INSTITUTO TÉCNOLOGICO DE SALINA CRUZ

REDES DE COMPUTADORA

SEMESTRE FEBRERO-AGOSTO 2015

REPORTE DE PRÁCTICAS

PRACTICA N°: 6

UNIDAD: 2

FECHA: 15 DE ABRIL DE 2015

NOMBRE: EDUARDO SALAZAR IRRIZARI

Objetivo:

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

Instrucciones:

1.- Cambiar de nombre a los dispositivos.

2.- configurar banner a ambos router´s.

3.- levantar los puertos fa0 a ambos routers.

4.- levantar los seriales de ambos routers.

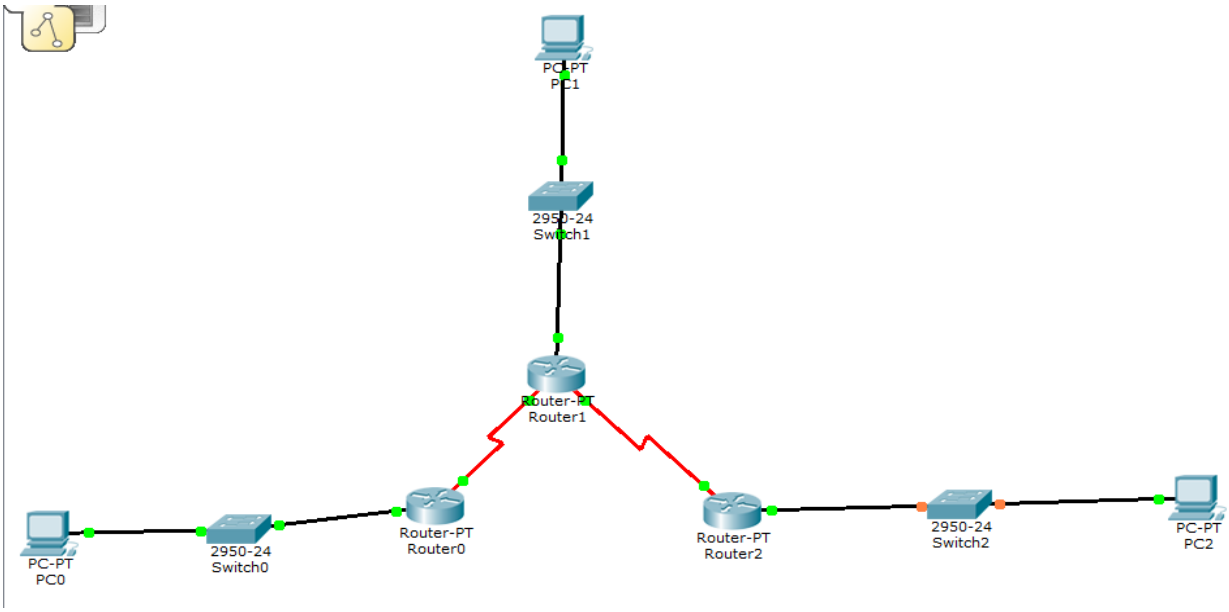
6. Comprobar conexiones por medio de ping.

Materiales:

1.- computadora.

2.- Packet tracert.

INSTITUTO TECNOLÓGICO DE SALINA CRUZ
REDES DE COMPUTADORAS
PRACTICAS UNIDAD 2



PASO 1
Construir la tabla de direccionamiento

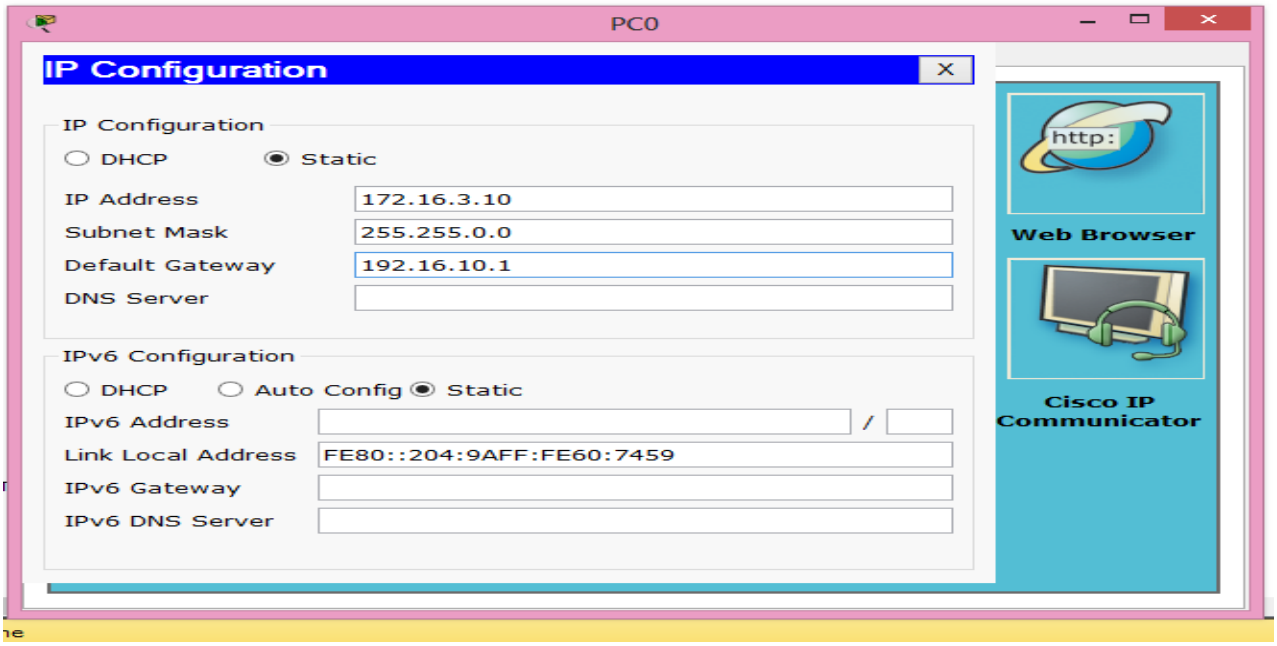
Dispositivo	Interfaz	Dirección IP	Mascara de subred	Gateway
R1	Fa0/0	192.168.10.1	255.255.255.0	No aplicable
	S2/0	10.0.0.2	255.0.0.0	No aplicable
R2	Fa0/0	192.16.11.2	255.255.5.0	No aplicable
	S2/0	10.0.0.1	255.0.0.0	No aplicable
	S3/0	11.0.0.1	255.255.0.0	No aplicable
R3	Fa0/0	192.168.20.1	255.255.255.0	No aplicable
	S2/0	11.0.0.2	255.0.0.0	No aplicable
PC1	No aplicable	172.16.3.10	255.255.0.0	192.16.10.1
PC2	No aplicable	172.16.1.10	255.255.0.0	192.16.11.2
PC3	No aplicable	192.168.2.10	255.255.255.0	192.168.20.1

