ronaldo(config-if)#no shut
Ronaldo(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
Ronaldo(config-if)#exit
Ronaldo(config)#interface fa1/0
Ronaldo(config-if)#ip address 172.30.2.1 255.255.0.0
% 172.30.0.0 overlaps with FastEthernet0/0
Ronaldo(config-if)#ip address 172.30.2.1 255.255.0.0
% 172.30.0.0 overlaps with FastEthernet0/0
Ronaldo(config-if)#ip address 172.30.0.1 255.255.0.0
% 172.30.0.0 overlaps with FastEthernet0/0
Ronaldo(config-if)#ip address 192.30.0.1 255.255.255.0
Ronaldo(config-if)#no shut
Ronaldo(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
Ronaldo(config-if)#
```

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

Serial 2/0.



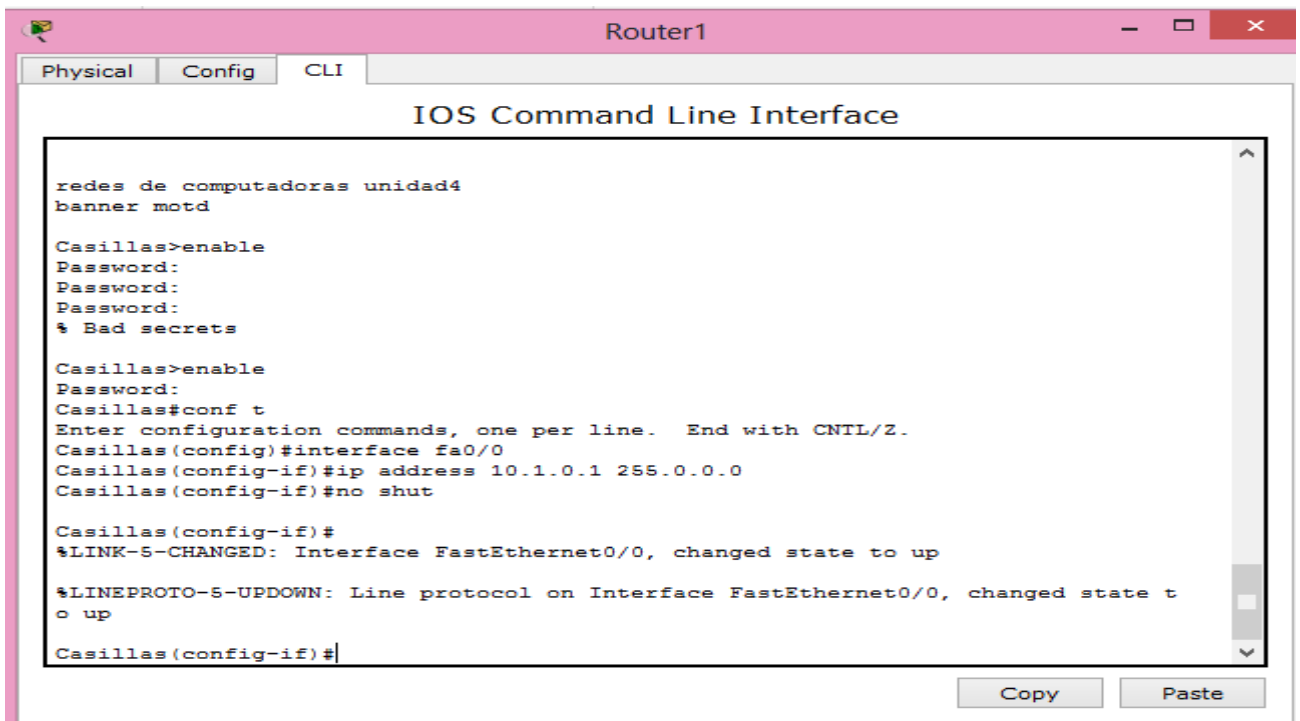
The screenshot shows the Router0 CLI interface with the 'Config' tab selected. The terminal output displays the following commands and responses:

```
o up
Ronaldo(config-if)#exit
Ronaldo(config)#interface fa1/0
Ronaldo(config-if)#ip address 172.30.2.1 255.255.0.0
% 172.30.0.0 overlaps with FastEthernet0/0
Ronaldo(config-if)#ip address 172.30.2.1 255.255.0.0
% 172.30.0.0 overlaps with FastEthernet0/0
Ronaldo(config-if)#ip address 172.30.0.1 255.255.0.0
% 172.30.0.0 overlaps with FastEthernet0/0
Ronaldo(config-if)#ip address 192.30.0.1 255.255.255.0
Ronaldo(config-if)#no shut
Ronaldo(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
Ronaldo(config-if)#exit
Ronaldo(config)#interface s2/0
Ronaldo(config-if)#ip address 209.165.200.228 255.255.255.0
Ronaldo(config-if)#no shut
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Ronaldo(config-if)#
```

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

## Casillas (R2).

Puerto fa0/0.



The screenshot shows the Router1 CLI interface with the following text:

```
Physical Config CLI
IOS Command Line Interface

redes de computadoras unidad4
banner motd

Casillas>enable
Password:
Password:
Password:
% Bad secrets

Casillas>enable
Password:
Casillas#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Casillas(config)#interface fa0/0
Casillas(config-if)#ip address 10.1.0.1 255.0.0.0
Casillas(config-if)#no shut

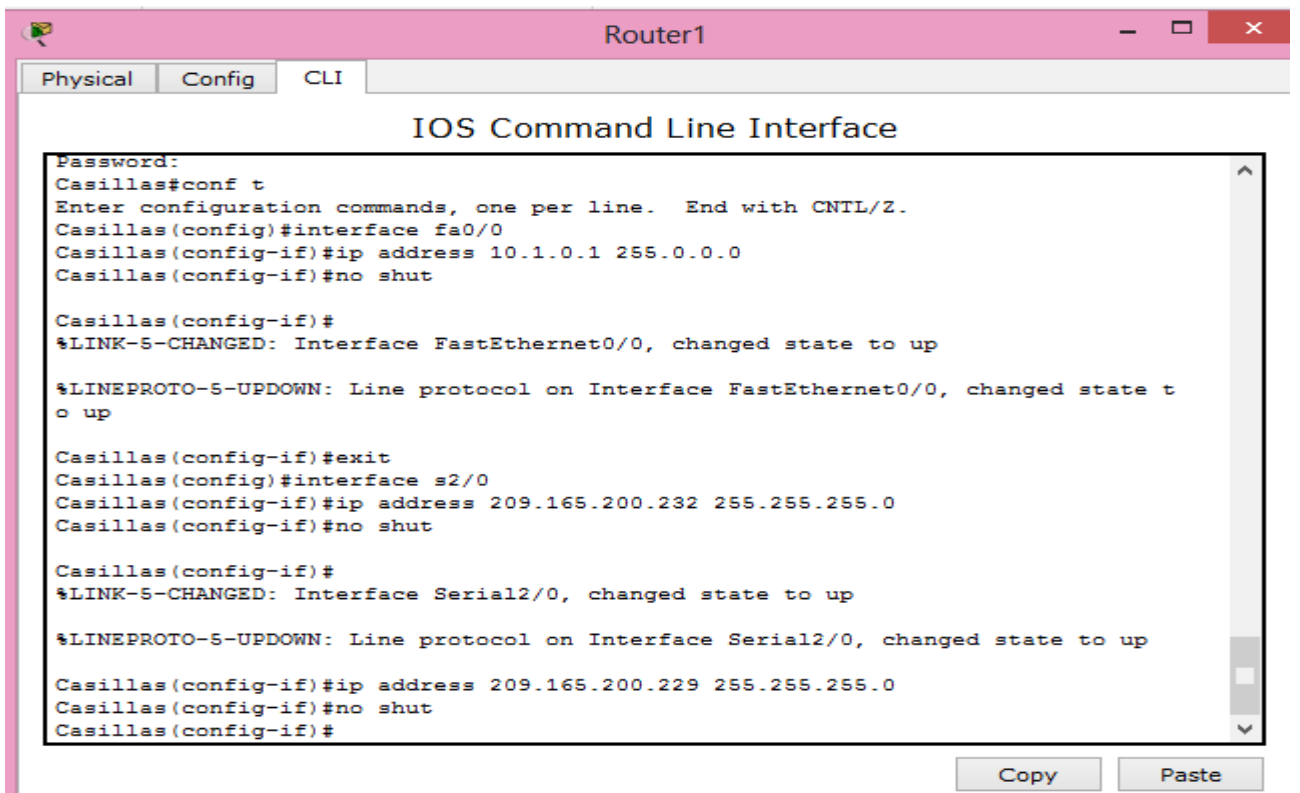
Casillas(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

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

Casillas(config-if)#
```

Copy Paste

Serial 2/0.



The screenshot shows the Router1 CLI interface with the following text:

```
Physical Config CLI
IOS Command Line Interface

Password:
Casillas#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Casillas(config)#interface fa0/0
Casillas(config-if)#ip address 10.1.0.1 255.0.0.0
Casillas(config-if)#no shut

Casillas(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

Casillas(config-if)#exit
Casillas(config)#interface s2/0
Casillas(config-if)#ip address 209.165.200.232 255.255.255.0
Casillas(config-if)#no shut

