

INSTITUTO TÉCNICO DE SALINA CRUZ

REDES DE COMPUTADORA

SEMESTRE FEBRERO-AGOSTO 2015

REPORTE DE PRÁCTICAS

PRACTICA N°: 1

UNIDAD: 5

FECHA: 15 DE MAYO DE 2015

NOMBRE: EDUARDO SALAZAR IRRIZARI

Objetivo:

Conocer el modo de operar de los protocolos de enrutamiento dinámico según trabajen con el vector distancia o con el estado del enlace, tomando como ejemplos RIPv2 y OSPF, utilizando para ello el simulador Cisco Packet Tracer.

Instrucciones:

- 1.- Analizar la topología.
- 2.- Construir la tabla de enrutamiento.
- 3.- Realizar configuraciones iniciales.
- 4.- Comprobación de conectividad.

Materiales:

- 1.- Computadoras.
- 2.- Cisco Packet Tracer.
- 3.- Silla.
- 4.- Protocolo OSPF.

Escenario.

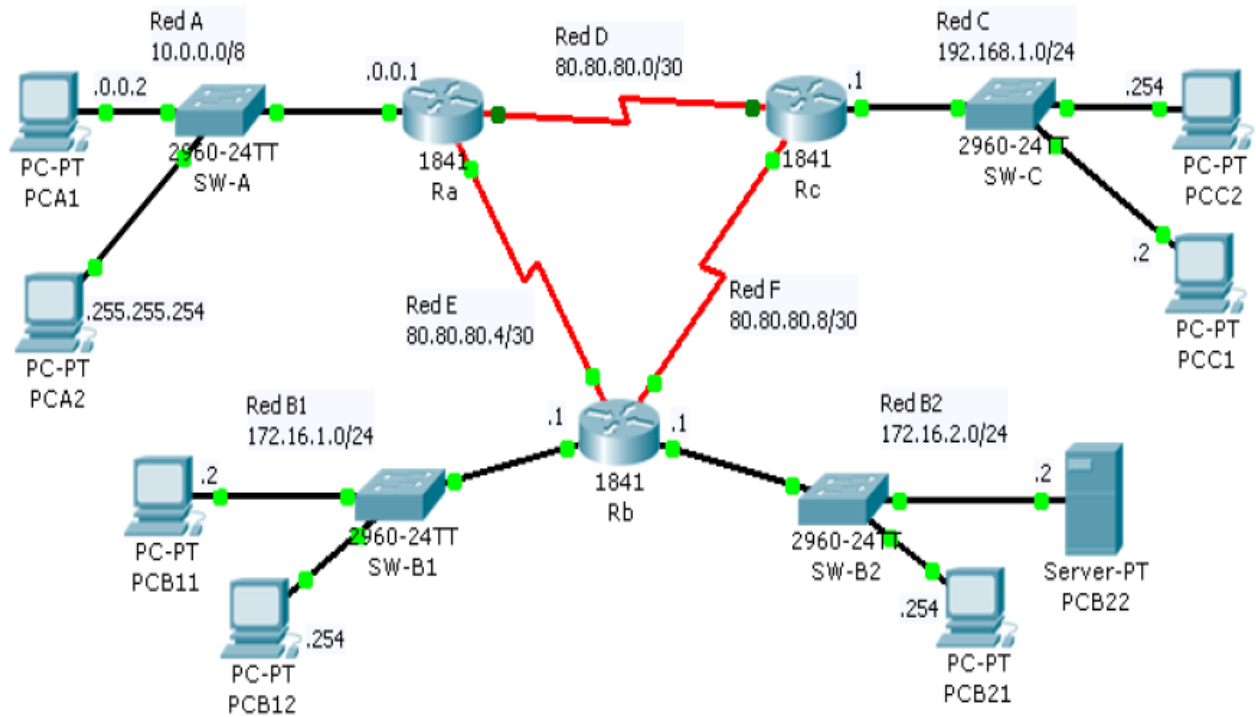


Tabla de ruteo.

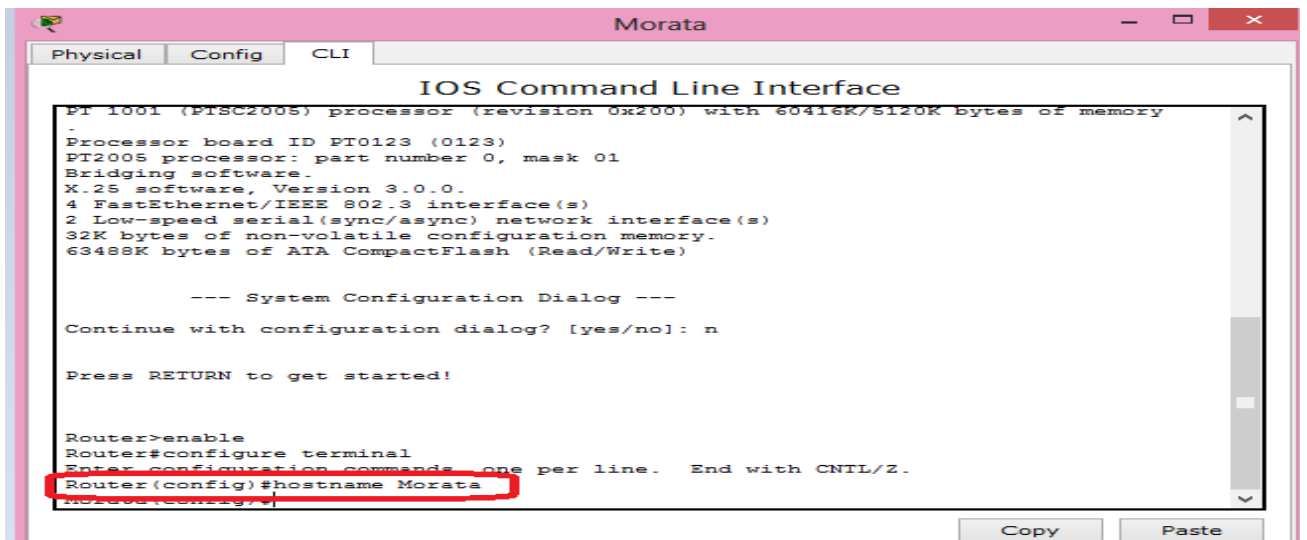
Dispositivo	Interfaz	Red	Dirección IP	Máscara	Gateway
Router Ra	Fa0/0	A	10.0.0.1	255.0.0.0	---
	S0/0/0	D	200.0.1.1	255.0.0.0	---
	S0/0/1	E	200.0.2.1	255.0.0.0	---
Router Rb	Fa0/0	B1	172.16.1.1	255.255.255.0	---
	Fa0/1	B2	172.16.2.1	255.255.255.0	---
	S0/0/0	E	200.0.2.2	255.255.255.252	---
	S0/0/1	F	200.0.3.1	255.255.255.252	---
Router Rc	Fa0/0	C	192.168.1.1	255.255.255.0	---
	S0/0/0	D	200.0.1.2	255.255.255.252	---
	S0/0/0	F	200.0.3.2	255.255.255.252	---
PCA1	NIC	A	10.0.0.2	255.0.0.0	10.0.0.1
PCA2	NIC	A	10.255.255.254	255.0.0.0	10.0.0.1
PCB11	NIC	B1	172.16.1.2	255.255.255.0	172.16.1.1
PCB12	NIC	B1	172.16.1.254	255.255.255.0	172.16.1.1
PCB21	NIC	B2	172.16.2.2	255.255.255.0	172.16.2.1
PCB22	NIC	B2	172.16.2.254	255.255.255.0	172.16.2.1
PCC1	NIC	C	192.168.1.2	255.255.255.0	192.168.1.1
PCC2	NIC	C	192.168.1.254	255.255.255.0	192.168.1.1

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 (Morata).

Cambio de nombre.



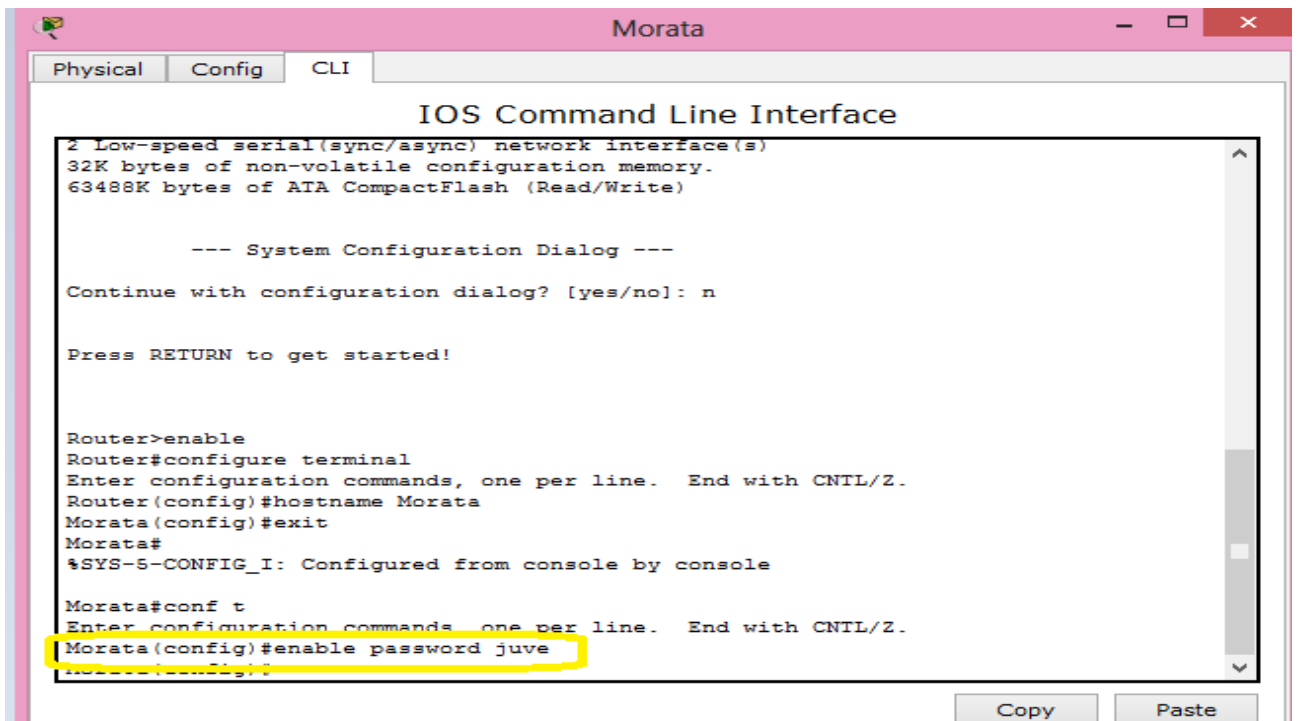
```
PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K bytes of memory
.
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)
2 Low-speed serial(sync/async) network interface(s)
32K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

Configuración de una contraseña.



```
2 Low-speed serial(sync/async) network interface(s)
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

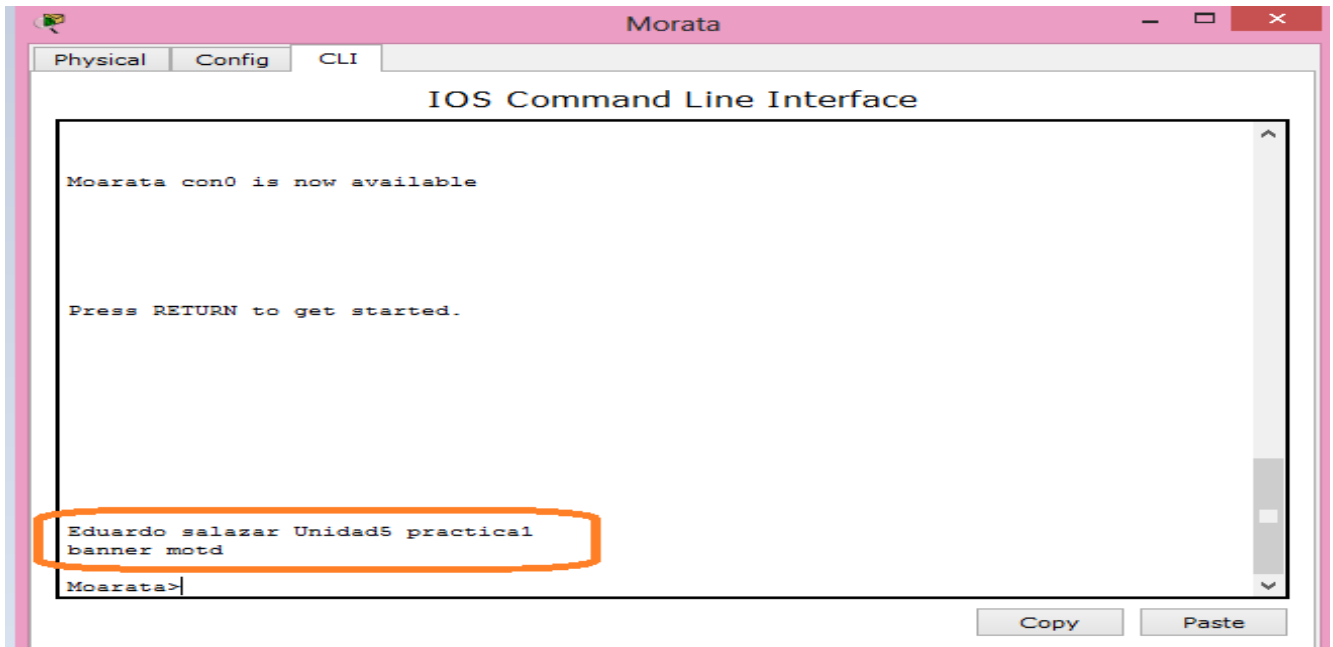
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

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

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

Asignación de un banner.