PASÓ 2
CONFIGURACIÓN INICIAL

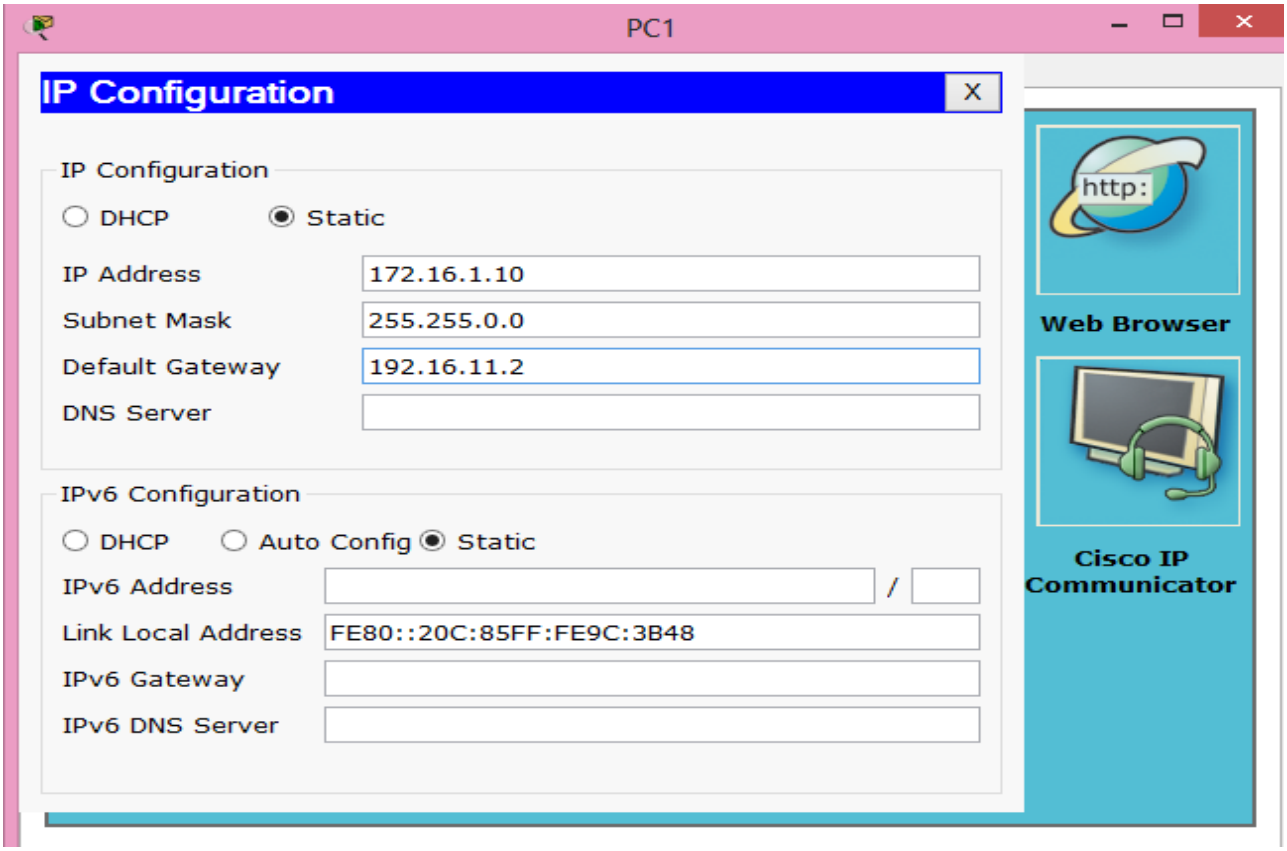
A) HOST

***Agregar puerta de enlace**

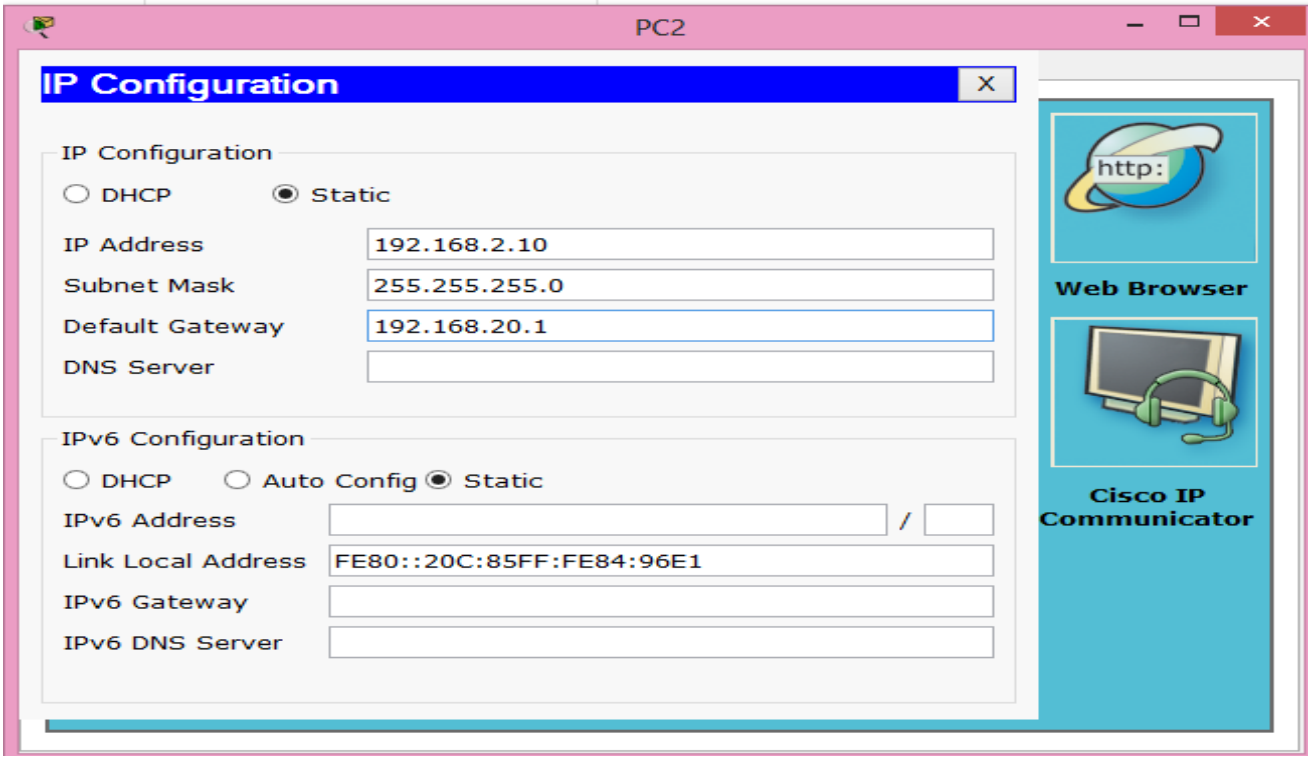
PC1


PC0
IP Configuration
IP Configuration
DHCP
Static
IP Address
172.16.3.10
Subnet Mask
255.255.0.0
Default Gateway
192.16.10.1
DNS Server
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::204:9AFF:FE60:7459
IPv6 Gateway
IPv6 DNS Server
http:
Web Browser
Cisco IP Communicator

PC2


PC1