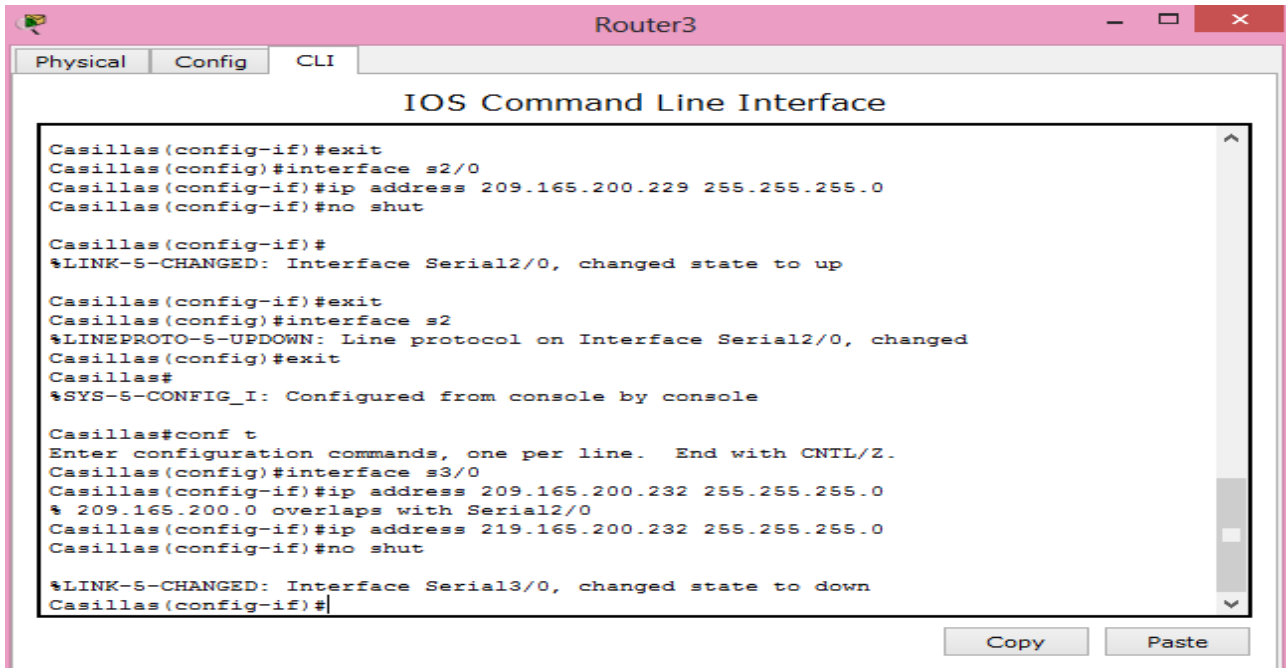
Casillas(config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up

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

Casillas(config-if)#ip address 209.165.200.229 255.255.255.0
Casillas(config-if)#no shut
Casillas(config-if)#
```

Copy Paste

Serial 3/0.



The screenshot shows the CLI of Router3. The user is in the configuration mode for interface s2/0. They have entered the following commands: `exit`, `interface s2/0`, `ip address 209.165.200.229 255.255.255.0`, and `no shut`. The system has responded with `%LINK-5-CHANGED: Interface Serial2/0, changed state to up`. Then, the user enters `exit` and `interface s2`. The system responds with `%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed`. The user then enters `exit` and `conf t`. The system prompts for configuration commands. The user enters `interface s3/0`, `ip address 209.165.200.232 255.255.255.0`, `ip address 219.165.200.232 255.255.255.0`, and `no shut`. The system responds with `%LINK-5-CHANGED: Interface Serial3/0, changed state to down`. The user is currently at the `Casillas(config-if)#` prompt.

```
Casillas(config-if)#exit
Casillas(config)#interface s2/0
Casillas(config-if)#ip address 209.165.200.229 255.255.255.0
Casillas(config-if)#no shut

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

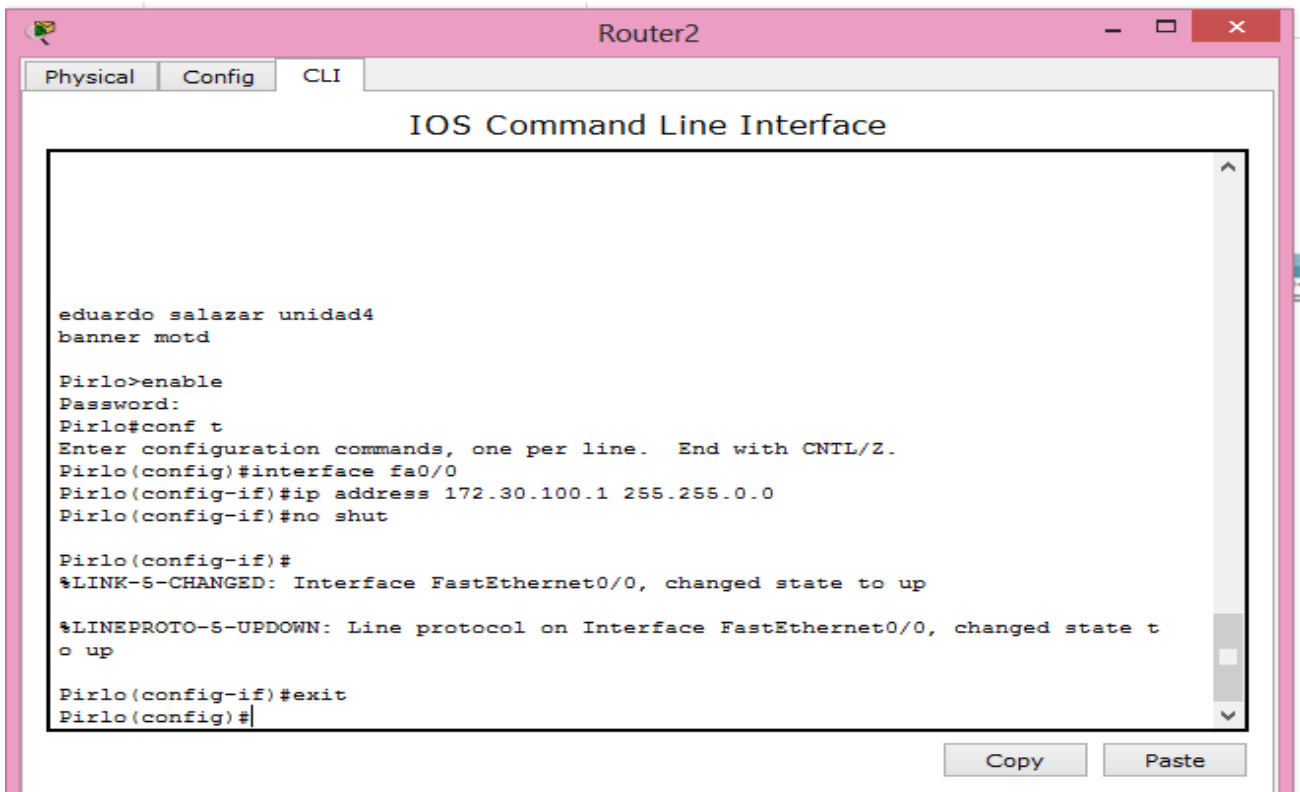
Casillas(config-if)#exit
Casillas(config)#interface s2
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed
Casillas(config)#exit
Casillas#
%SYS-5-CONFIG_I: Configured from console by console

Casillas#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Casillas(config)#interface s3/0
Casillas(config-if)#ip address 209.165.200.232 255.255.255.0
% 209.165.200.0 overlaps with Serial2/0
Casillas(config-if)#ip address 219.165.200.232 255.255.255.0
Casillas(config-if)#no shut

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Casillas(config-if)#
```

Pirlo (R3).

Puerto fa0/0.



The screenshot shows the CLI of Router2. The user is in the configuration mode for interface fa0/0. They have entered the following commands: `enable`, `banner motd`, `enable`, `conf t`, `interface fa0/0`, `ip address 172.30.100.1 255.255.0.0`, and `no shut`. The system has responded with `%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up` and `%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up`. The user is currently at the `Pirlo(config)#` prompt.