The screenshot shows the CLI interface of a router named 'Morata'. The interface has tabs for 'Physical', 'Config', and 'CLI'. The main window displays the following text:

```
Morarata con0 is now available

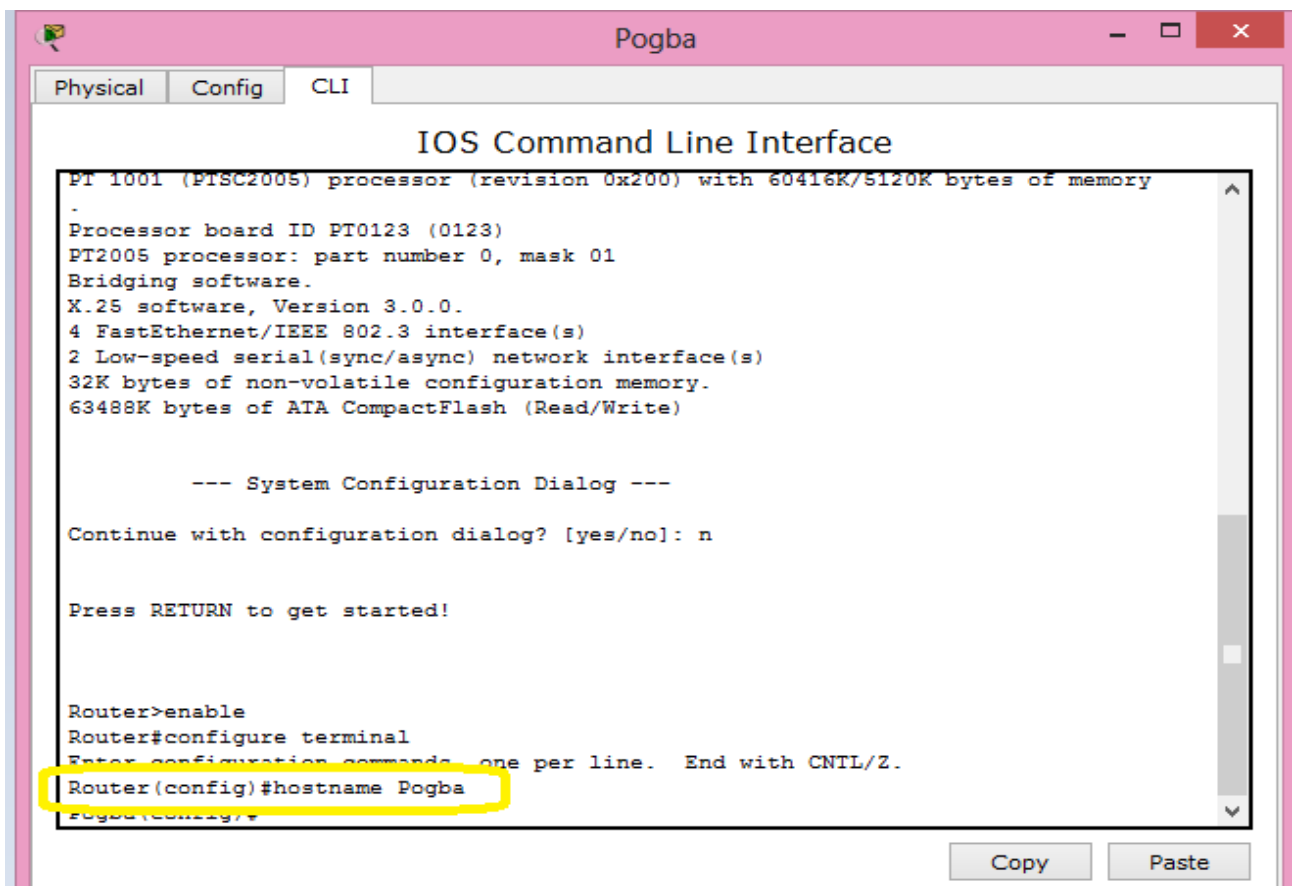
Press RETURN to get started.

Eduardo salazar Unidad5 practical
banner motd
Morarata>
```

The command `banner motd` and its output are highlighted with an orange box. At the bottom right, there are 'Copy' and 'Paste' buttons.

R2 (Pogba).

Cambio de nombre



The screenshot shows the CLI interface of a router named 'Pogba'. The interface has tabs for 'Physical', 'Config', and 'CLI'. The main window displays 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 ---

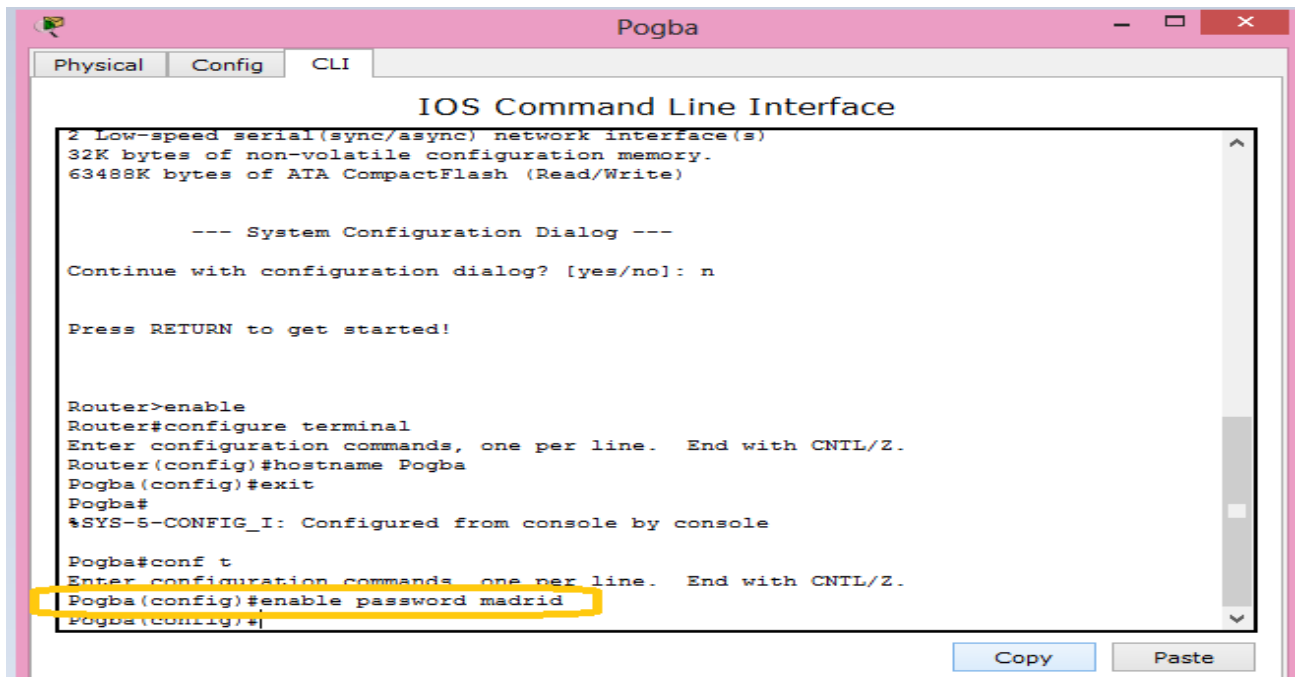
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

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

The command `hostname Pogba` and its output are highlighted with a yellow box. At the bottom right, there are 'Copy' and 'Paste' buttons.

Configuración de una contraseña.



The screenshot shows a Cisco IOS Command Line Interface window titled "Pogba". The window has tabs for "Physical", "Config", and "CLI". The main content area displays the following text:

```
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

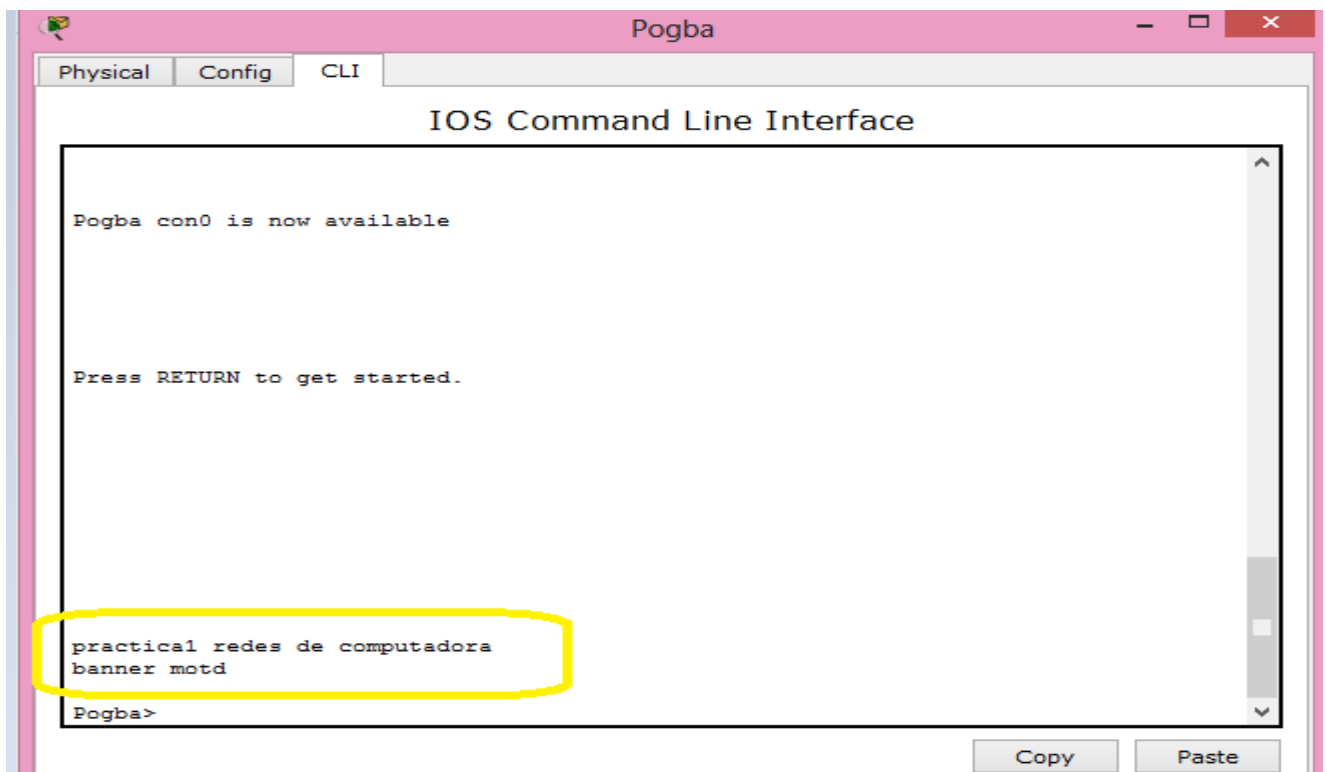
Press RETURN to get started!

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

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

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

Asignación de un banner.



The screenshot shows the same Cisco IOS Command Line Interface window titled "Pogba". The main content area displays the following text:

```
IOS Command Line Interface

Pogba con0 is now available

Press RETURN to get started.