IP Configuration
IP Configuration
DHCP
Static
IP Address
172.16.1.10
Subnet Mask
255.255.0.0
Default Gateway
192.16.11.2
DNS Server
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::20C:85FF:FE9C:3B48
IPv6 Gateway
IPv6 DNS Server
http:
Web Browser
Cisco IP Communicator

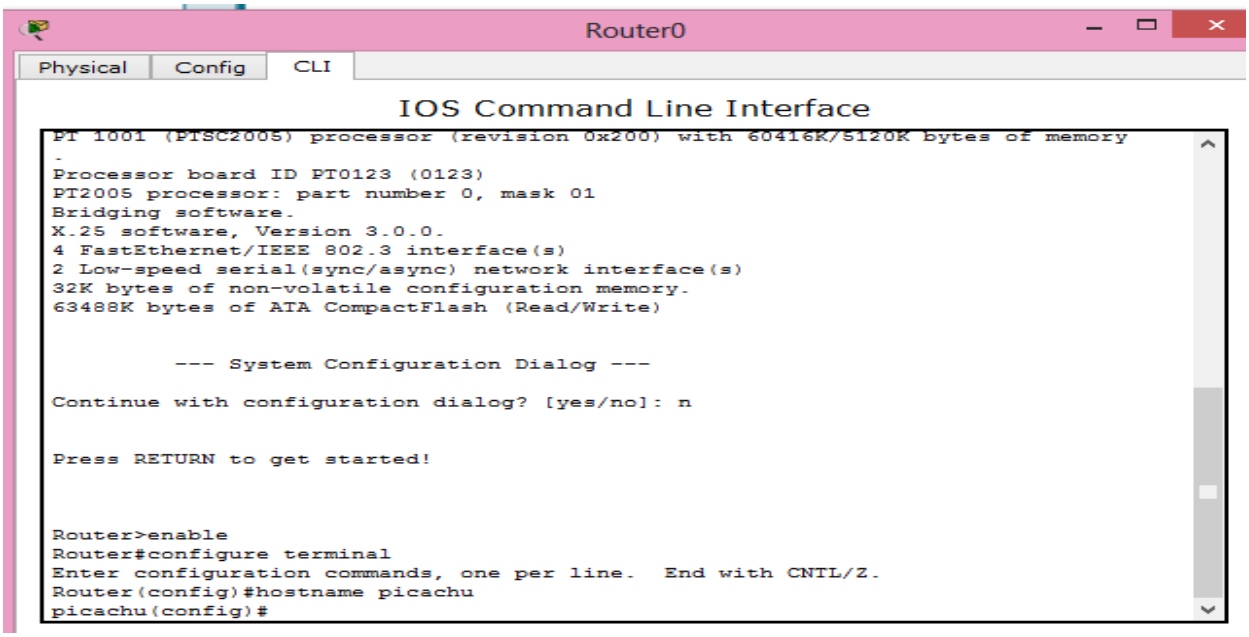
PC3



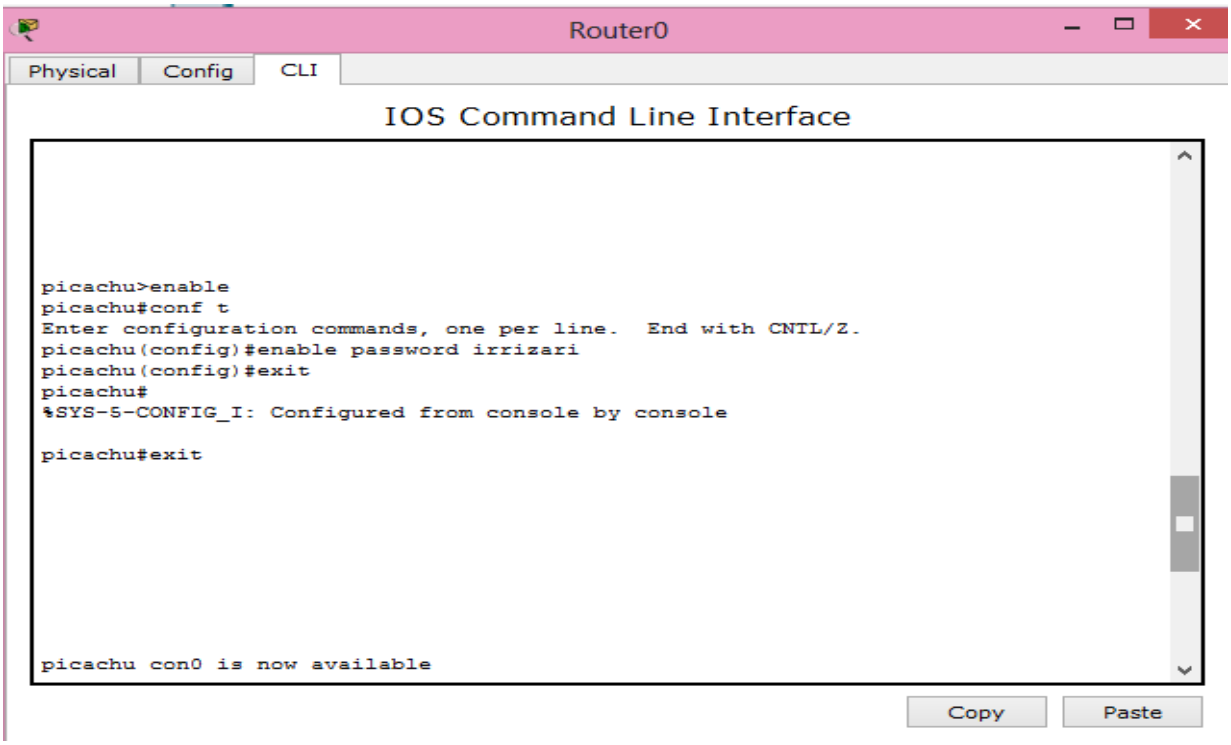
Después de realizar la configuración a las pc´s pasamos a configuración básica de los routers.