```
eduardo salazar unidad4
banner motd

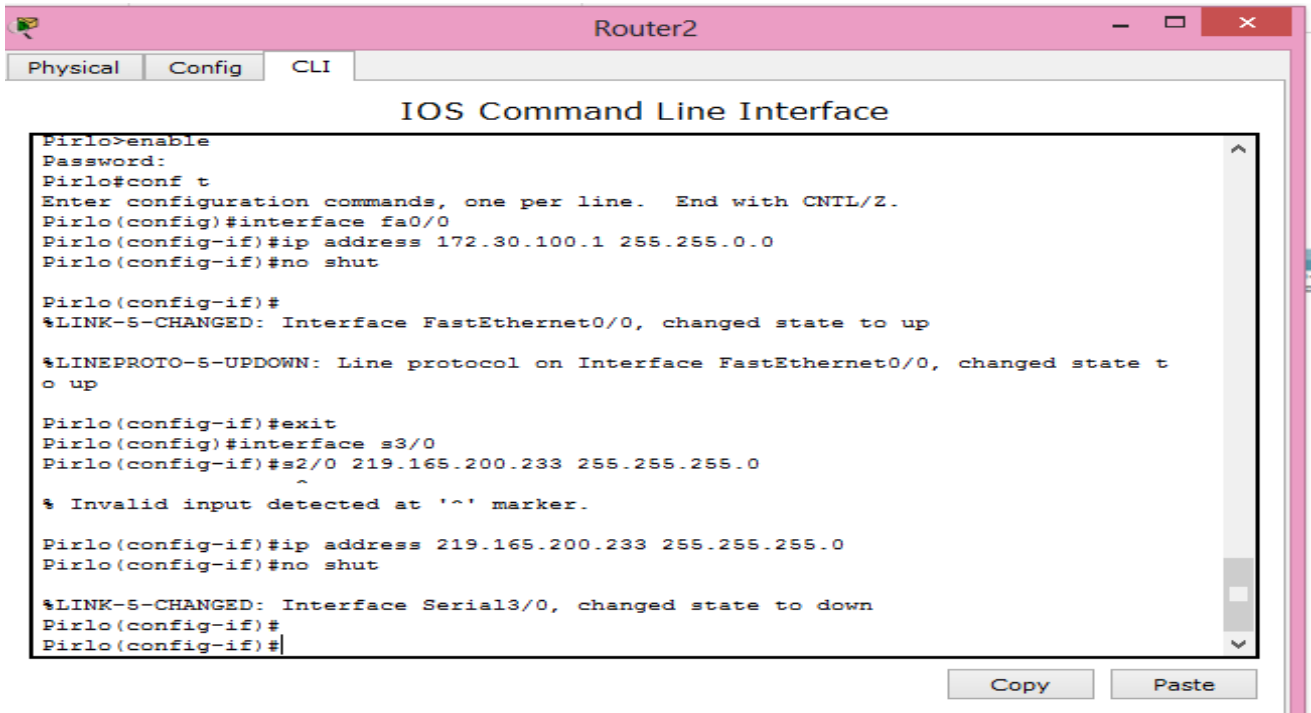
Pirlo>enable
Password:
Pirlo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pirlo(config)#interface fa0/0
Pirlo(config-if)#ip address 172.30.100.1 255.255.0.0
Pirlo(config-if)#no shut

Pirlo(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

Pirlo(config-if)#exit
Pirlo(config)#
```

Serial 2/0.



The screenshot shows the CLI of Router2. The user has entered the following commands:

```
Pirlo>enable
Password:
Pirlo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pirlo(config)#interface fa0/0
Pirlo(config-if)#ip address 172.30.100.1 255.255.0.0
Pirlo(config-if)#no shut

Pirlo(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

Pirlo(config-if)#exit
Pirlo(config)#interface s3/0
Pirlo(config-if)#s2/0 219.165.200.233 255.255.255.0
^
% Invalid input detected at '^' marker.

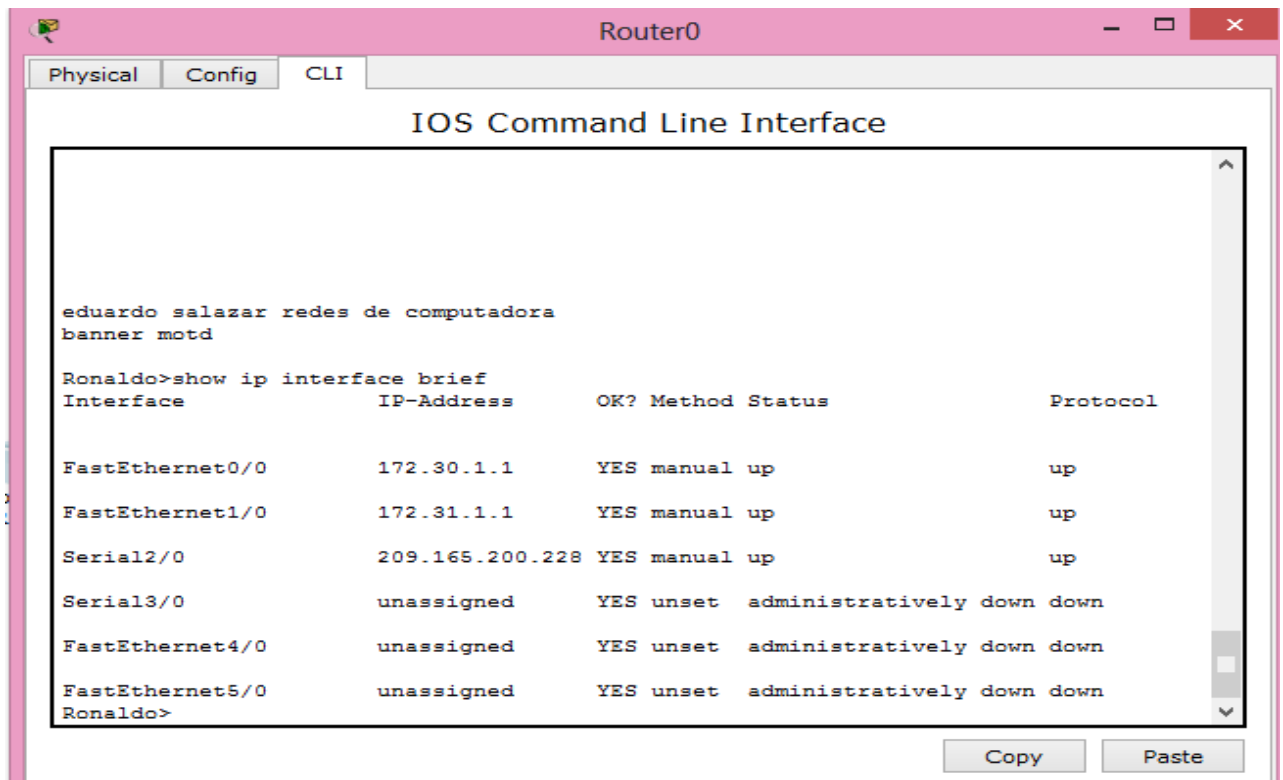
Pirlo(config-if)#ip address 219.165.200.233 255.255.255.0
Pirlo(config-if)#no shut

%LINK-5-CHANGED: Interface Serial3/0, changed state to down
Pirlo(config-if)#
Pirlo(config-if)#
```

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

Posteriormente verificamos la conectividad.

R1



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

```
eduardo salazar redes de computadora
banner motd

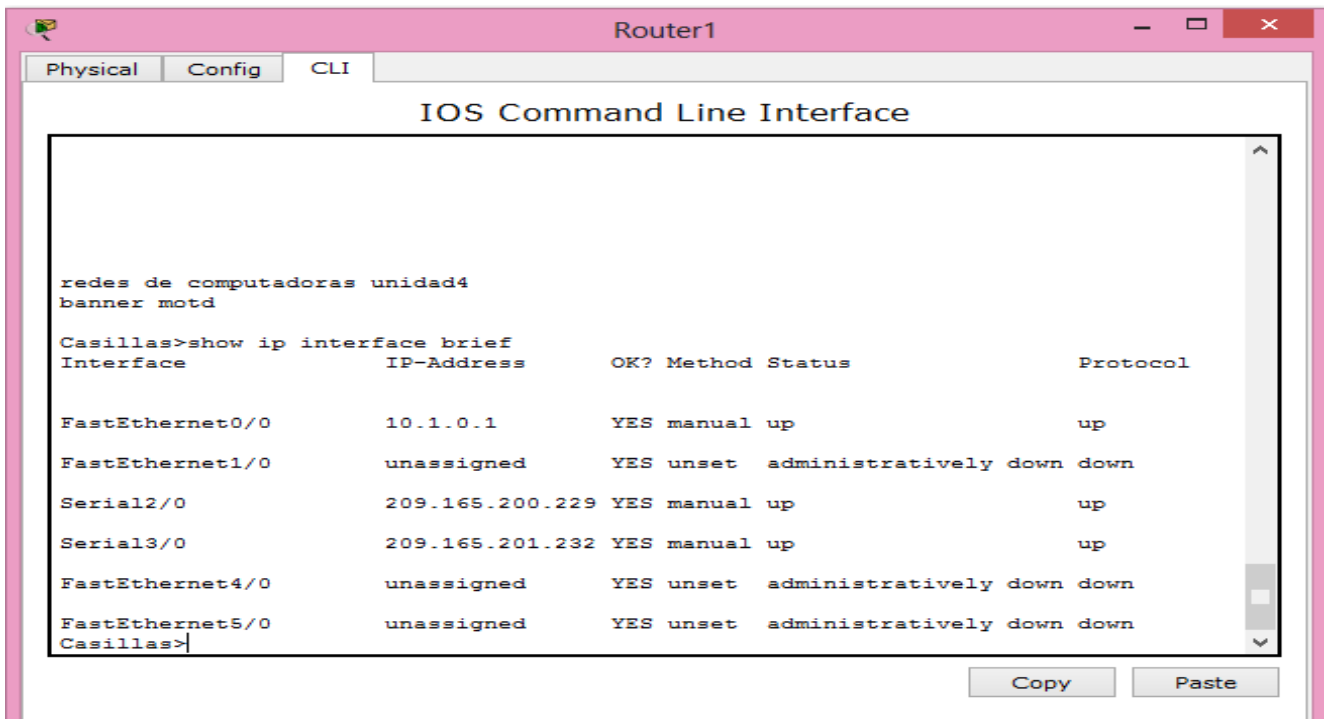
Ronaldo>show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	172.30.1.1	YES	manual	up	up
FastEthernet1/0	172.31.1.1	YES	manual	up	up
Serial2/0	209.165.200.228	YES	manual	up	up
Serial3/0	unassigned	YES	unset	administratively down	down
FastEthernet4/0	unassigned	YES	unset	administratively down	down
FastEthernet5/0	unassigned	YES	unset	administratively down	down