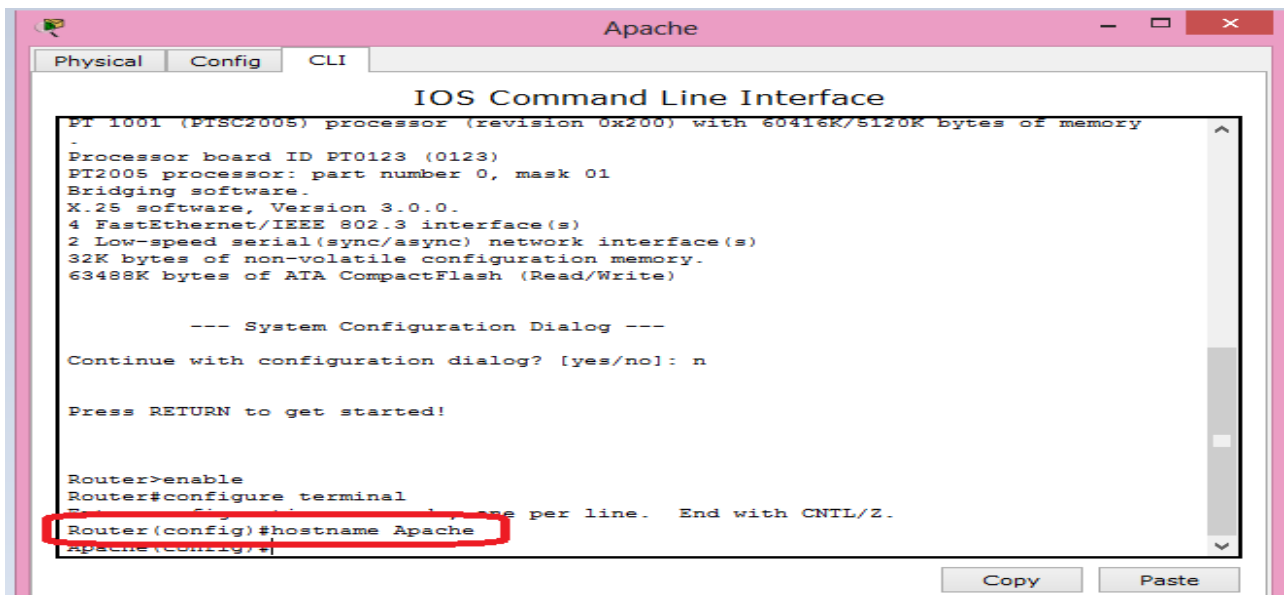
practical redes de computadora
banner motd

Pogba>
```

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

R3 (Apache).

Cambio de nombre



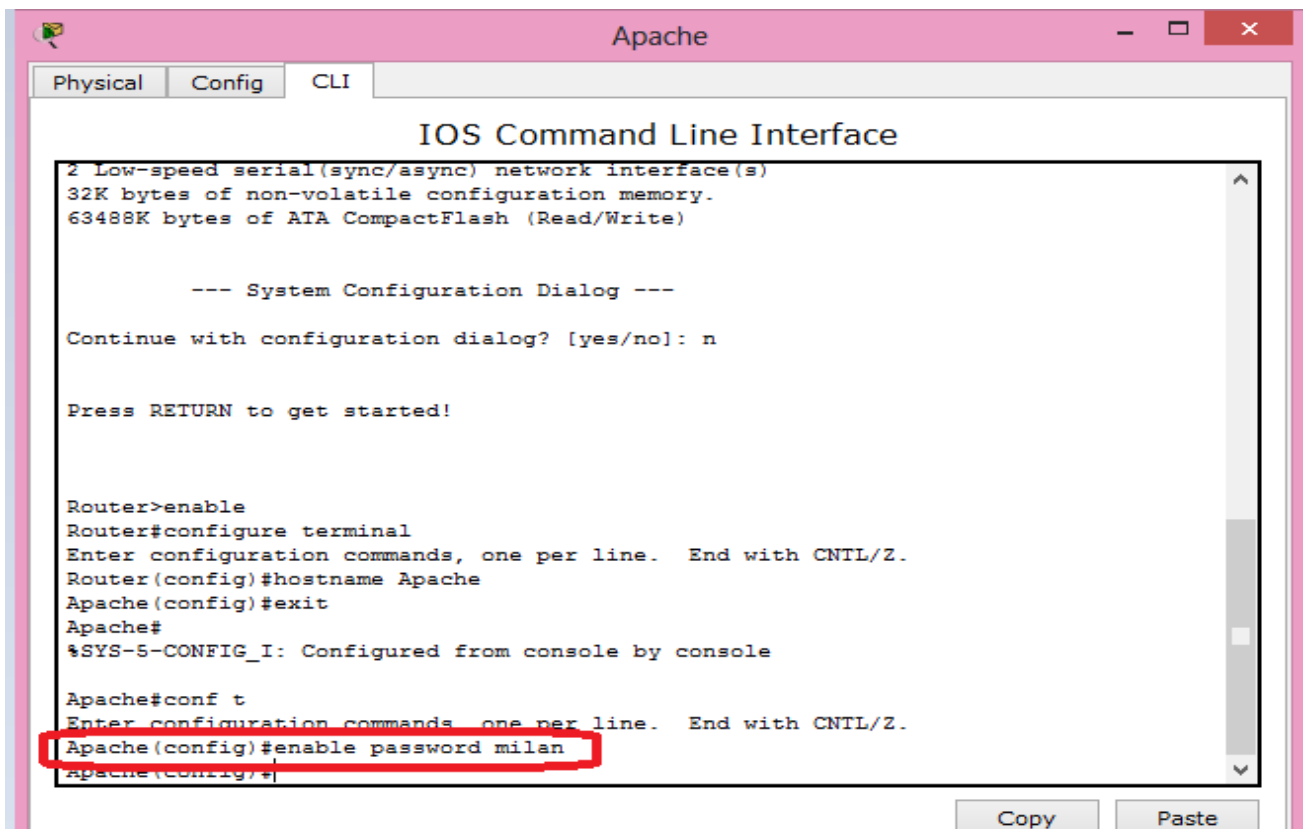
```
Apache
Physical Config CLI
IOS Command Line Interface
PT 1001 (PTSC2005) processor (revision 0x200) with 60416K/5120K Bytes of memory
-
Processor board ID PT0123 (0123)
PT2005 processor: part number 0, mask 01
Bridging software.
X.25 software, Version 3.0.0.
4 FastEthernet/IEEE 802.3 interface(s)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

Asignación de una contraseña.



```
Apache
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)

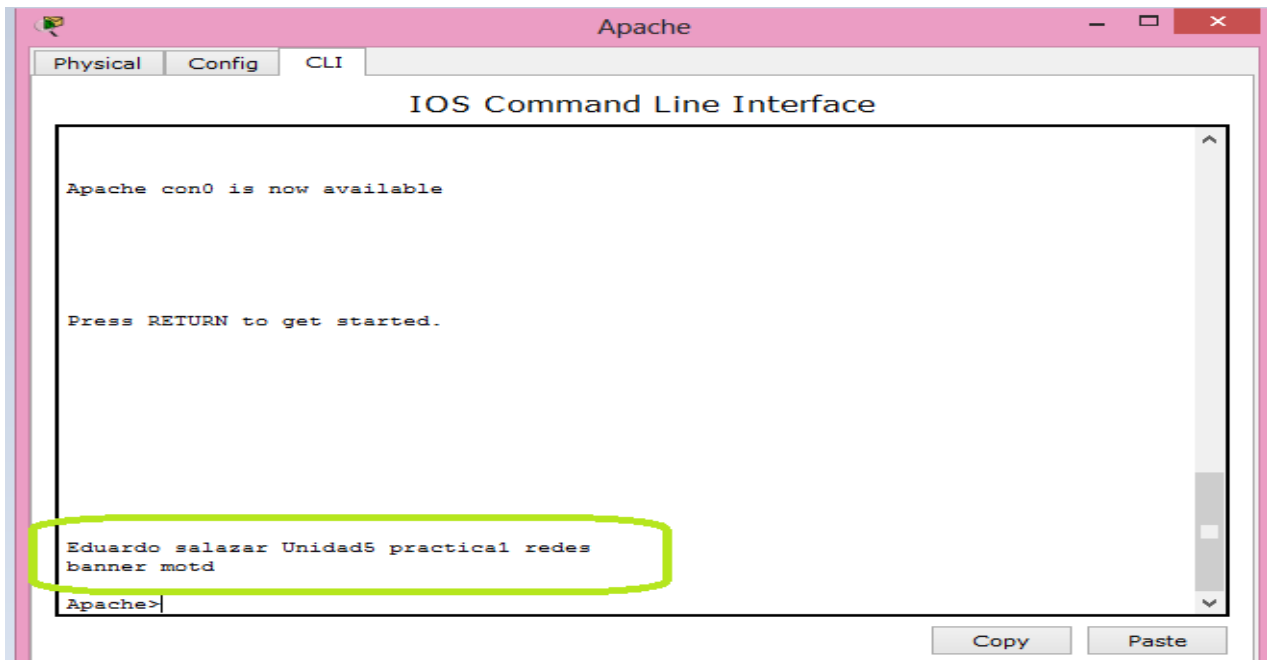
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

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

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

Agregación de un banner.



```
Apache
Physical Config CLI
IOS Command Line Interface

Apache con0 is now available

Press RETURN to get started.

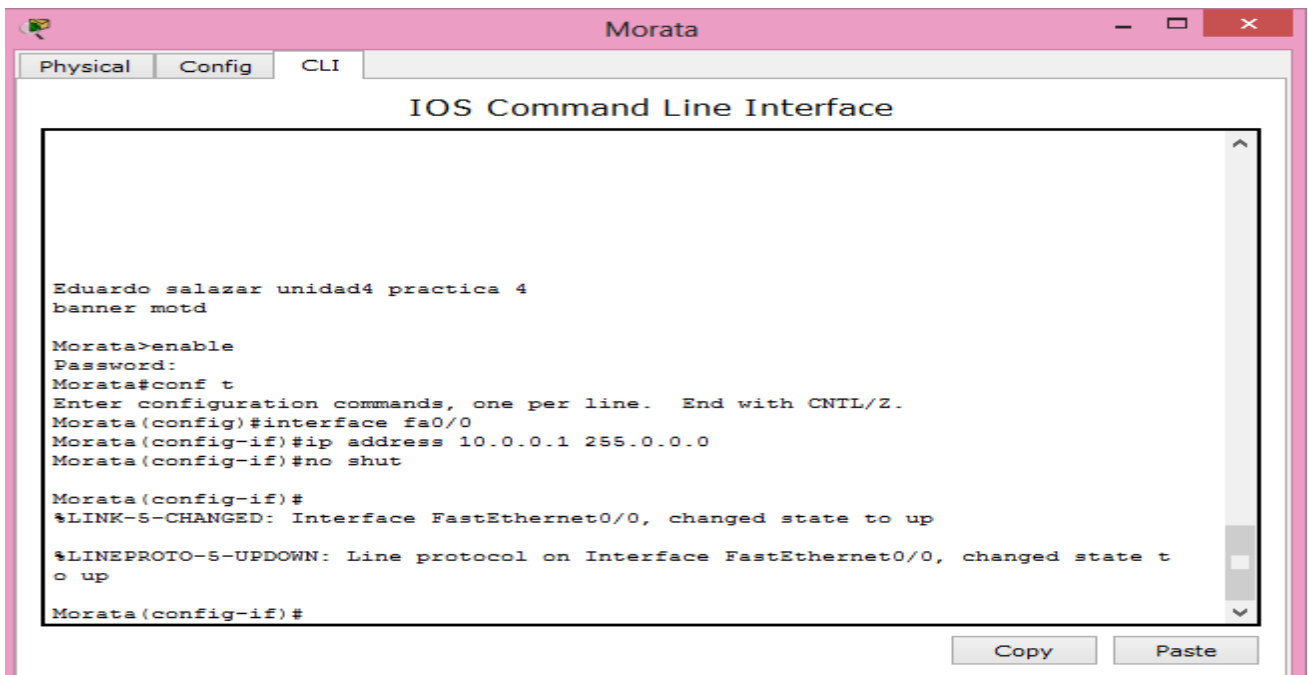
Eduardo salazar Unidad5 practical redes
banner motd

Apache>
```

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.

Morata (R1)

Puerto fa0/0