ROUTER1

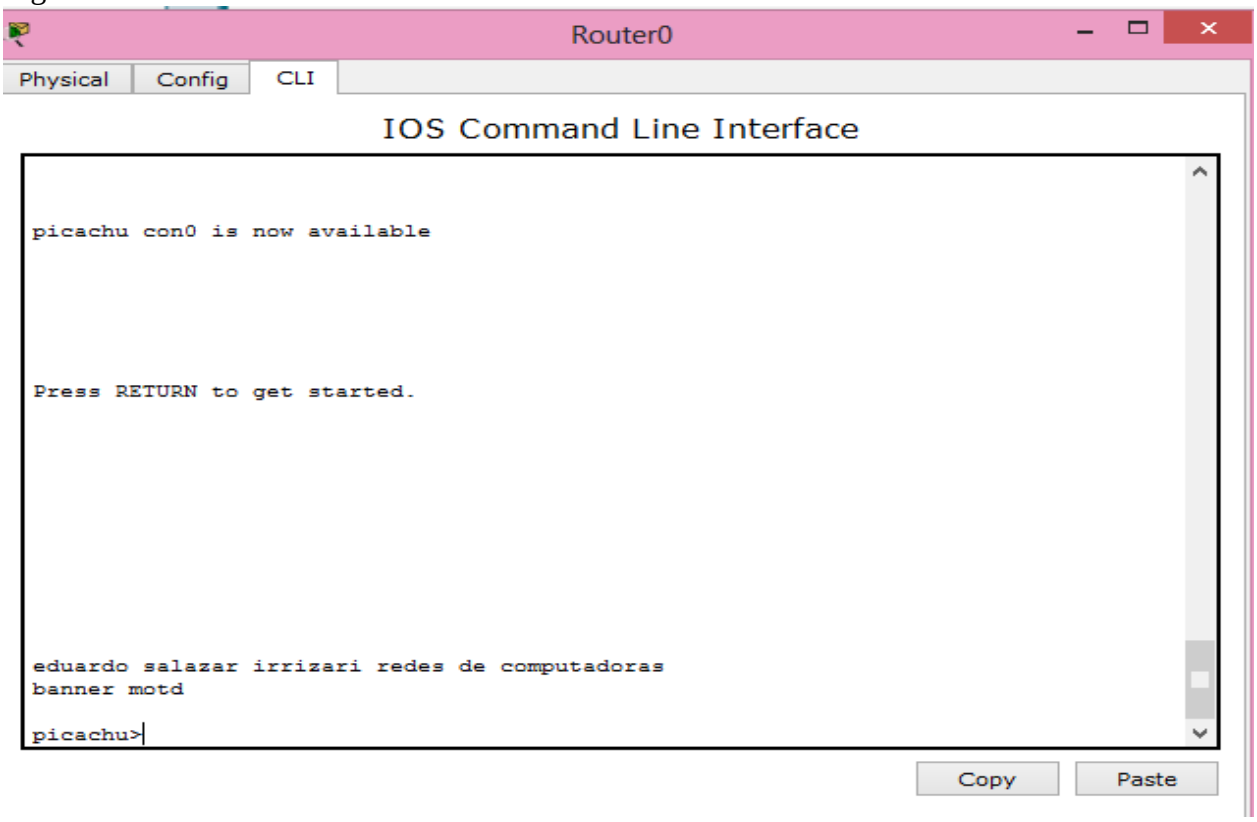
Cambiar nombre.



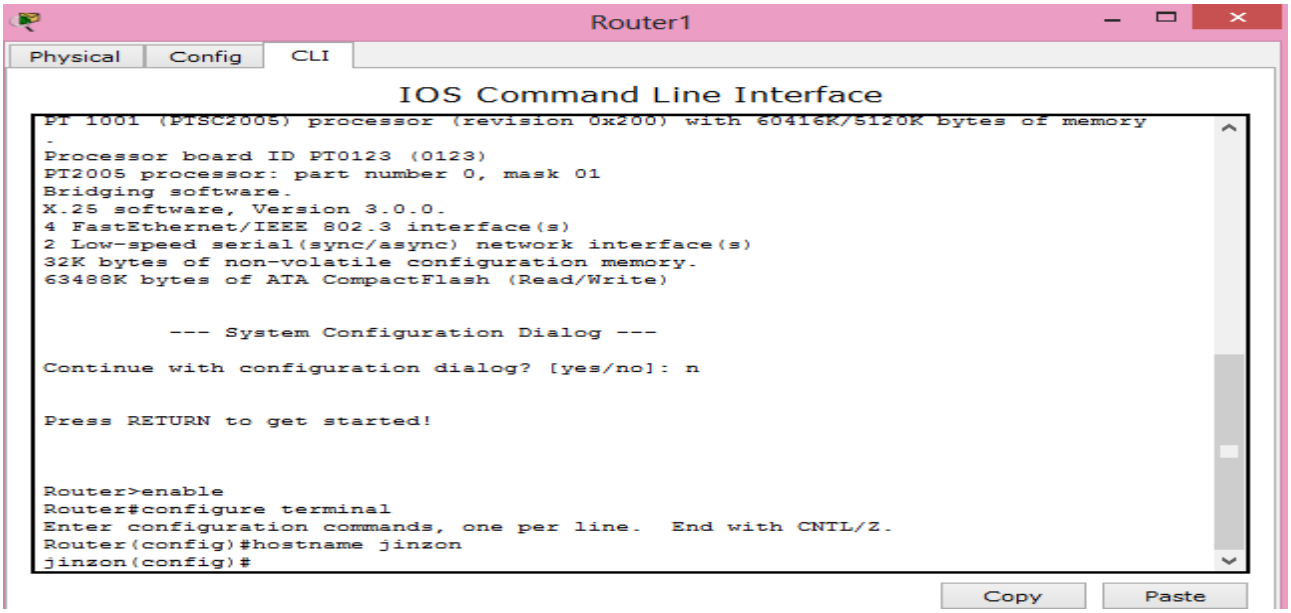
Cambiar contraseña.