Ronaldo>

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

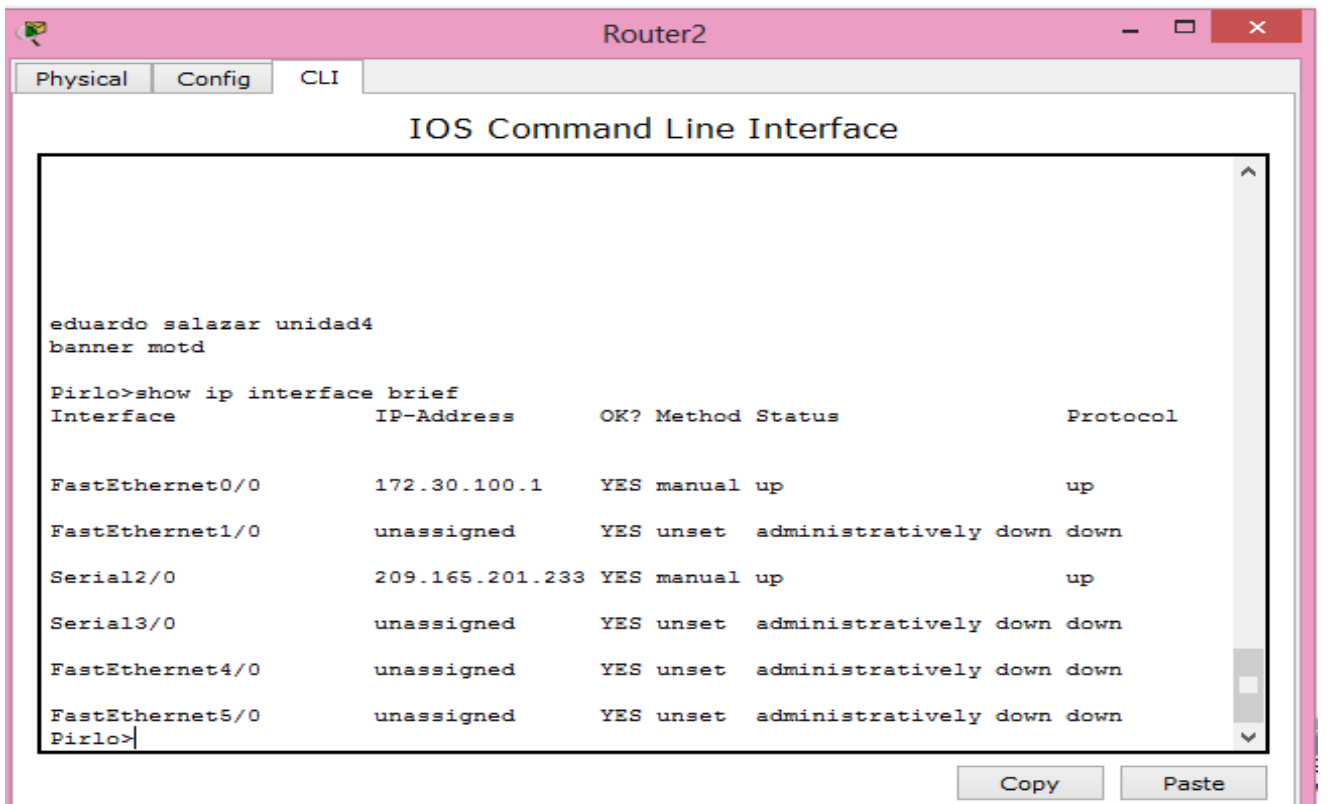
R2



The screenshot shows the CLI of Router1. The user has entered the command `show ip interface brief`. The output is a table with columns: Interface, IP-Address, OK?, Method, Status, and Protocol. The interfaces listed are FastEthernet0/0, FastEthernet1/0, Serial2/0, Serial3/0, FastEthernet4/0, and FastEthernet5/0. The status of each interface is shown as either 'up' or 'administratively down'.

```
redes de computadoras unidad4
banner motd
Casillas>show ip interface brief
Interface                IP-Address      OK? Method Status        Protocol
FastEthernet0/0          10.1.0.1        YES manual  up            up
FastEthernet1/0          unassigned      YES unset   administratively down down
Serial2/0                 209.165.200.229 YES manual  up            up
Serial3/0                 209.165.201.232 YES manual  up            up
FastEthernet4/0          unassigned      YES unset   administratively down down
FastEthernet5/0          unassigned      YES unset   administratively down down
Casillas>
```

R3.

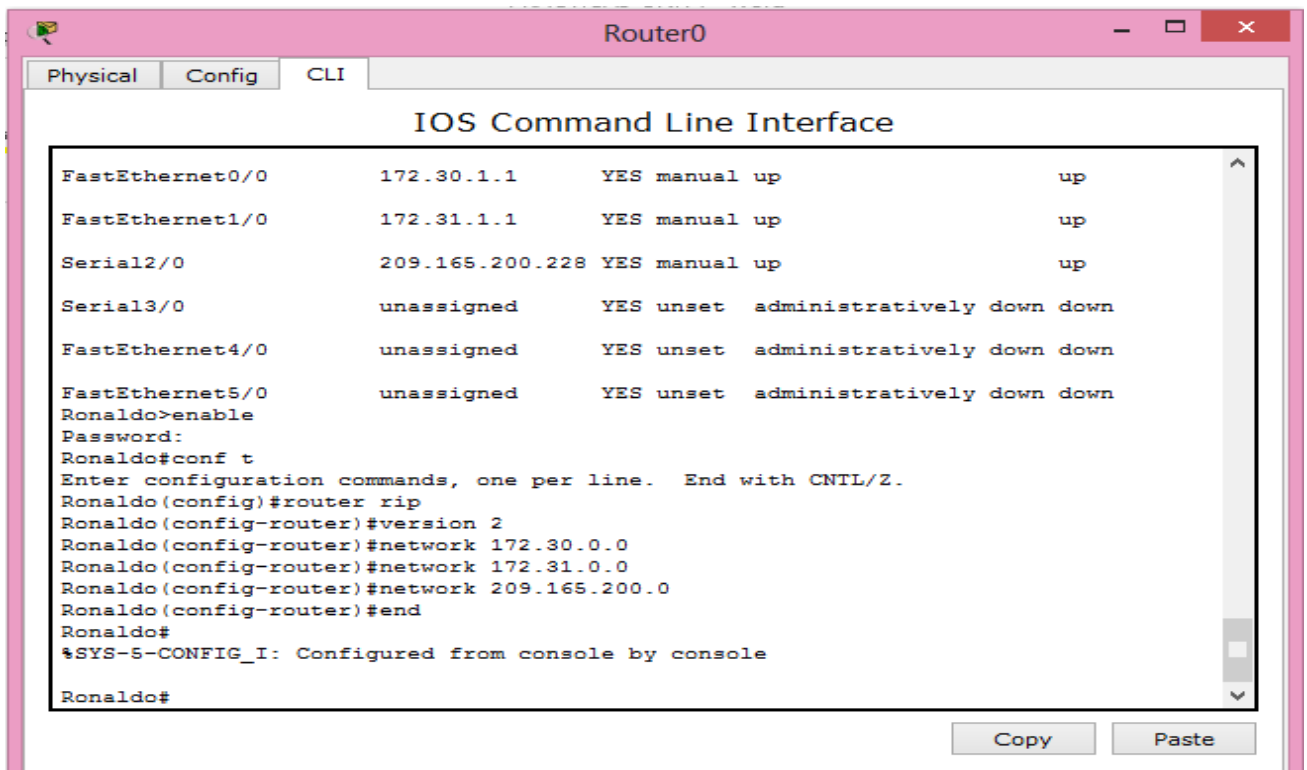


The screenshot shows the CLI of Router2. The user has entered the command `show ip interface brief`. The output is a table with columns: Interface, IP-Address, OK?, Method, Status, and Protocol. The interfaces listed are FastEthernet0/0, FastEthernet1/0, Serial2/0, Serial3/0, FastEthernet4/0, and FastEthernet5/0. The status of each interface is shown as either 'up' or 'administratively down'.

```
eduardo salazar unidad4
banner motd
Pirlo>show ip interface brief
Interface                IP-Address      OK? Method Status        Protocol
FastEthernet0/0          172.30.100.1    YES manual  up            up
FastEthernet1/0          unassigned      YES unset   administratively down down
Serial2/0                 209.165.201.233 YES manual  up            up
Serial3/0                 unassigned      YES unset   administratively down down
FastEthernet4/0          unassigned      YES unset   administratively down down
FastEthernet5/0          unassigned      YES unset   administratively down down
Pirlo>
```

## Configuración de RIPv2 en un router Cisco.

R1.