```
Morata
Physical Config CLI
IOS Command Line Interface

Eduardo salazar unidad4 practica 4
banner motd

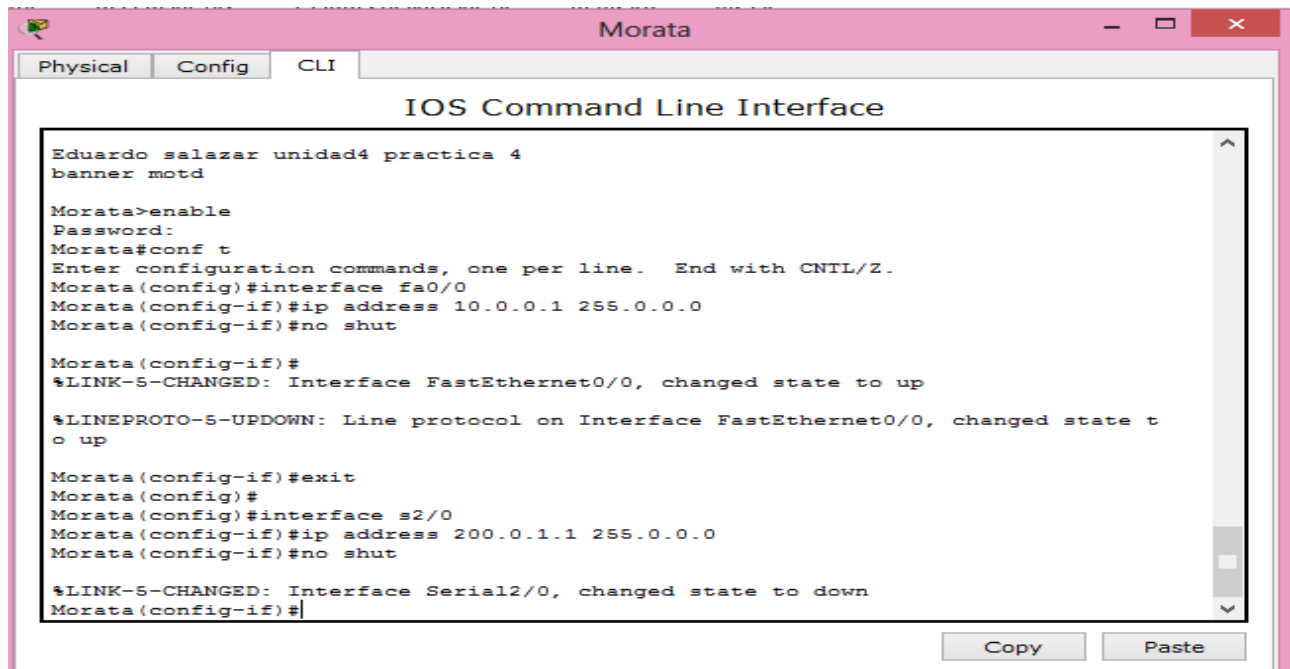
Morata>enable
Password:
Morata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Morata(config)#interface fa0/0
Morata(config-if)#ip address 10.0.0.1 255.0.0.0
Morata(config-if)#no shut

Morata(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

Morata(config-if)#
```

Serial 2/0



The screenshot shows the Morata IOS Command Line Interface. The window title is "Morata". The tabs are "Physical", "Config", and "CLI". The main content area displays the following text:

```
Eduardo salazar unidad4 practica 4
banner motd

Morata>enable
Password:
Morata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Morata(config)#interface fa0/0
Morata(config-if)#ip address 10.0.0.1 255.0.0.0
Morata(config-if)#no shut

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

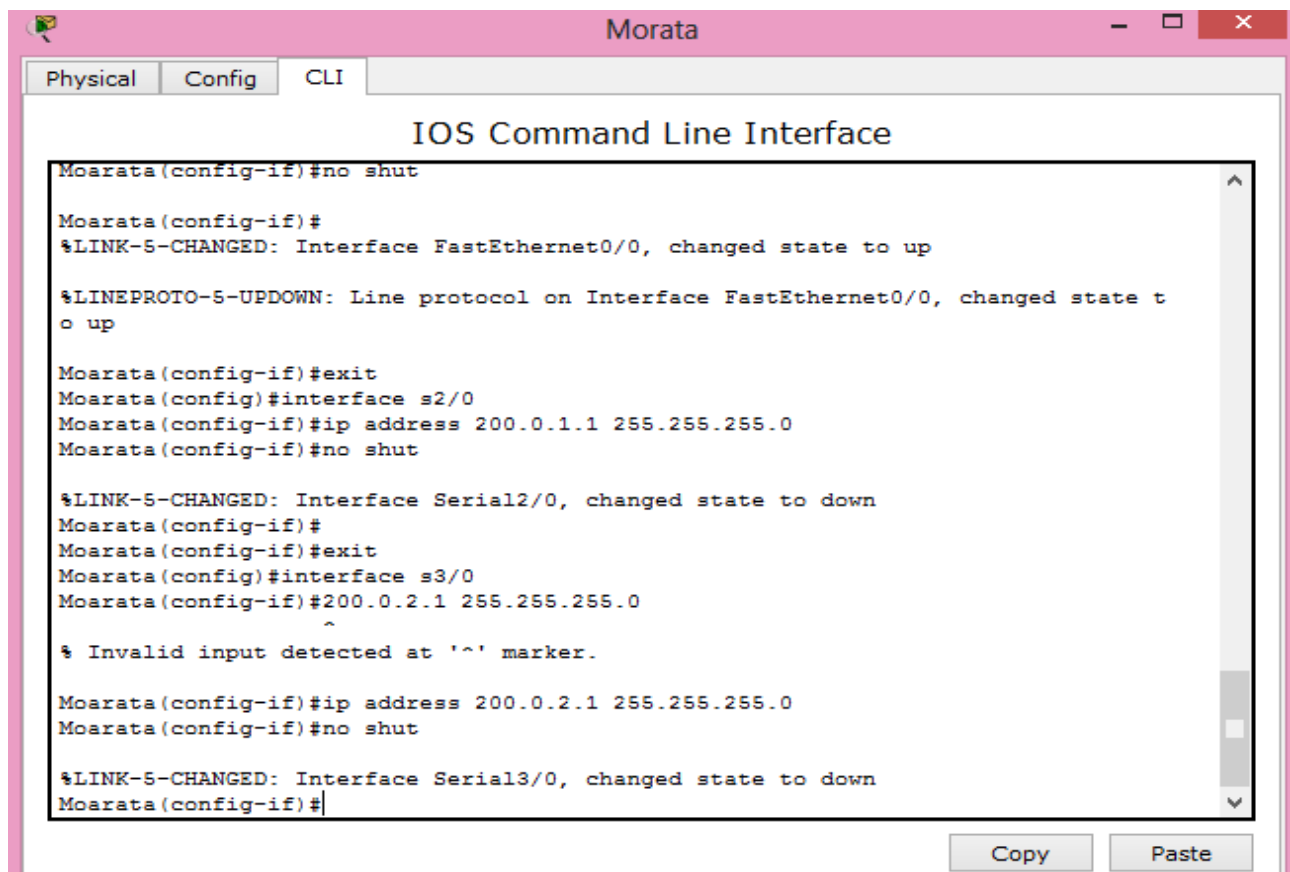
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state t
o up

Morata(config-if)#exit
Morata(config)#
Morata(config)#interface s2/0
Morata(config-if)#ip address 200.0.1.1 255.0.0.0
Morata(config-if)#no shut

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

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

Serial 3/0



The screenshot shows the Morata IOS Command Line Interface. The window title is "Morata". The tabs are "Physical", "Config", and "CLI". The main content area displays the following text:

```
Moarata(config-if)#no shut

Moarata(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

Moarata(config-if)#exit
Moarata(config)#interface s2/0
Moarata(config-if)#ip address 200.0.1.1 255.255.255.0
Moarata(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Moarata(config-if)#
Moarata(config-if)#exit
Moarata(config)#interface s3/0
Moarata(config-if)#200.0.2.1 255.255.255.0
^
% Invalid input detected at '^' marker.

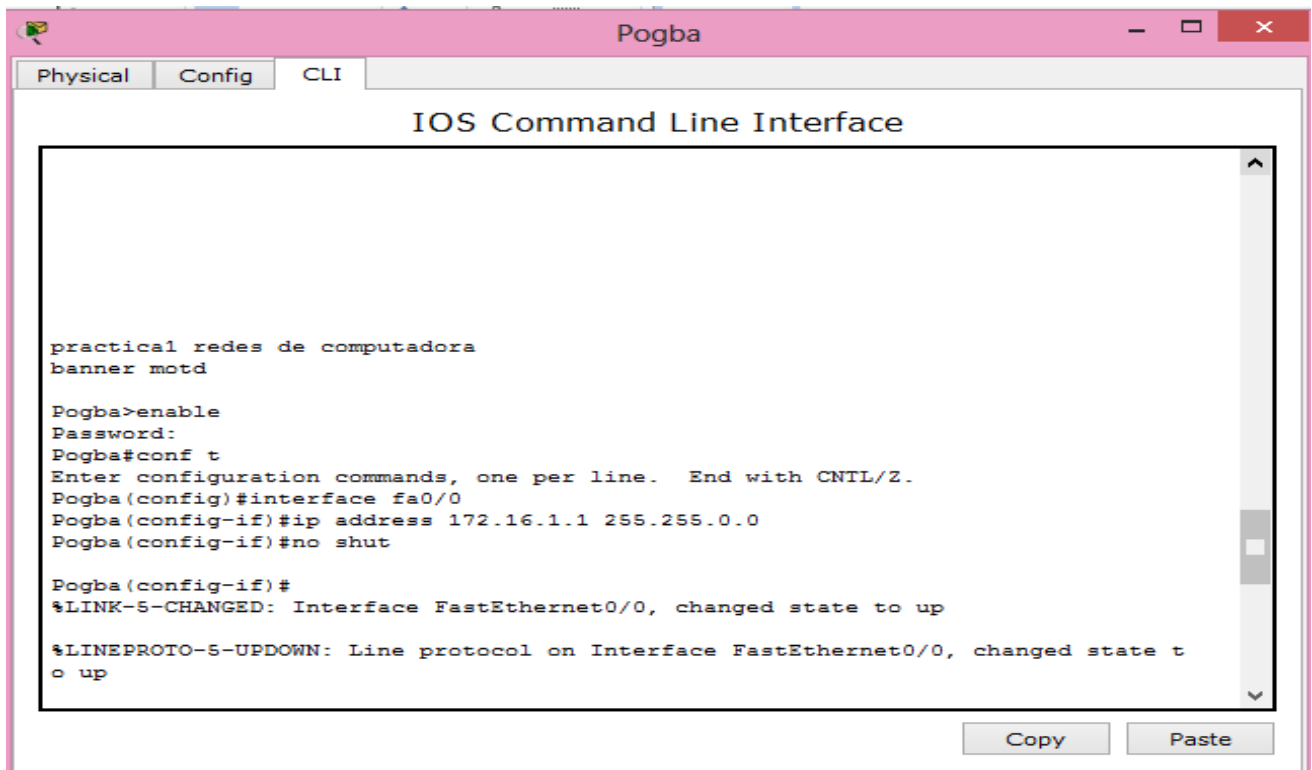
Moarata(config-if)#ip address 200.0.2.1 255.255.255.0
Moarata(config-if)#no shut

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

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

Pogba (R2).

Puerto fa0/0



The screenshot shows a terminal window titled "Pogba" with tabs for "Physical", "Config", and "CLI". The main area displays the "IOS Command Line Interface" with the following text:

```
practical redes de computadora
banner motd

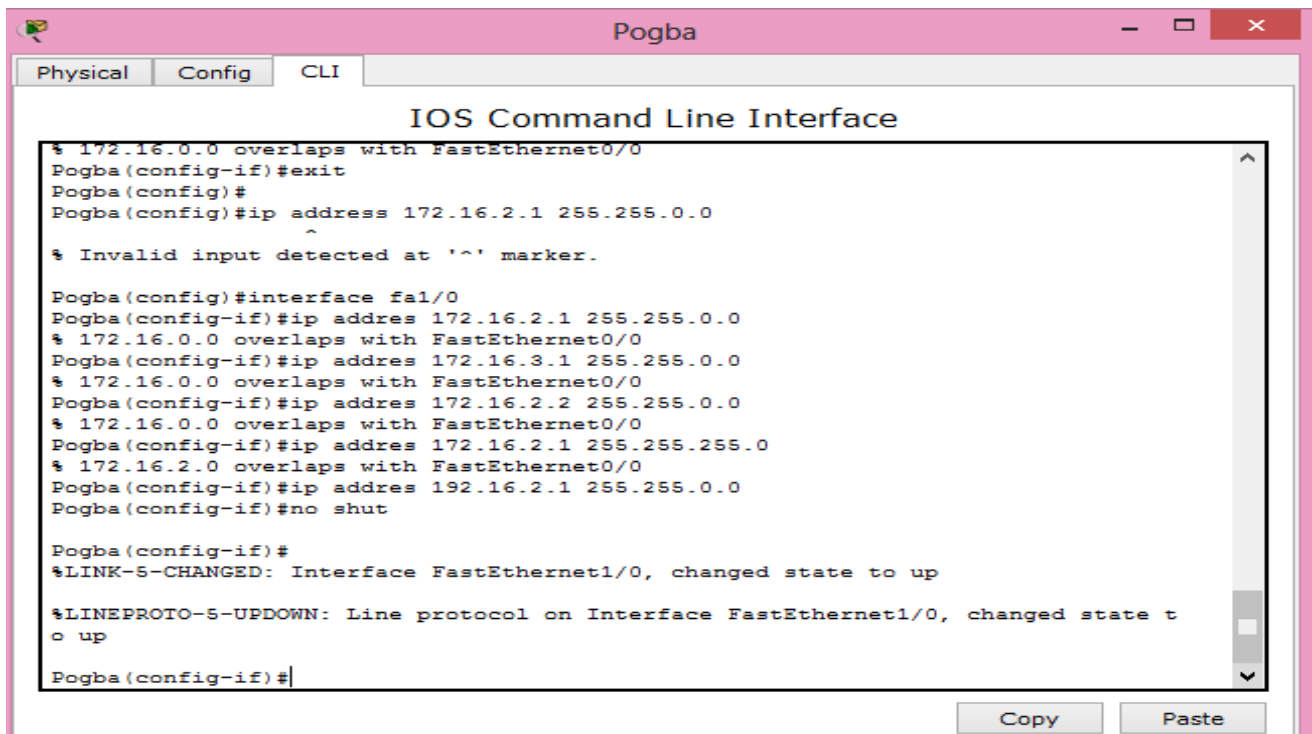
Pogba>enable
Password:
Pogba#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pogba(config)#interface fa0/0
Pogba(config-if)#ip address 172.16.1.1 255.255.0.0
Pogba(config-if)#no shut

Pogba(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
```

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

Puerto fa1/0.



The screenshot shows a terminal window titled "Pogba" with tabs for "Physical", "Config", and "CLI". The main area displays the "IOS Command Line Interface" with the following text:

```
% 172.16.0.0 overlaps with FastEthernet0/0
Pogba(config-if)#exit
Pogba(config)#
Pogba(config)#ip address 172.16.2.1 255.255.0.0
^
% Invalid input detected at '^' marker.

Pogba(config)#interface fa1/0
Pogba(config-if)#ip address 172.16.2.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 172.16.3.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 172.16.2.2 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 172.16.2.1 255.255.255.0
% 172.16.2.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 192.16.2.1 255.255.0.0
Pogba(config-if)#no shut

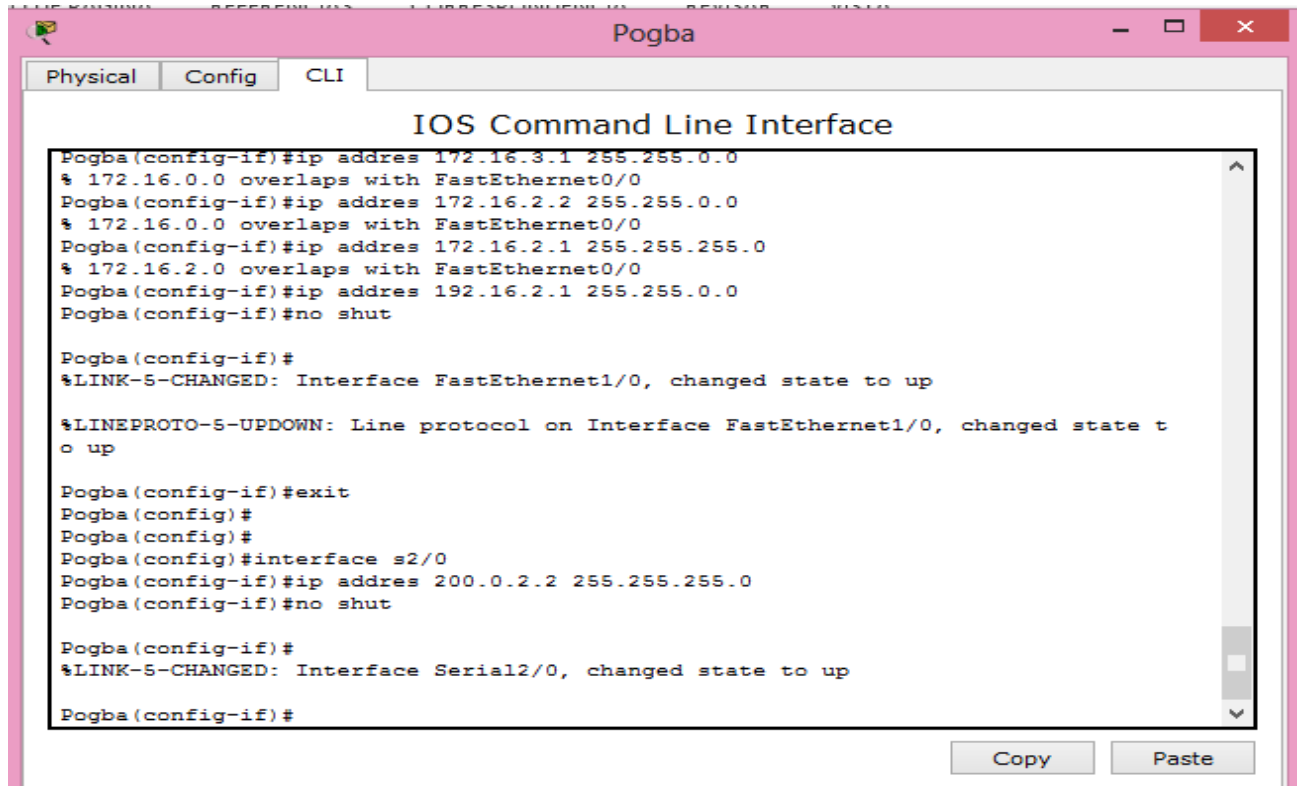
Pogba(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

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

Pogba(config-if)#
```

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

Serial 2/0



```
Pogba
Physical Config CLI
IOS Command Line Interface
Pogba(config-if)#ip address 172.16.3.1 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 172.16.2.2 255.255.0.0
% 172.16.0.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 172.16.2.1 255.255.255.0
% 172.16.2.0 overlaps with FastEthernet0/0
Pogba(config-if)#ip address 192.16.2.1 255.255.0.0
Pogba(config-if)#no shut

Pogba(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

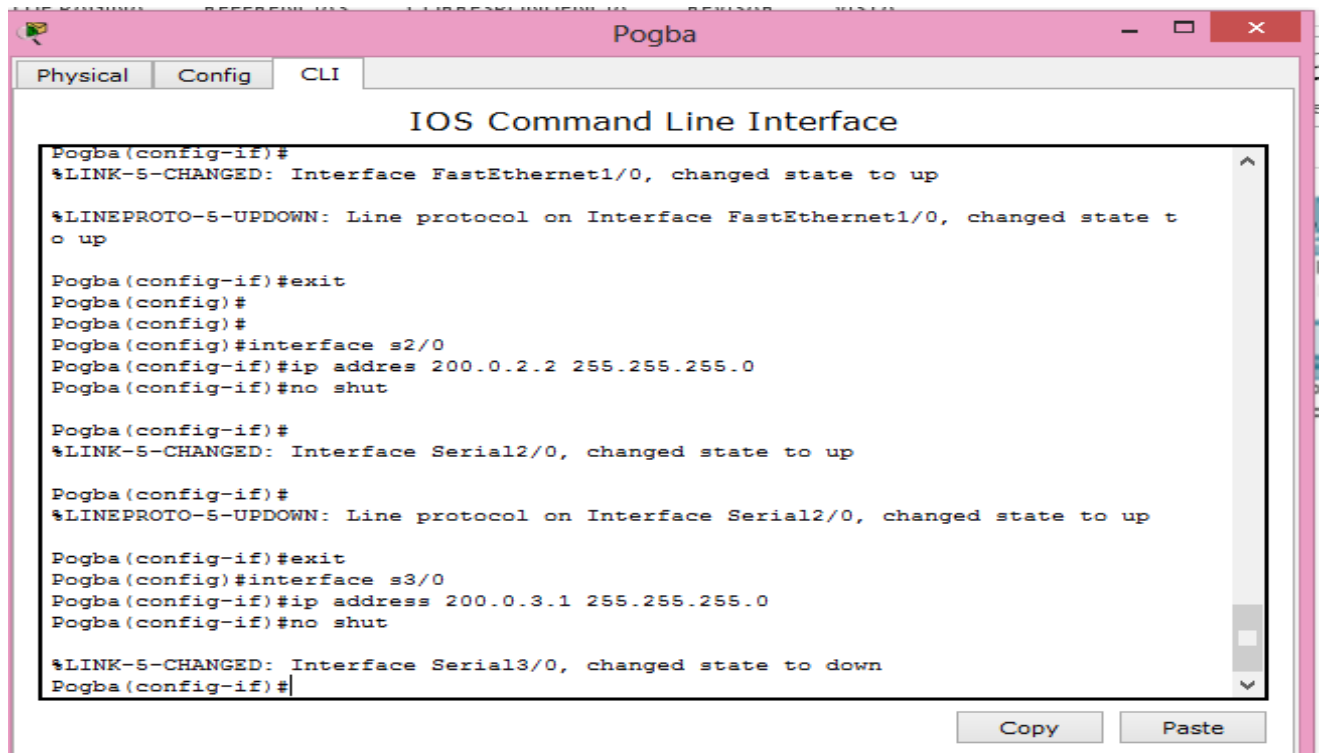
Pogba(config-if)#exit
Pogba(config)#
Pogba(config)#
Pogba(config)#interface s2/0
Pogba(config-if)#ip address 200.0.2.2 255.255.255.0
Pogba(config-if)#no shut

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

Pogba(config-if)#
```

Copy Paste

Serial 3/0.



```
Pogba
Physical Config CLI
IOS Command Line Interface
Pogba(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

Pogba(config-if)#exit
Pogba(config)#
Pogba(config)#
Pogba(config)#interface s2/0
Pogba(config-if)#ip address 200.0.2.2 255.255.255.0
Pogba(config-if)#no shut

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

Pogba(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

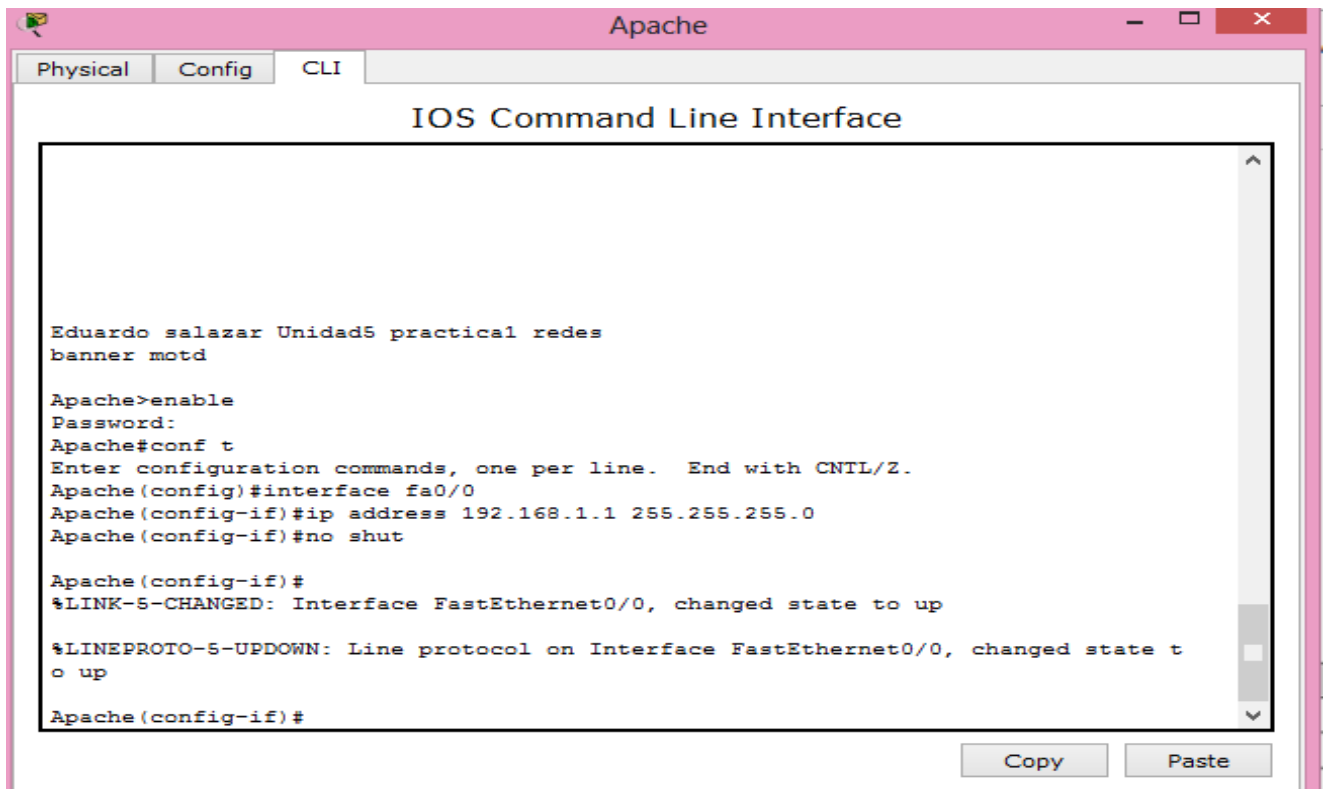
Pogba(config-if)#exit
Pogba(config)#interface s3/0
Pogba(config-if)#ip address 200.0.3.1 255.255.255.0
Pogba(config-if)#no shut

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

Copy Paste

Apache (R3).