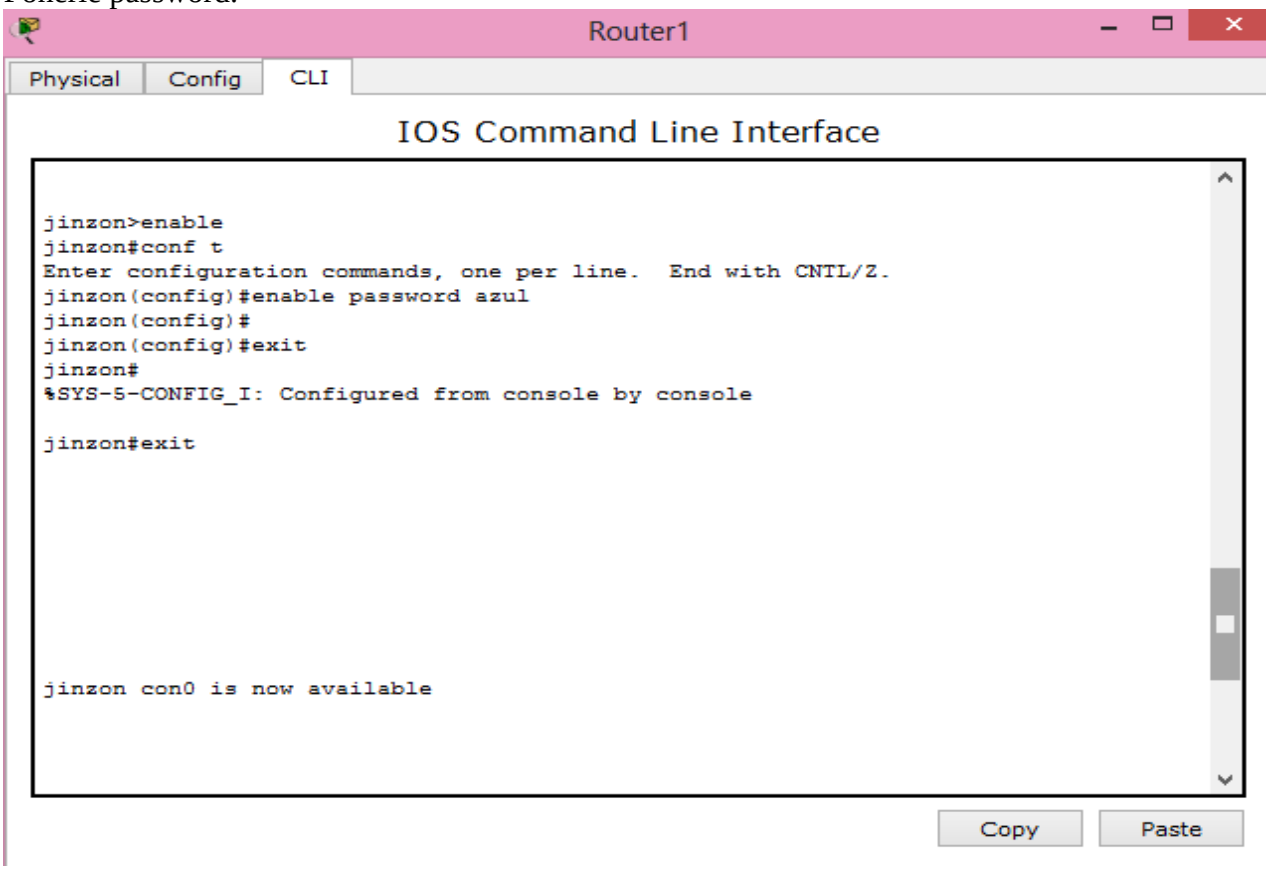
Ingresarle el banner.



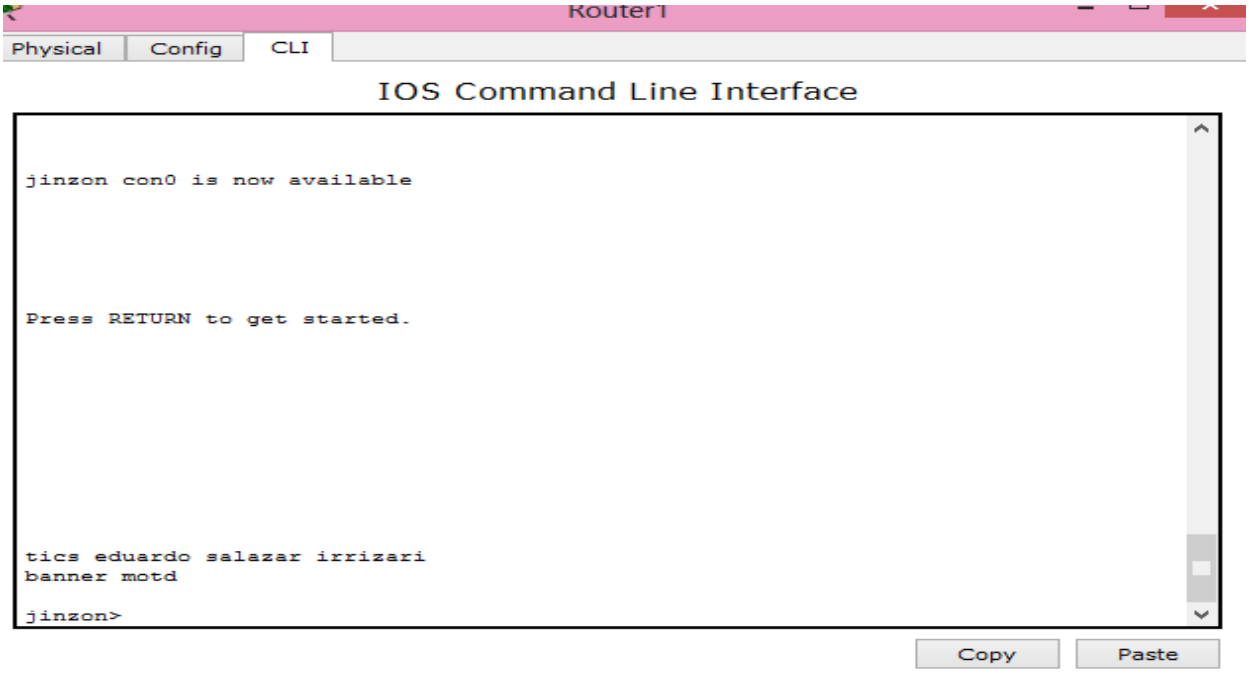
ROUTER 2.
Cambiarle el nombre.