The screenshot shows the CLI of Router0. At the top, there are tabs for 'Physical', 'Config', and 'CLI'. The main window is titled 'IOS Command Line Interface'. It displays a table of interface configurations:

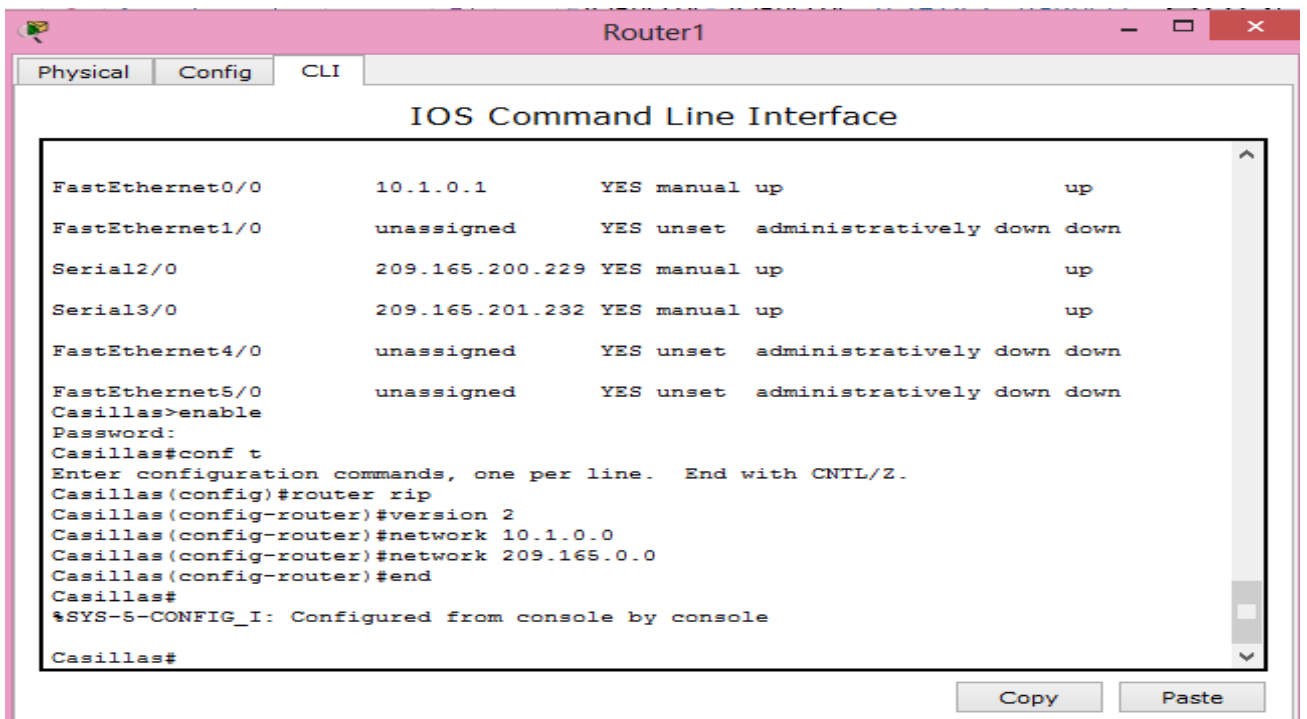
Interface	IP Address	Configured	Mode	Status	Line Status
FastEthernet0/0	172.30.1.1	YES	manual	up	up
FastEthernet1/0	172.31.1.1	YES	manual	up	up
Serial2/0	209.165.200.228	YES	manual	up	up
Serial3/0	unassigned	YES	unset	administratively down	down
FastEthernet4/0	unassigned	YES	unset	administratively down	down
FastEthernet5/0	unassigned	YES	unset	administratively down	down

Below the table, the CLI shows the following commands and output:

```
Ronaldo>enable
Password:
Ronaldo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Ronaldo(config)#router rip
Ronaldo(config-router)#version 2
Ronaldo(config-router)#network 172.30.0.0
Ronaldo(config-router)#network 172.31.0.0
Ronaldo(config-router)#network 209.165.200.0
Ronaldo(config-router)#end
Ronaldo#
%SYS-5-CONFIG_I: Configured from console by console
Ronaldo#
```

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

R2.



The screenshot shows the CLI of Router1. At the top, there are tabs for 'Physical', 'Config', and 'CLI'. The main window is titled 'IOS Command Line Interface'. It displays a table of interface configurations:

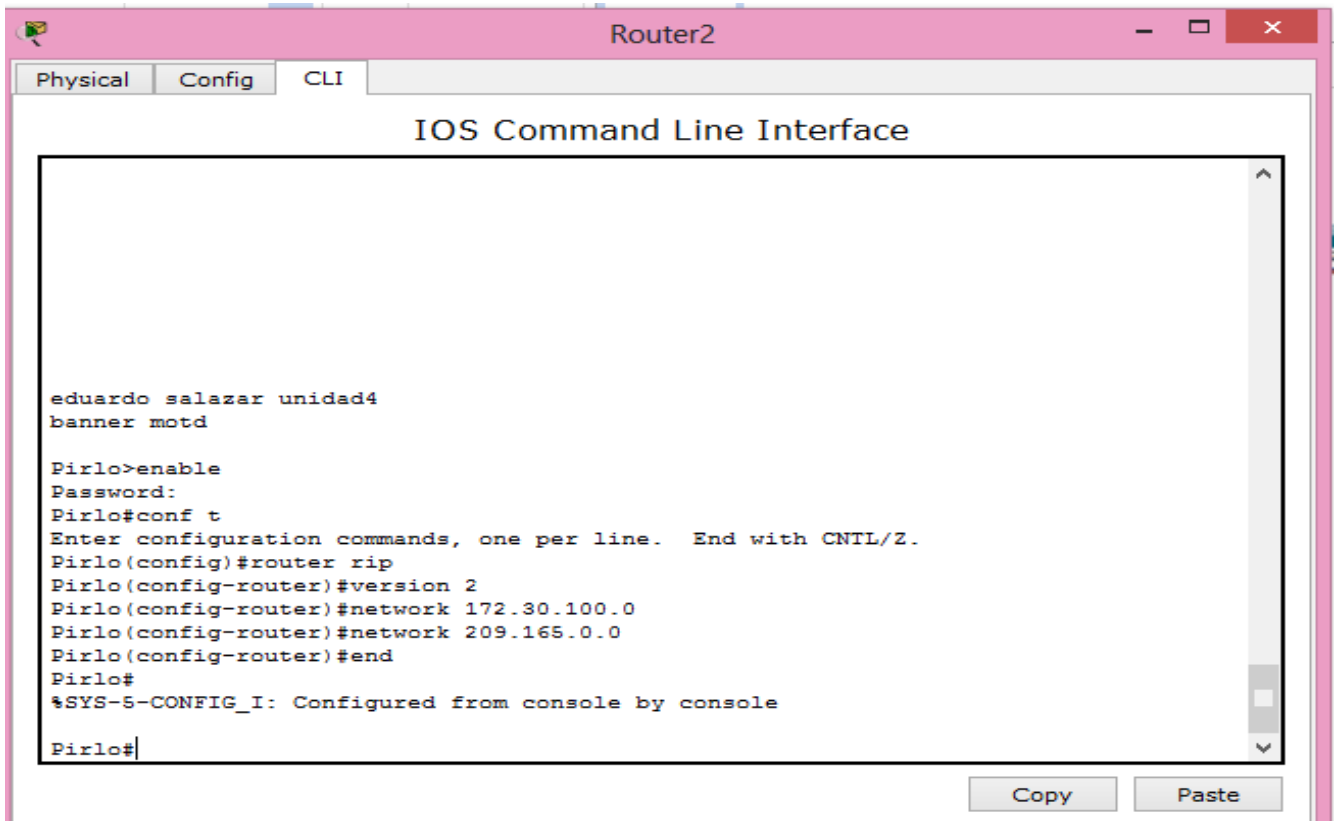
Interface	IP Address	Configured	Mode	Status	Line Status
FastEthernet0/0	10.1.0.1	YES	manual	up	up
FastEthernet1/0	unassigned	YES	unset	administratively down	down
Serial2/0	209.165.200.229	YES	manual	up	up
Serial3/0	209.165.201.232	YES	manual	up	up
FastEthernet4/0	unassigned	YES	unset	administratively down	down
FastEthernet5/0	unassigned	YES	unset	administratively down	down

Below the table, the CLI shows the following commands and output:

```
Casillas>enable
Password:
Casillas#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Casillas(config)#router rip
Casillas(config-router)#version 2
Casillas(config-router)#network 10.1.0.0
Casillas(config-router)#network 209.165.0.0
Casillas(config-router)#end
Casillas#
%SYS-5-CONFIG_I: Configured from console by console
Casillas#
```

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

R3.