Puerto fa0/0



The screenshot shows a terminal window titled "Apache" with tabs for "Physical", "Config", and "CLI". The main content is the "IOS Command Line Interface". The text in the terminal is as follows:

```
Eduardo salazar Unidad5 practical redes
banner motd

Apache>enable
Password:
Apache#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Apache(config)#interface fa0/0
Apache(config-if)#ip address 192.168.1.1 255.255.255.0
Apache(config-if)#no shut

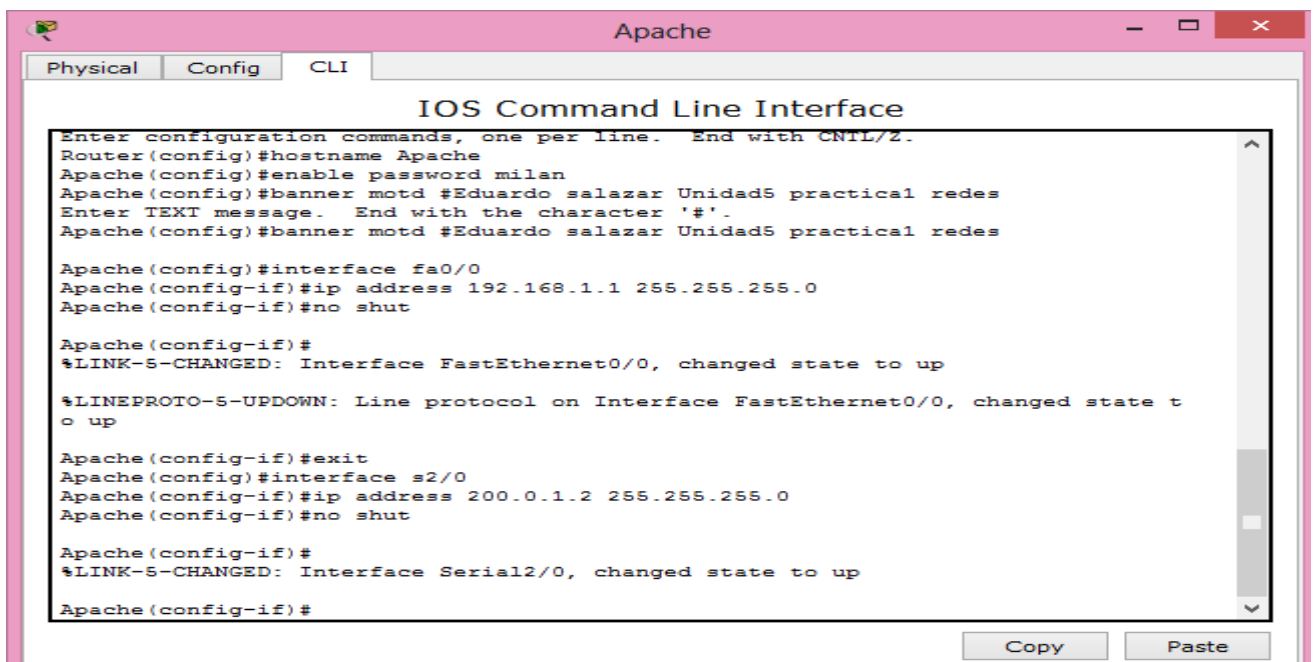
Apache(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

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

Apache(config-if)#
```

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

Serial 2/0.



The screenshot shows a terminal window titled "Apache" with tabs for "Physical", "Config", and "CLI". The main content is the "IOS Command Line Interface". The text in the terminal is as follows:

```
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Apache
Apache(config)#enable password milan
Apache(config)#banner motd #Eduardo salazar Unidad5 practical redes
Enter TEXT message. End with the character '#'.
Apache(config)#banner motd #Eduardo salazar Unidad5 practical redes

Apache(config)#interface fa0/0
Apache(config-if)#ip address 192.168.1.1 255.255.255.0
Apache(config-if)#no shut

Apache(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

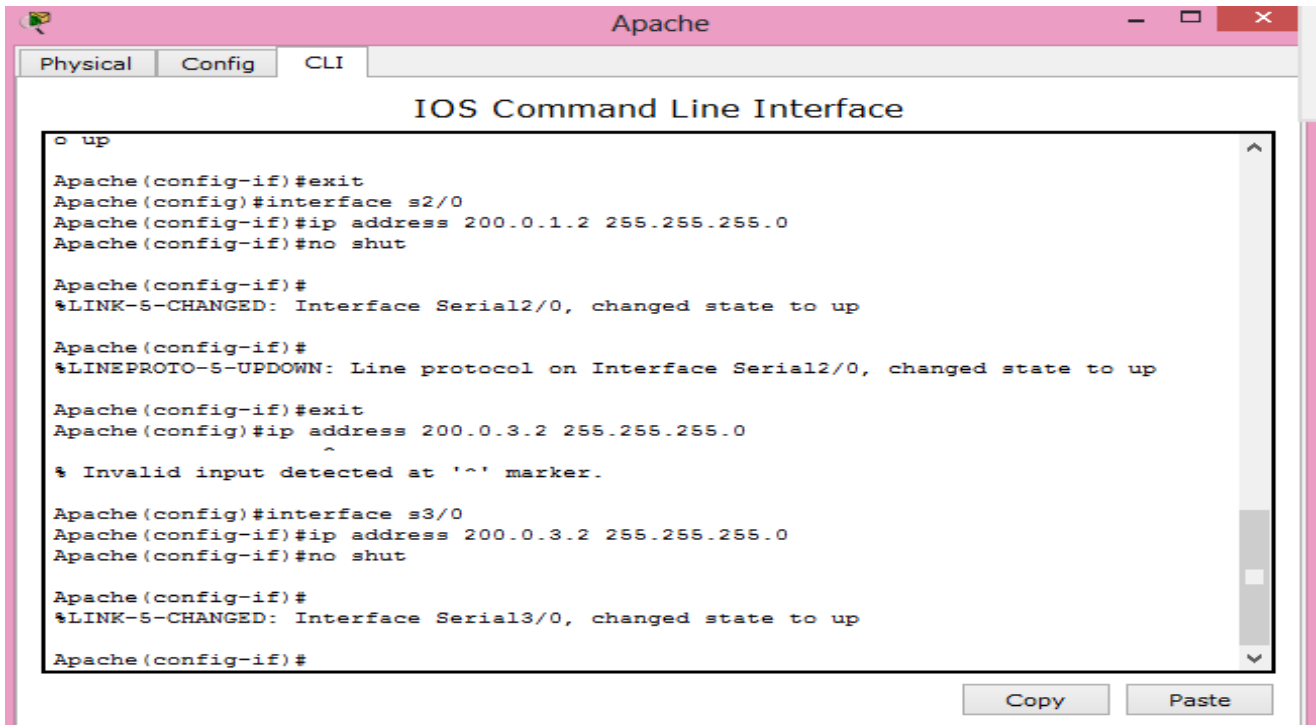
Apache(config-if)#exit
Apache(config)#interface s2/0
Apache(config-if)#ip address 200.0.1.2 255.255.255.0
Apache(config-if)#no shut

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

Apache(config-if)#
```

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

Serial 3/0



```
Apache
Physical Config CLI
IOS Command Line Interface
o up
Apache(config-if)#exit
Apache(config)#interface s2/0
Apache(config-if)#ip address 200.0.1.2 255.255.255.0
Apache(config-if)#no shut

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

Apache(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Apache(config-if)#exit
Apache(config)#ip address 200.0.3.2 255.255.255.0
^
% Invalid input detected at '^' marker.

Apache(config)#interface s3/0
Apache(config-if)#ip address 200.0.3.2 255.255.255.0
Apache(config-if)#no shut

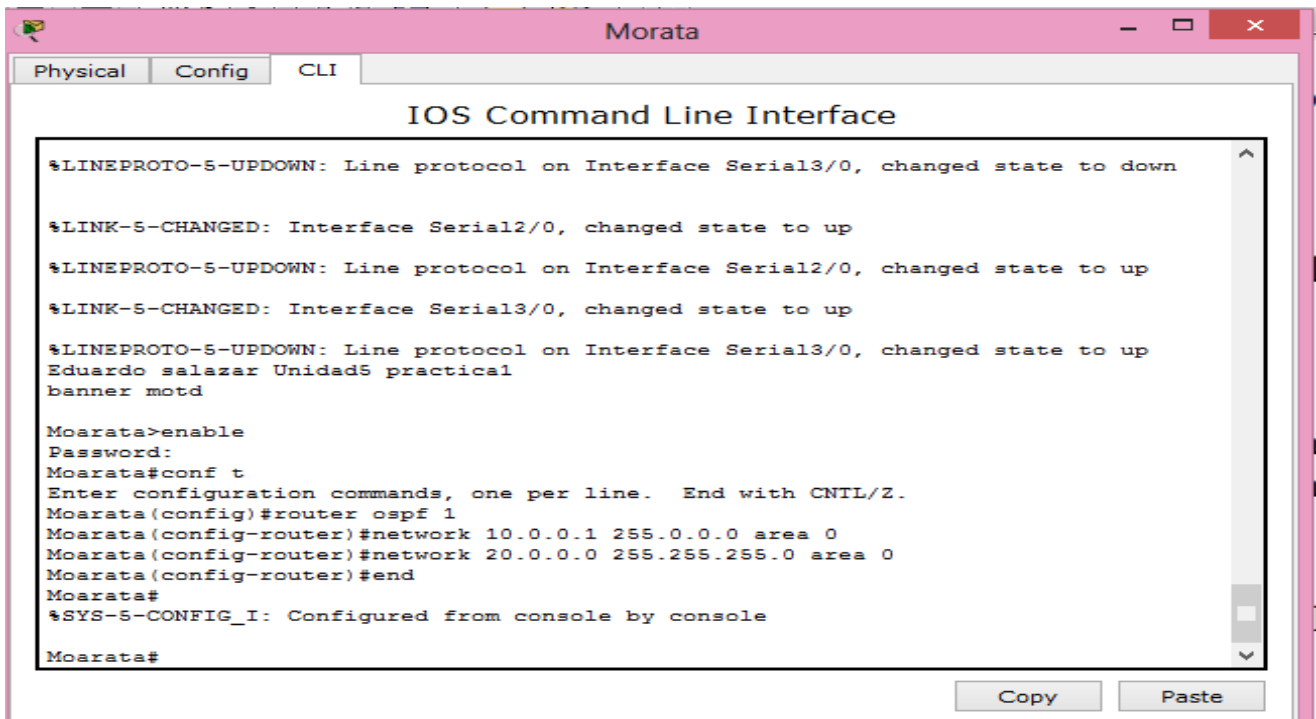
Apache(config-if)#
%LINK-5-CHANGED: Interface Serial3/0, changed state to up

Apache(config-if)#
```

Copy Paste

La activación del protocolo OSPF debe llevarse a cabo en cada uno de los routers bajo una administración común.