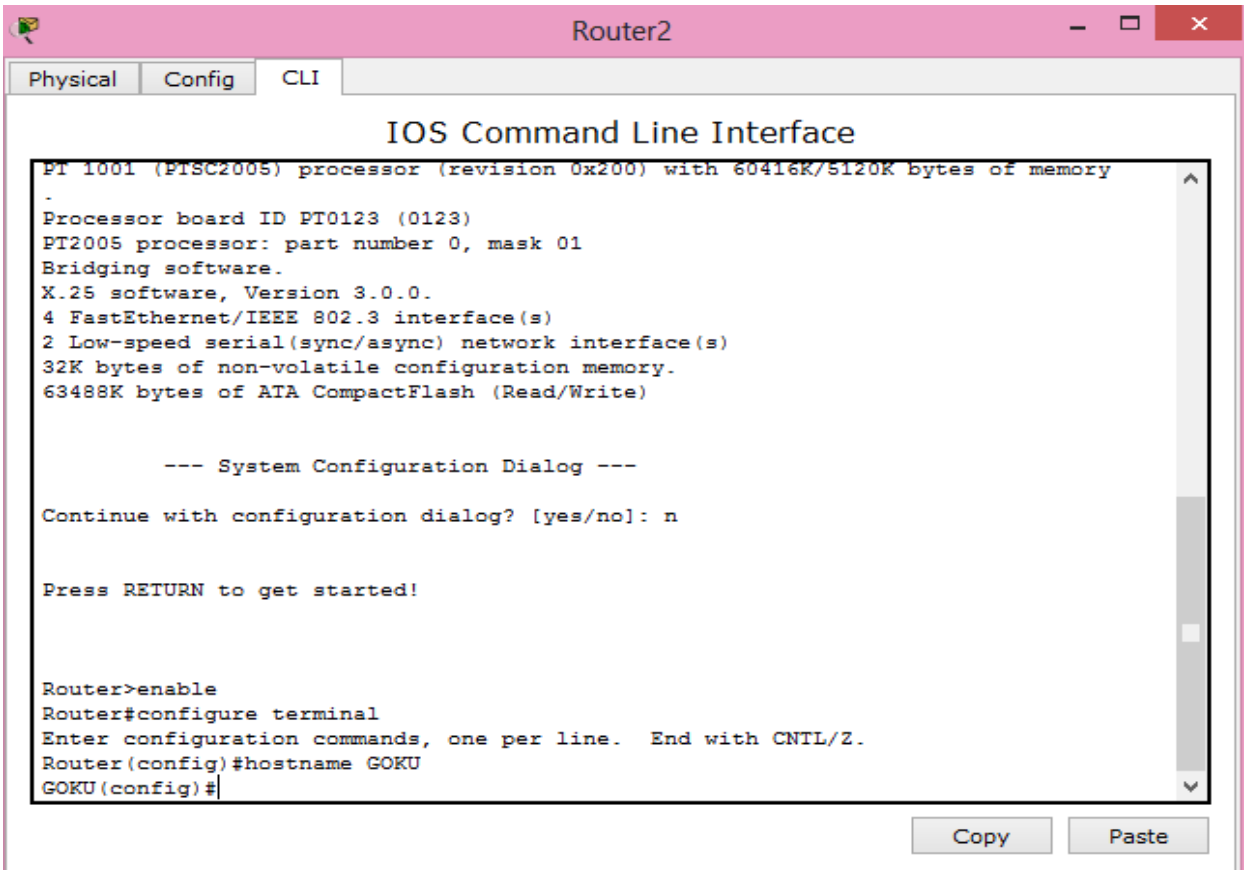
Ponerle password.



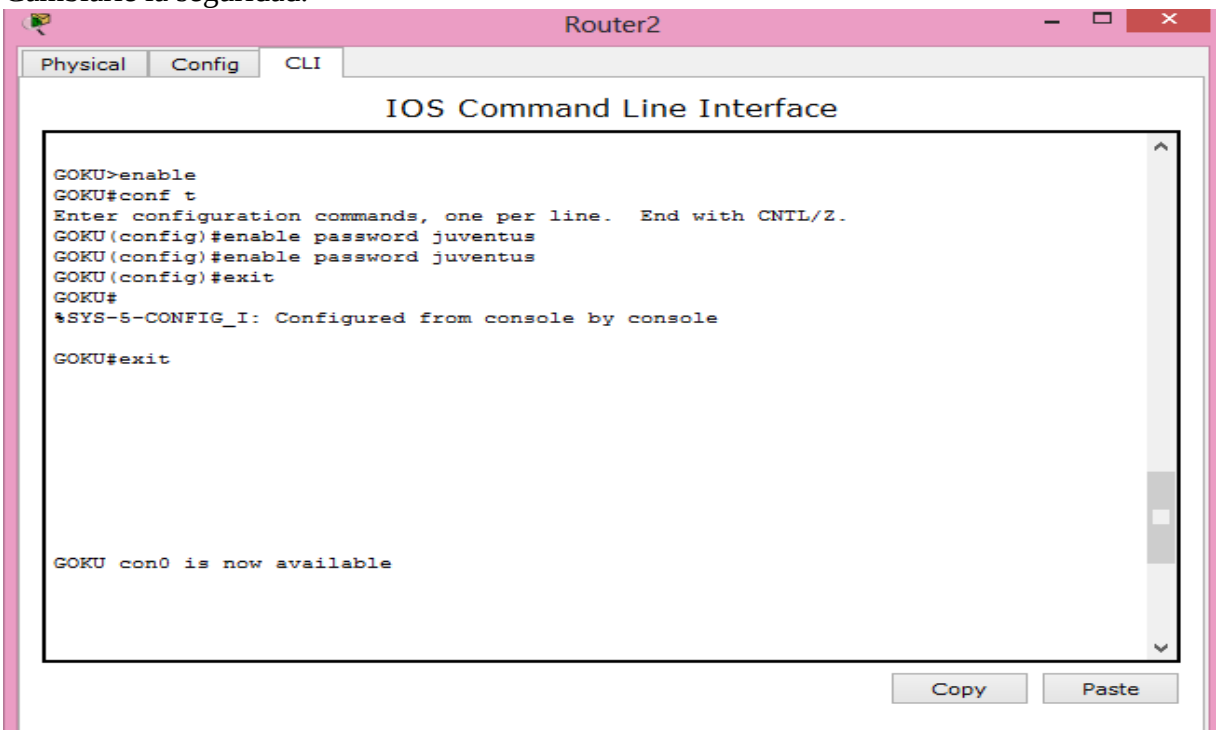
Anexarle el banner.