The screenshot shows the CLI of Router2. The user has entered the following commands:

```
eduardo salazar unidad4
banner motd

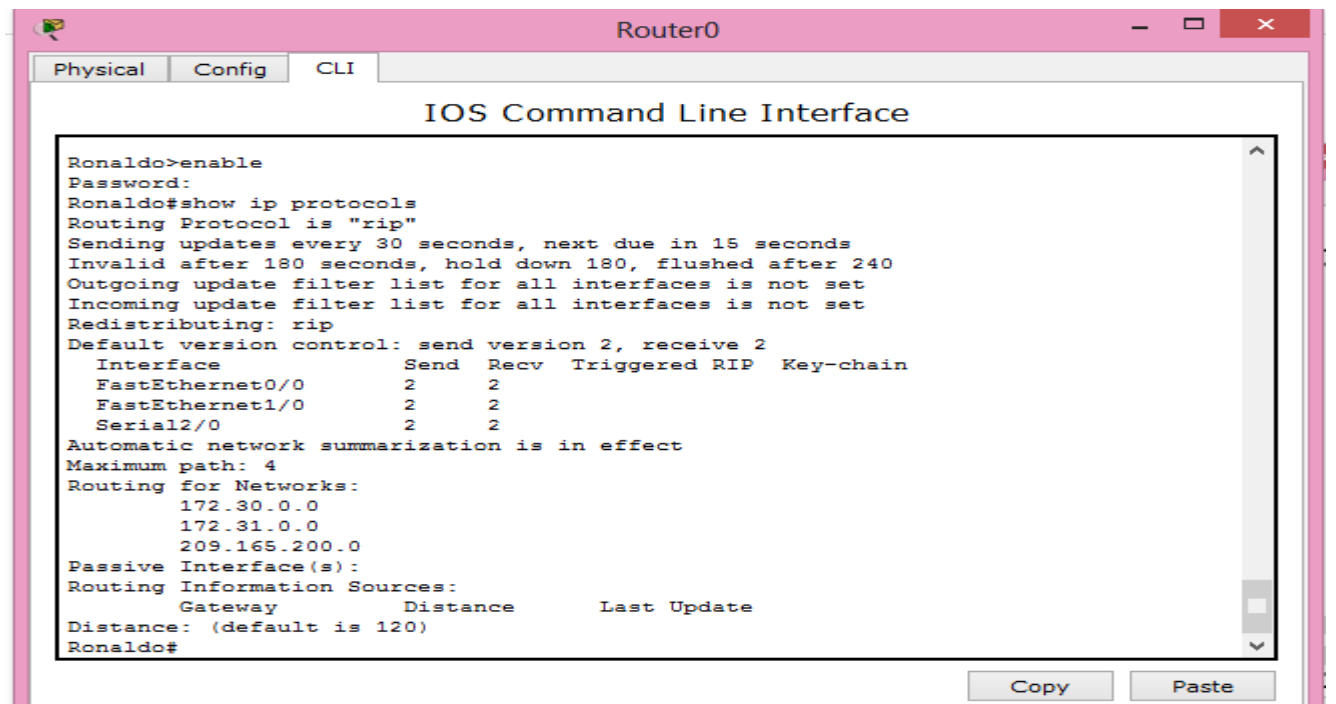
Pirlo>enable
Password:
Pirlo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pirlo(config)#router rip
Pirlo(config-router)#version 2
Pirlo(config-router)#network 172.30.100.0
Pirlo(config-router)#network 209.165.0.0
Pirlo(config-router)#end
Pirlo#
%SYS-5-CONFIG_I: Configured from console by console

Pirlo#
```

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

Verificación del protocolo configurado.

R1.

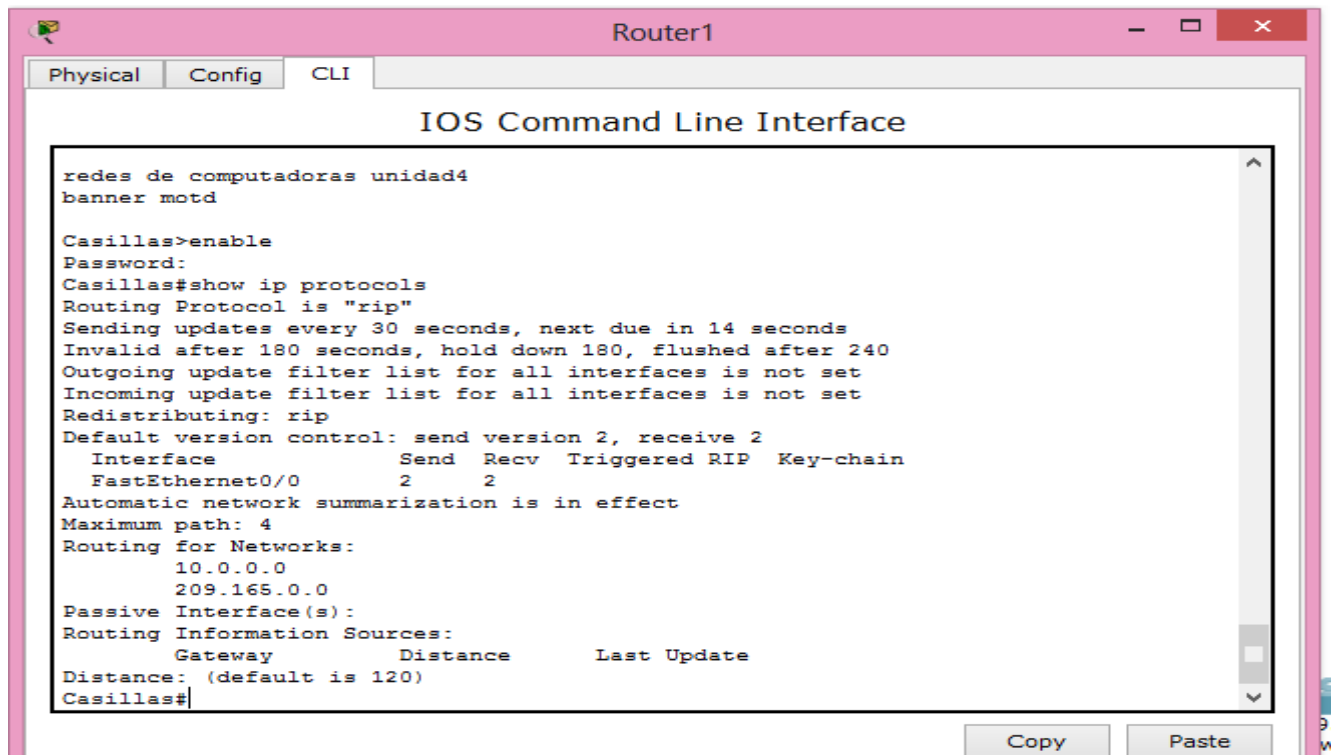


The screenshot shows the CLI of Router0. The user has entered the following commands:

```
Ronaldo>enable
Password:
Ronaldo#show ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 15 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Redistributing: rip
Default version control: send version 2, receive 2
  Interface          Send  Recv  Triggered RIP  Key-chain
FastEthernet0/0      2     2
FastEthernet1/0      2     2
Serial2/0            2     2
Automatic network summarization is in effect
Maximum path: 4
Routing for Networks:
  172.30.0.0
  172.31.0.0
  209.165.200.0
Passive Interface(s):
Routing Information Sources:
  Gateway         Distance      Last Update
Distance: (default is 120)
Ronaldo#
```

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

R2



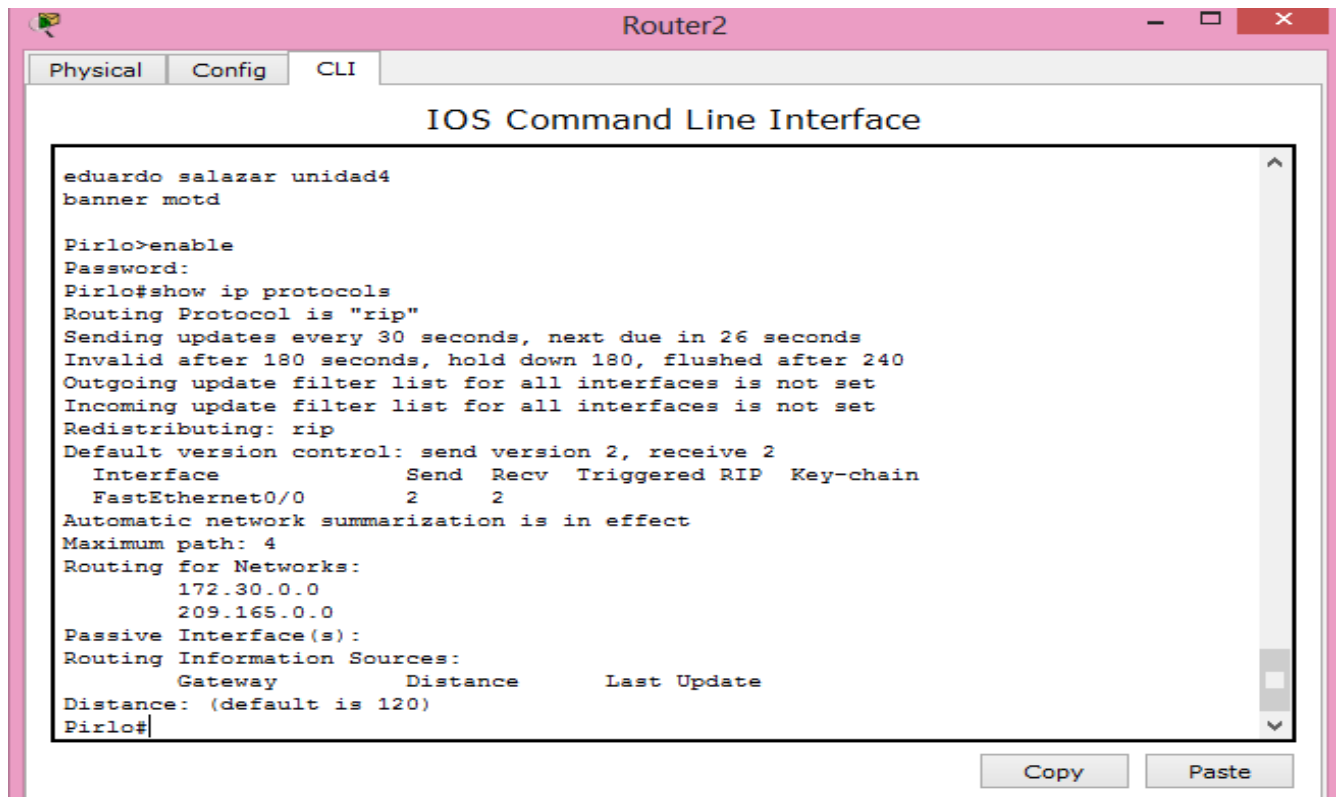
The screenshot shows the CLI of Router1. The window title is "Router1". The tabs are "Physical", "Config", and "CLI". The main title is "IOS Command Line Interface". The text in the terminal is as follows:

```
redes de computadoras unidad4
banner motd

Casillas>enable
Password:
Casillas#show ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 14 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Redistributing: rip
Default version control: send version 2, receive 2
  Interface          Send Recv Triggered RIP Key-chain
FastEthernet0/0      2      2
Automatic network summarization is in effect
Maximum path: 4
Routing for Networks:
  10.0.0.0
  209.165.0.0
Passive Interface(s):
Routing Information Sources:
  Gateway            Distance      Last Update
Distance: (default is 120)
Casillas#
```