R1.



```
Morata
Physical Config CLI
IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to down

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

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

%LINK-5-CHANGED: Interface Serial3/0, changed state to up

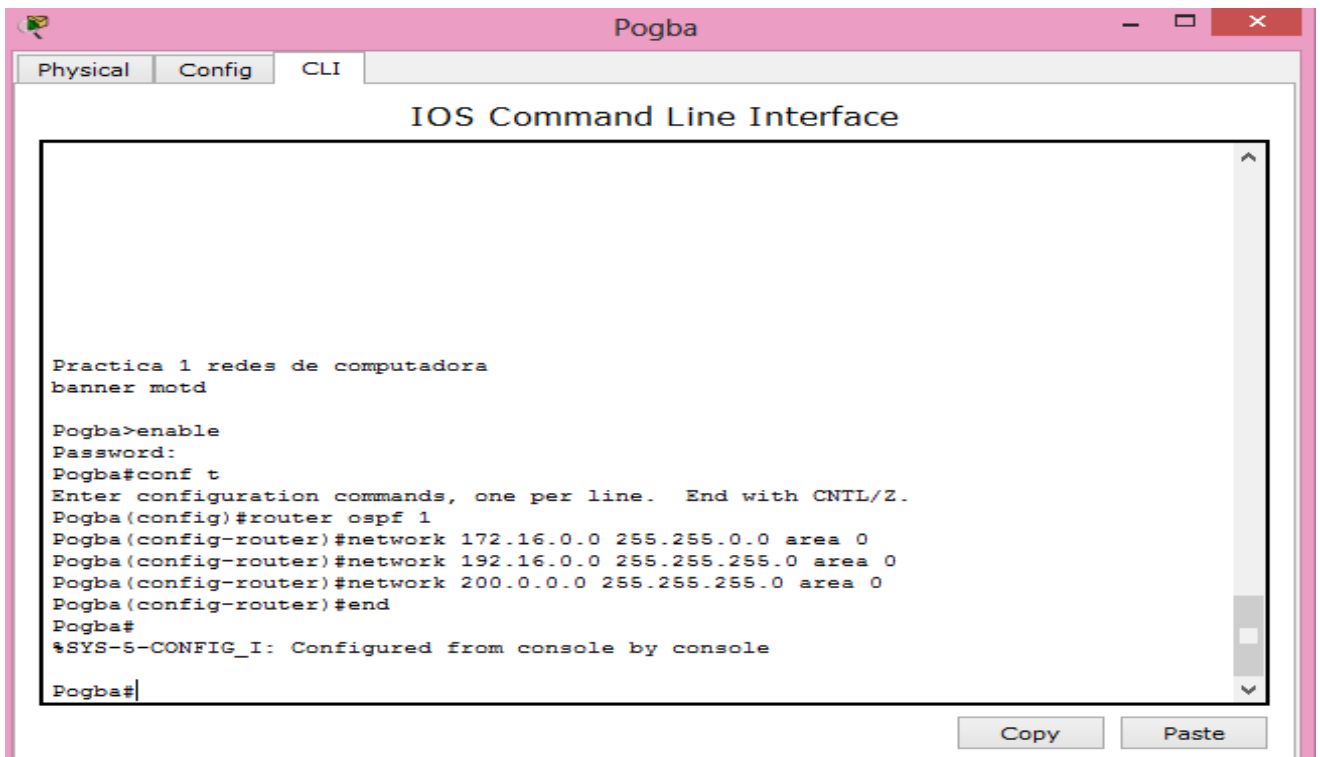
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
Eduardo salazar Unidad5 practical
banner motd

Moarata>enable
Password:
Moarata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Moarata(config)#router ospf 1
Moarata(config-router)#network 10.0.0.1 255.0.0.0 area 0
Moarata(config-router)#network 20.0.0.0 255.255.255.0 area 0
Moarata(config-router)#end
Moarata#
%SYS-5-CONFIG_I: Configured from console by console

Moarata#
```

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R2.



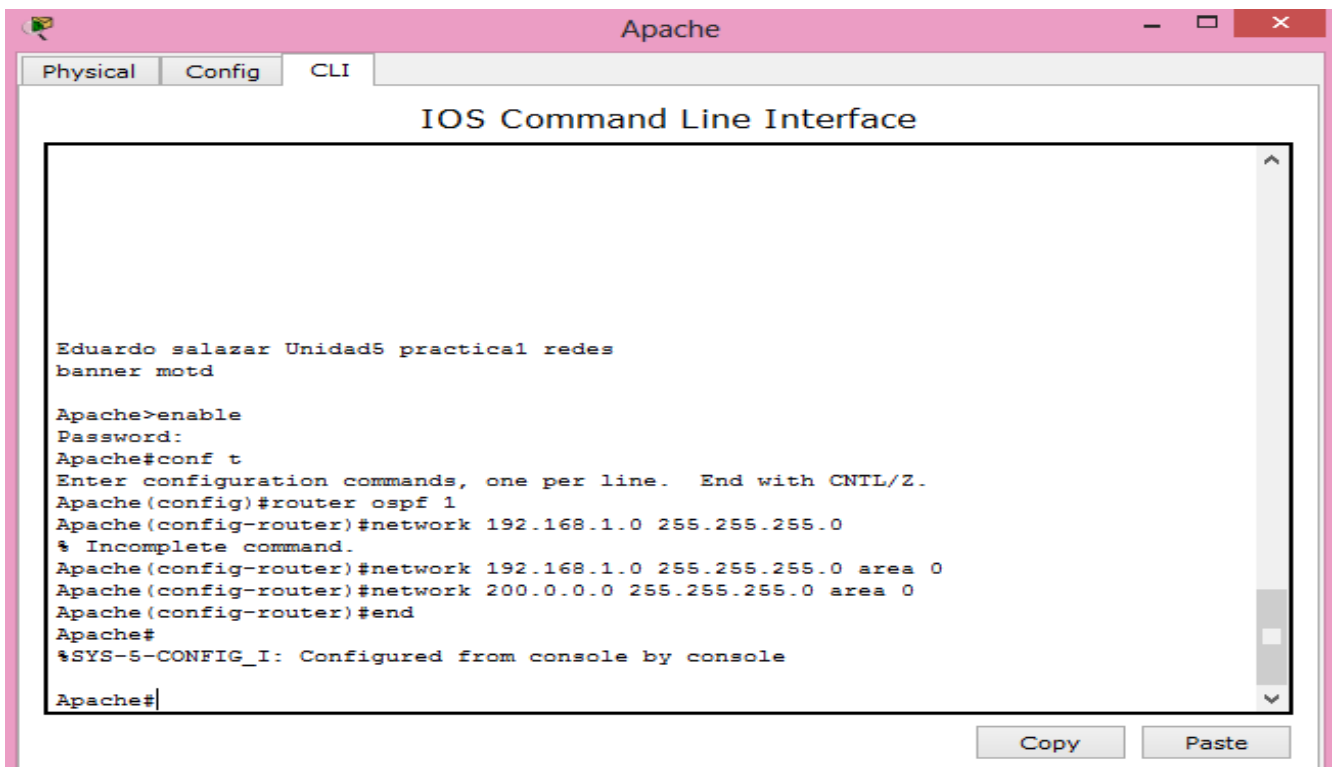
```
Physical Config CLI
IOS Command Line Interface

Practica 1 redes de computadora
banner motd

Pogba>enable
Password:
Pogba#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pogba(config)#router ospf 1
Pogba(config-router)#network 172.16.0.0 255.255.0.0 area 0
Pogba(config-router)#network 192.16.0.0 255.255.255.0 area 0
Pogba(config-router)#network 200.0.0.0 255.255.255.0 area 0
Pogba(config-router)#end
Pogba#
%SYS-5-CONFIG_I: Configured from console by console

Pogba#
```

R3



```
Physical Config CLI
IOS Command Line Interface

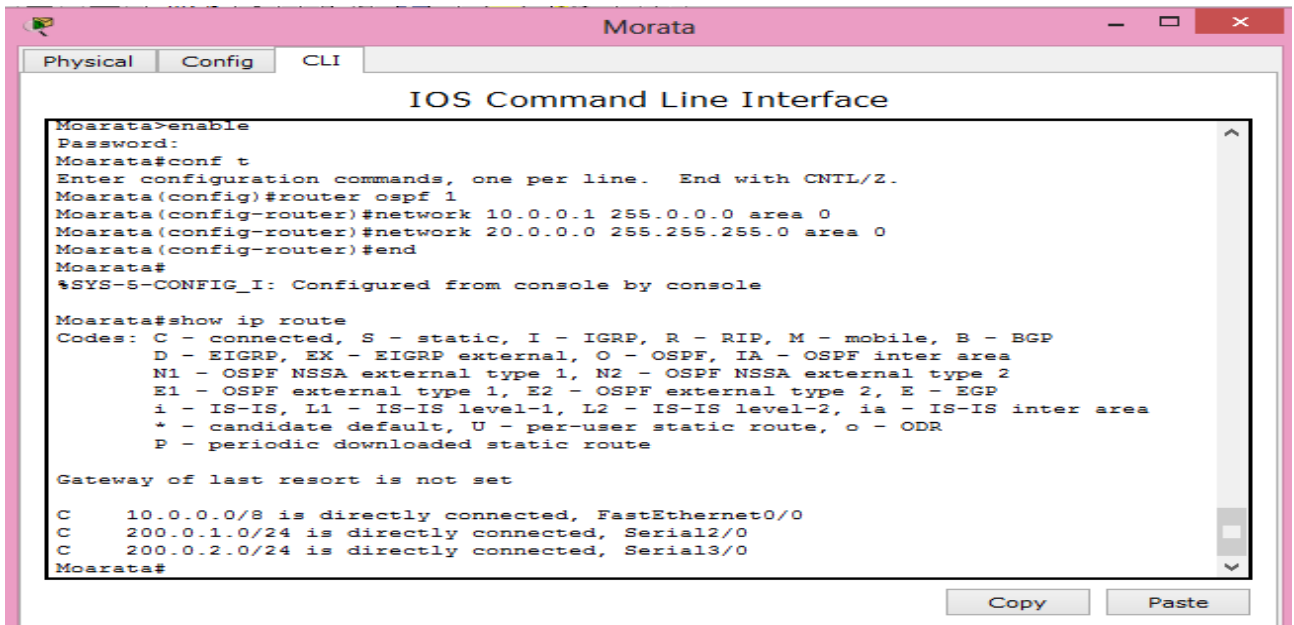
Eduardo salazar Unidad5 practical redes
banner motd

Apache>enable
Password:
Apache#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Apache(config)#router ospf 1
Apache(config-router)#network 192.168.1.0 255.255.255.0
% Incomplete command.
Apache(config-router)#network 192.168.1.0 255.255.255.0 area 0
Apache(config-router)#network 200.0.0.0 255.255.255.0 area 0
Apache(config-router)#end
Apache#
%SYS-5-CONFIG_I: Configured from console by console

Apache#
```

Una vez finalizado el proceso de configuración del protocolo de enrutamiento, verificar que las tablas de enrutamiento de los routers han incorporado las rutas hasta las redes remotas.