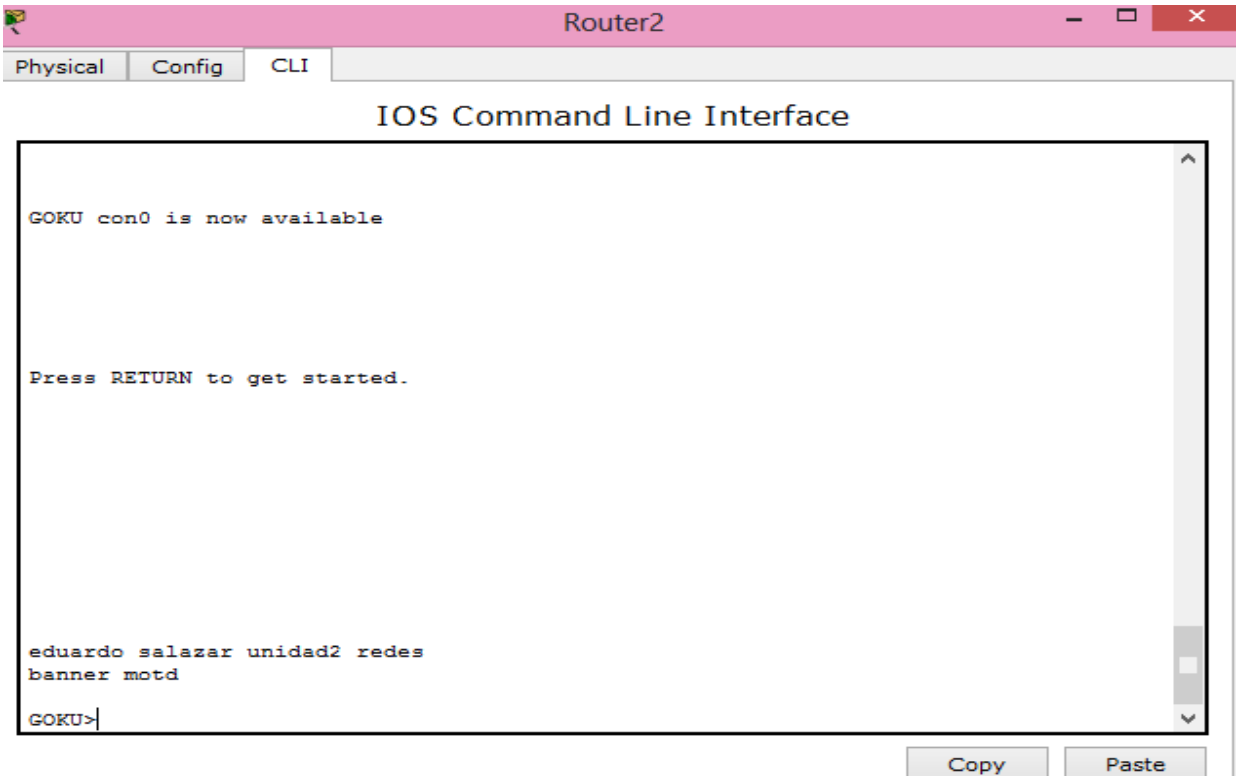
ROUTER3.



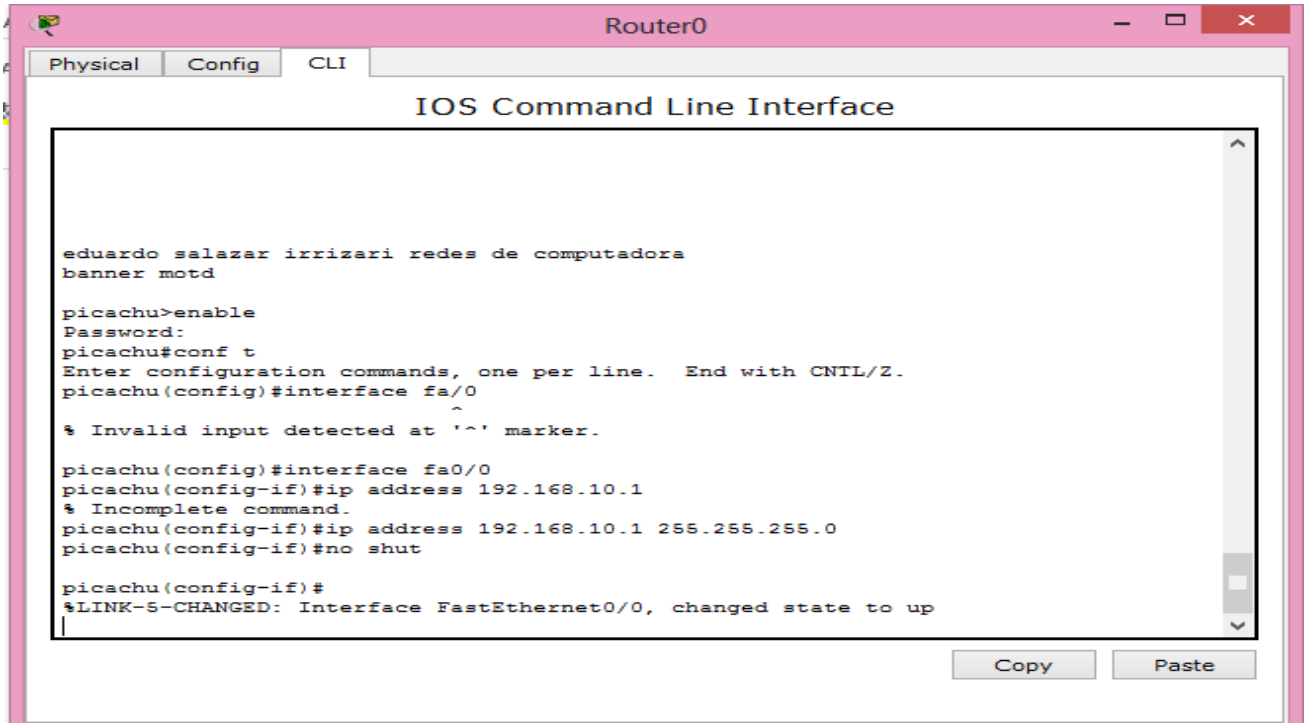
Cambiarle la seguridad.