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

R3.



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

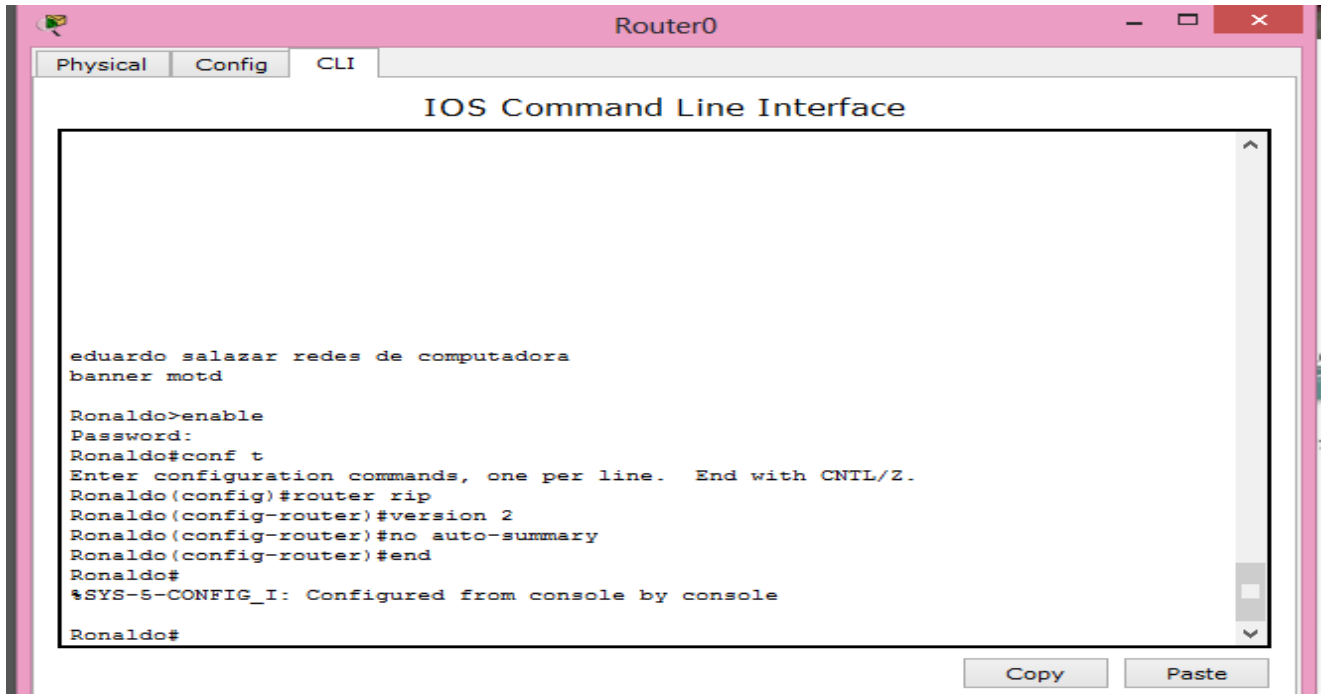
```
eduardo salazar unidad4
banner motd

Pirlo>enable
Password:
Pirlo#show ip protocols
Routing Protocol is "rip"
Sending updates every 30 seconds, next due in 26 seconds
Invalid after 180 seconds, hold down 180, flushed after 240
Outgoing update filter list for all interfaces is not set
Incoming update filter list for all interfaces is not set
Redistributing: rip
Default version control: send version 2, receive 2
  Interface          Send Recv Triggered RIP Key-chain
FastEthernet0/0      2      2
Automatic network summarization is in effect
Maximum path: 4
Routing for Networks:
  172.30.0.0
  209.165.0.0
Passive Interface(s):
Routing Information Sources:
  Gateway            Distance      Last Update
Distance: (default is 120)
Pirlo#
```

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

Para realizar la inhabilitación de sumarización automática solo usaremos “no auto-summary”.

R1.



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 following text:

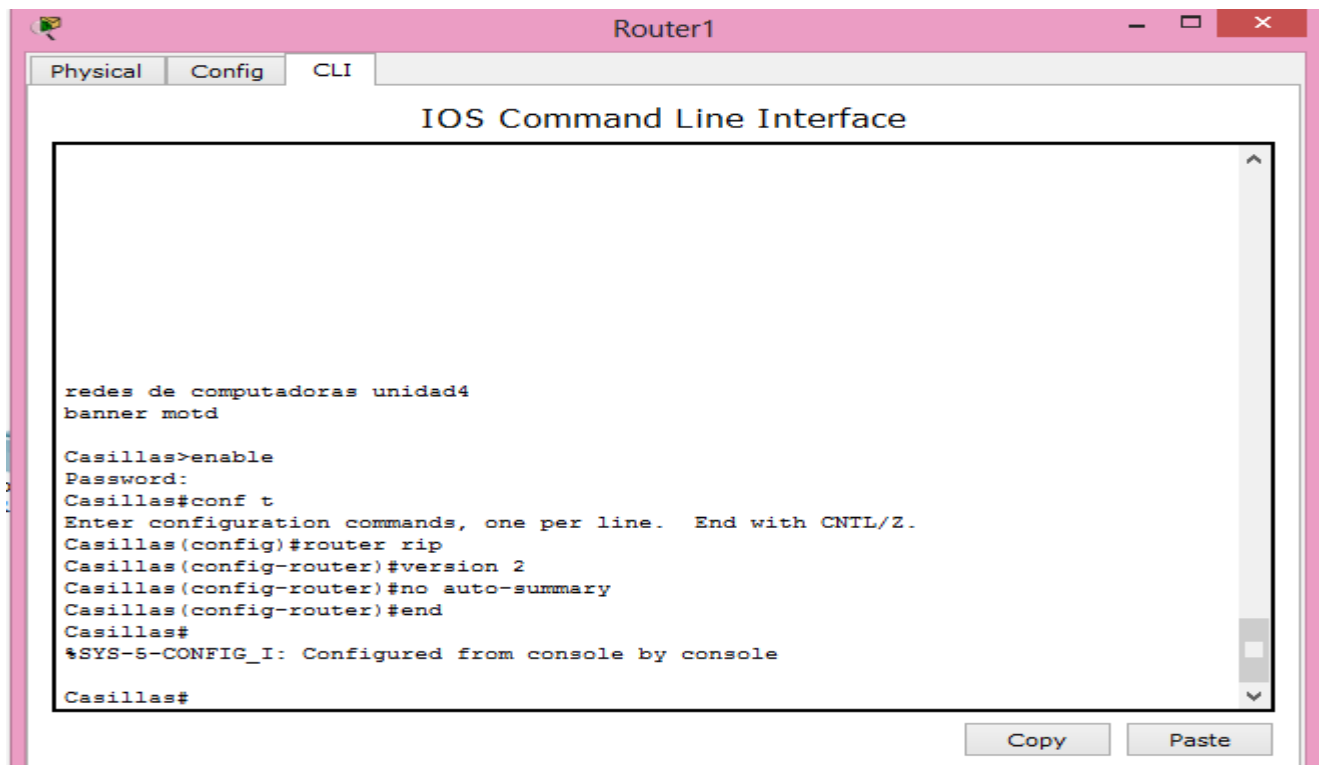
```
eduardo salazar redes de computadora
banner motd

Ronaldo>enable
Password:
Ronaldo#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Ronaldo(config)#router rip
Ronaldo(config-router)#version 2
Ronaldo(config-router)#no auto-summary
Ronaldo(config-router)#end
Ronaldo#
%SYS-5-CONFIG_I: Configured from console by console

Ronaldo#
```

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

R2.