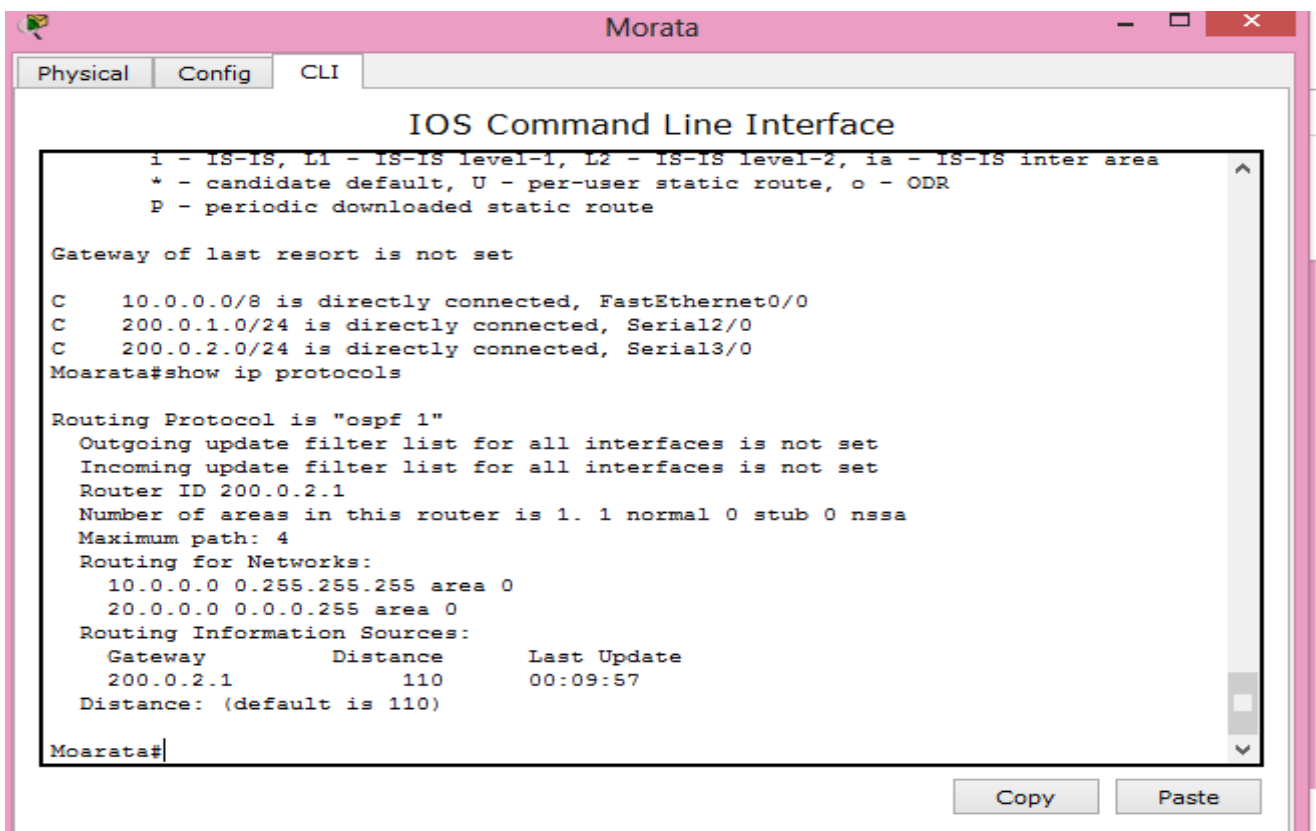
R1.



```
Morata
Physical Config CLI
IOS Command Line Interface
Moarata>enable
Password:
Moarata#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Moarata(config)#router ospf 1
Moarata(config-router)#network 10.0.0.1 255.0.0.0 area 0
Moarata(config-router)#network 20.0.0.0 255.255.255.0 area 0
Moarata(config-router)#end
Moarata#
$SYS-5-CONFIG_I: Configured from console by console
Moarata#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    200.0.1.0/24 is directly connected, Serial12/0
C    200.0.2.0/24 is directly connected, Serial13/0
Moarata#
```



```
Morata
Physical Config CLI
IOS Command Line Interface
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

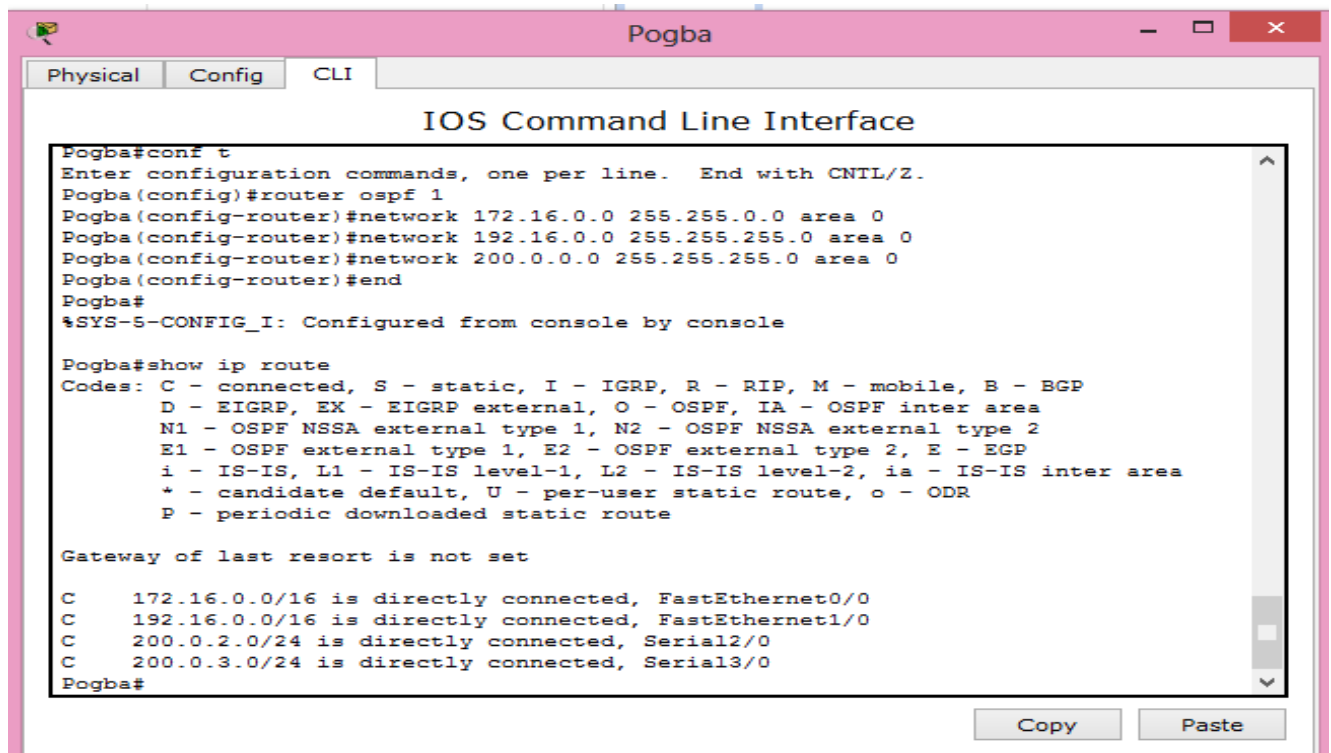
Gateway of last resort is not set

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    200.0.1.0/24 is directly connected, Serial12/0
C    200.0.2.0/24 is directly connected, Serial13/0
Moarata#show ip protocols

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 200.0.2.1
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    10.0.0.0 0.255.255.255 area 0
    20.0.0.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    200.0.2.1         110          00:09:57
  Distance: (default is 110)

Moarata#
```

R2.



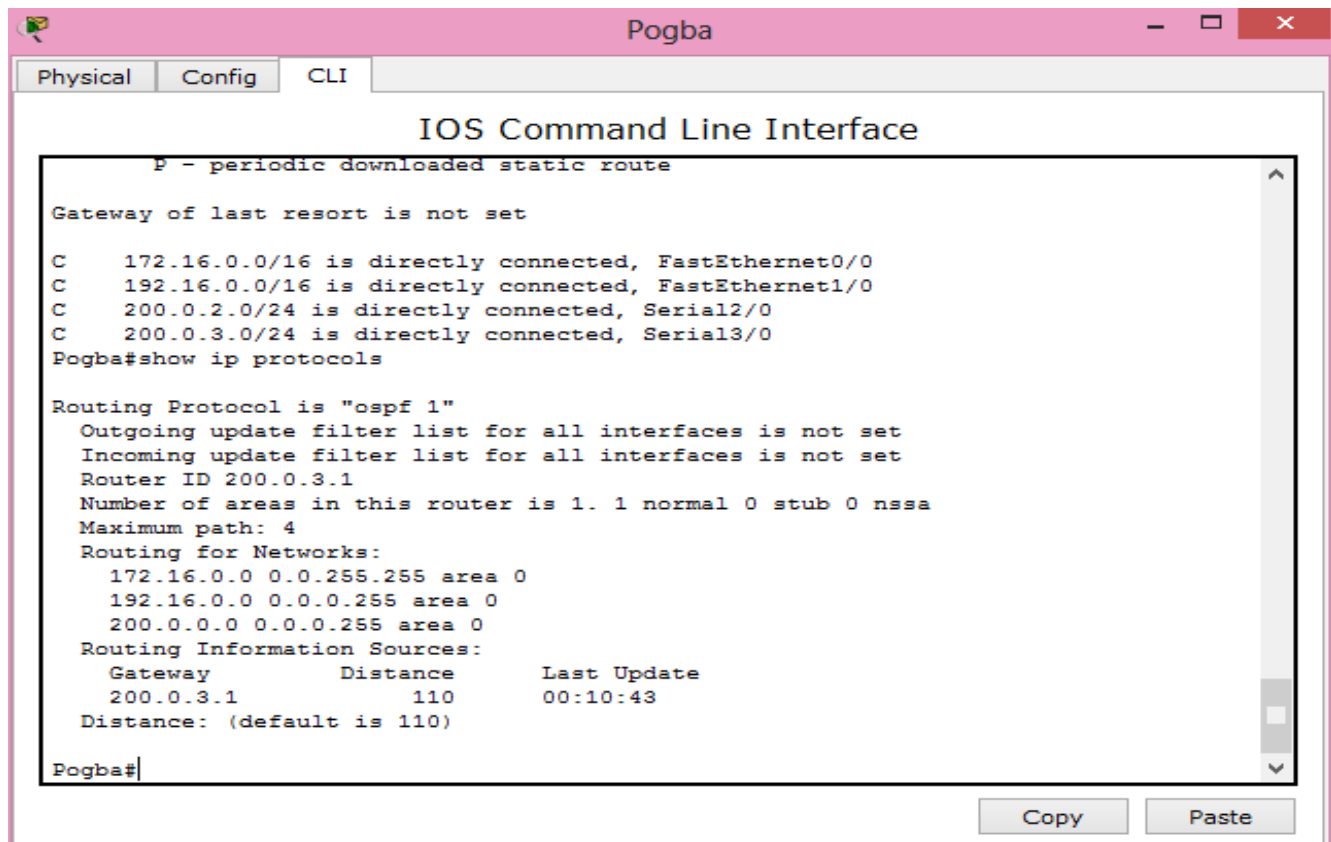
```
Pogba
Physical Config CLI
IOS Command Line Interface
Pogba#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Pogba(config)#router ospf 1
Pogba(config-router)#network 172.16.0.0 255.255.0.0 area 0
Pogba(config-router)#network 192.16.0.0 255.255.255.0 area 0
Pogba(config-router)#network 200.0.0.0 255.255.255.0 area 0
Pogba(config-router)#end
Pogba#
%SYS-5-CONFIG_I: Configured from console by console

Pogba#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     200.0.2.0/24 is directly connected, Serial2/0
C     200.0.3.0/24 is directly connected, Serial3/0
Pogba#
```

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```
Pogba
Physical Config CLI
IOS Command Line Interface
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     200.0.2.0/24 is directly connected, Serial2/0
C     200.0.3.0/24 is directly connected, Serial3/0
Pogba#show ip protocols

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 200.0.3.1
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    172.16.0.0 0.0.255.255 area 0
    192.16.0.0 0.0.0.255 area 0
    200.0.0.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    200.0.3.1             110          00:10:43
  Distance: (default is 110)

Pogba#
```

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R3.

```
Apache
Physical Config CLI
IOS Command Line Interface
Apache#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Apache(config)#router ospf 1
Apache(config-router)#network 192.168.1.0 255.255.255.0
% Incomplete command.
Apache(config-router)#network 192.168.1.0 255.255.255.0 area 0
Apache(config-router)#network 200.0.0.0 255.255.255.0 area 0
Apache(config-router)#end
Apache#
%SYS-5-CONFIG_I: Configured from console by console

Apache#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      192.168.1.0/24 is directly connected, FastEthernet0/0
C      200.0.1.0/24 is directly connected, Serial2/0
C      200.0.3.0/24 is directly connected, Serial3/0
Apache#
```

Copy Paste

```
Apache
Physical Config CLI
IOS Command Line Interface
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      192.168.1.0/24 is directly connected, FastEthernet0/0
C      200.0.1.0/24 is directly connected, Serial2/0
C      200.0.3.0/24 is directly connected, Serial3/0
Apache#show ip protocols

Routing Protocol is "ospf 1"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Router ID 200.0.3.2
  Number of areas in this router is 1. 1 normal 0 stub 0 nssa
  Maximum path: 4
  Routing for Networks:
    192.168.1.0 0.0.0.255 area 0
    200.0.0.0 0.0.0.255 area 0
  Routing Information Sources:
    Gateway         Distance      Last Update
    200.0.3.2             110          00:04:40
  Distance: (default is 110)

Apache#
```

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CONCLUSIÓN

Puedo decir que esta práctica se realizó como las prácticas de RIP nada más que en esta ocasión se realizó por medio del protocolo OSPF que es un protocolo sin clase y de estado enlace, pude captar algo que fue que cada router tiene que tener una identificación propia e inequívoca que coincide, en este caso es mediante el comando router-id.

Es más que nada casi las mismas configuraciones, lo único que cambia fue en la contraseña router ospf envés de rip y lo demás digamos que es básicamente igual en los demás pasos