The screenshot shows the CLI interface of Router1. The window title is "Router1". The tabs are "Physical", "Config", and "CLI". The main area displays the following text:

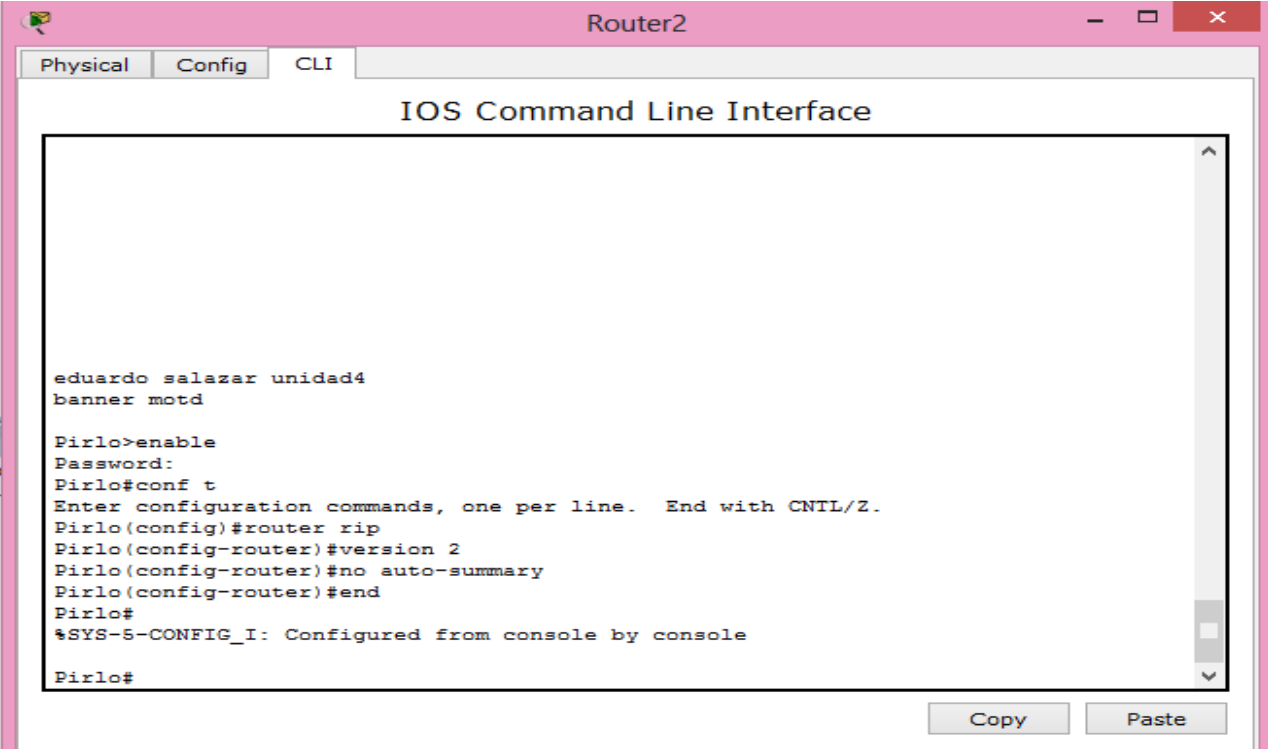
```
redes de computadoras unidad4
banner motd

Casillas>enable
Password:
Casillas#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Casillas(config)#router rip
Casillas(config-router)#version 2
Casillas(config-router)#no auto-summary
Casillas(config-router)#end
Casillas#
%SYS-5-CONFIG_I: Configured from console by console

Casillas#
```

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

R3.



```
Router2
Physical Config CLI
IOS Command Line Interface

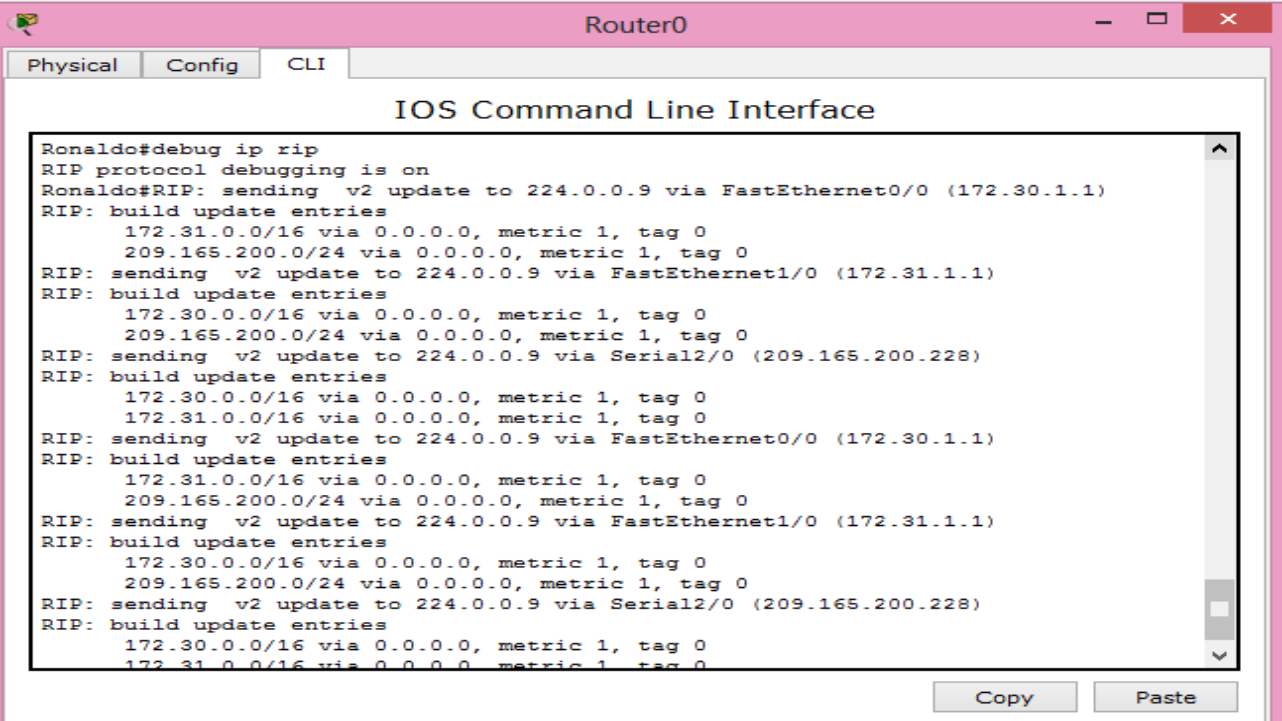
eduardo salazar unidad4
banner motd

Pirlo>enable
Password:
Pirlo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pirlo(config)#router rip
Pirlo(config-router)#version 2
Pirlo(config-router)#no auto-summary
Pirlo(config-router)#end
Pirlo#
*SYS-5-CONFIG_I: Configured from console by console

Pirlo#
```

Copy Paste

Para la verificación de la información que envía RIPv2 usaremos “debug ip rip”.



```
Router0
Physical Config CLI
IOS Command Line Interface

Ronaldo#debug ip rip
RIP protocol debugging is on
Ronaldo#RIP: sending v2 update to 224.0.0.9 via FastEthernet0/0 (172.30.1.1)
RIP: build update entries
  172.31.0.0/16 via 0.0.0.0, metric 1, tag 0
  209.165.200.0/24 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via FastEthernet1/0 (172.31.1.1)
RIP: build update entries
  172.30.0.0/16 via 0.0.0.0, metric 1, tag 0
  209.165.200.0/24 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial2/0 (209.165.200.228)
RIP: build update entries
  172.30.0.0/16 via 0.0.0.0, metric 1, tag 0
  172.31.0.0/16 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via FastEthernet0/0 (172.30.1.1)
RIP: build update entries
  172.31.0.0/16 via 0.0.0.0, metric 1, tag 0
  209.165.200.0/24 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via FastEthernet1/0 (172.31.1.1)
RIP: build update entries
  172.30.0.0/16 via 0.0.0.0, metric 1, tag 0
  209.165.200.0/24 via 0.0.0.0, metric 1, tag 0
RIP: sending v2 update to 224.0.0.9 via Serial2/0 (209.165.200.228)
RIP: build update entries
  172.30.0.0/16 via 0.0.0.0, metric 1, tag 0
  172.31.0.0/16 via 0.0.0.0, metric 1, tag 0
```

Copy Paste

## Conclusión

Más que nada se repiten digamos como que la misma práctica, ya que se utiliza el mismo escenario y la misma tabla pero con excepción de que en este caso se utiliza el protocolo RIP versión2, como sabemos se utilizan los mismos comandos, pero la versión 2 nos da unas cosas que la primera versión como podría ser que incluye la próxima dirección de salto en las actualizaciones, Las actualizaciones de enrutamiento se envían por medio de multicast.