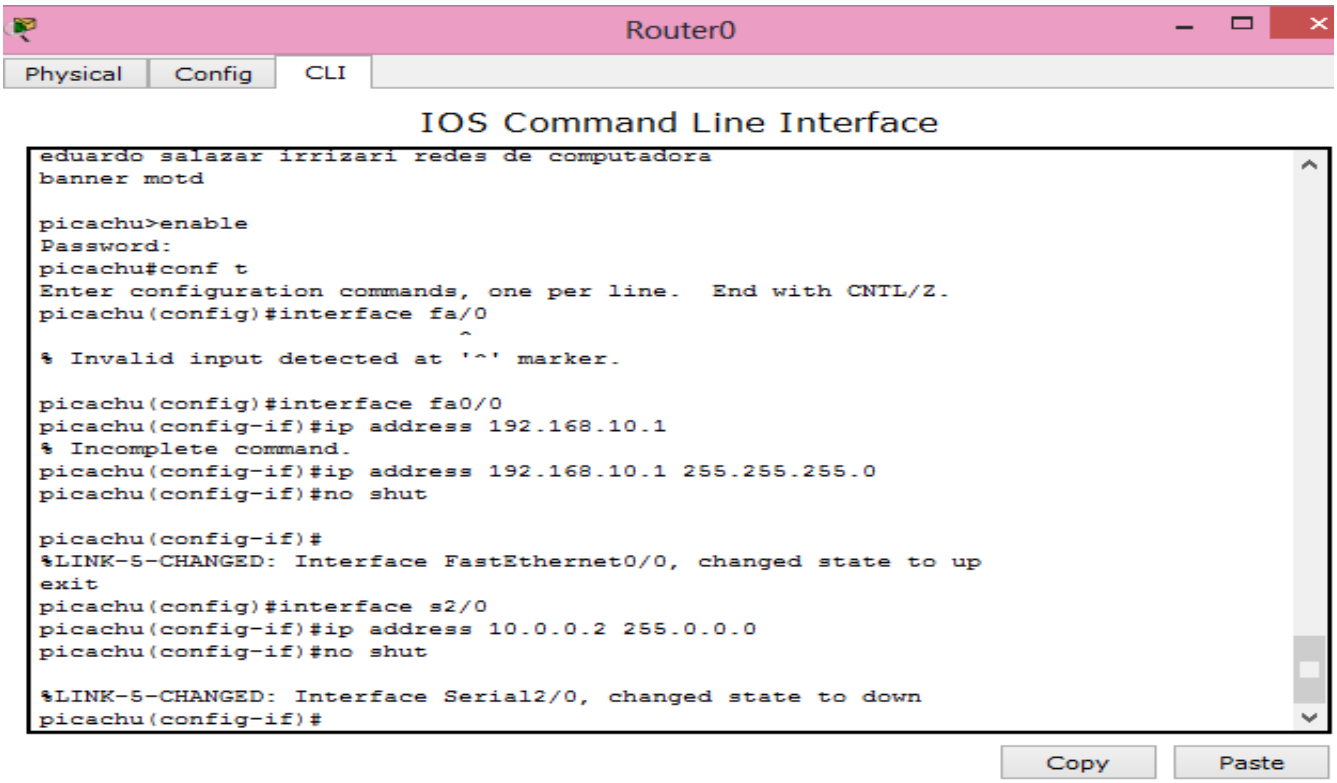
Mandarle el banner.



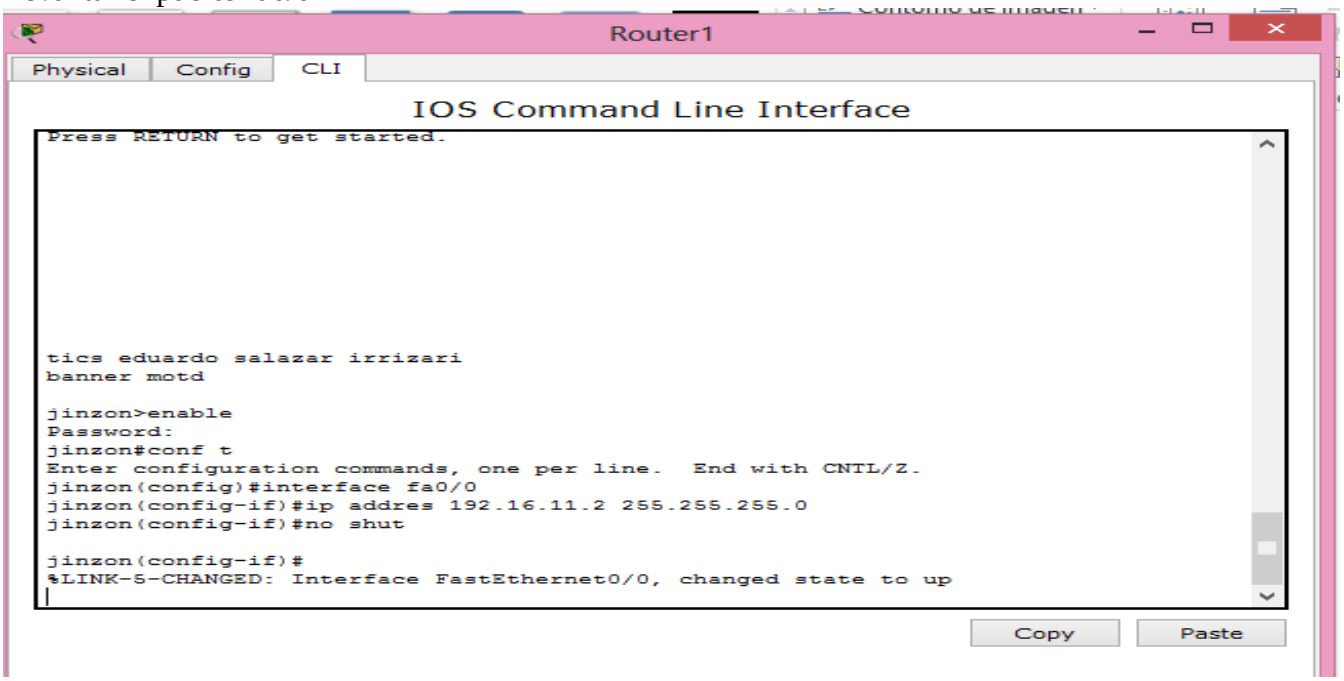
PASO3.
Levantar los puertos fa y los seriales.
ROUTER1.



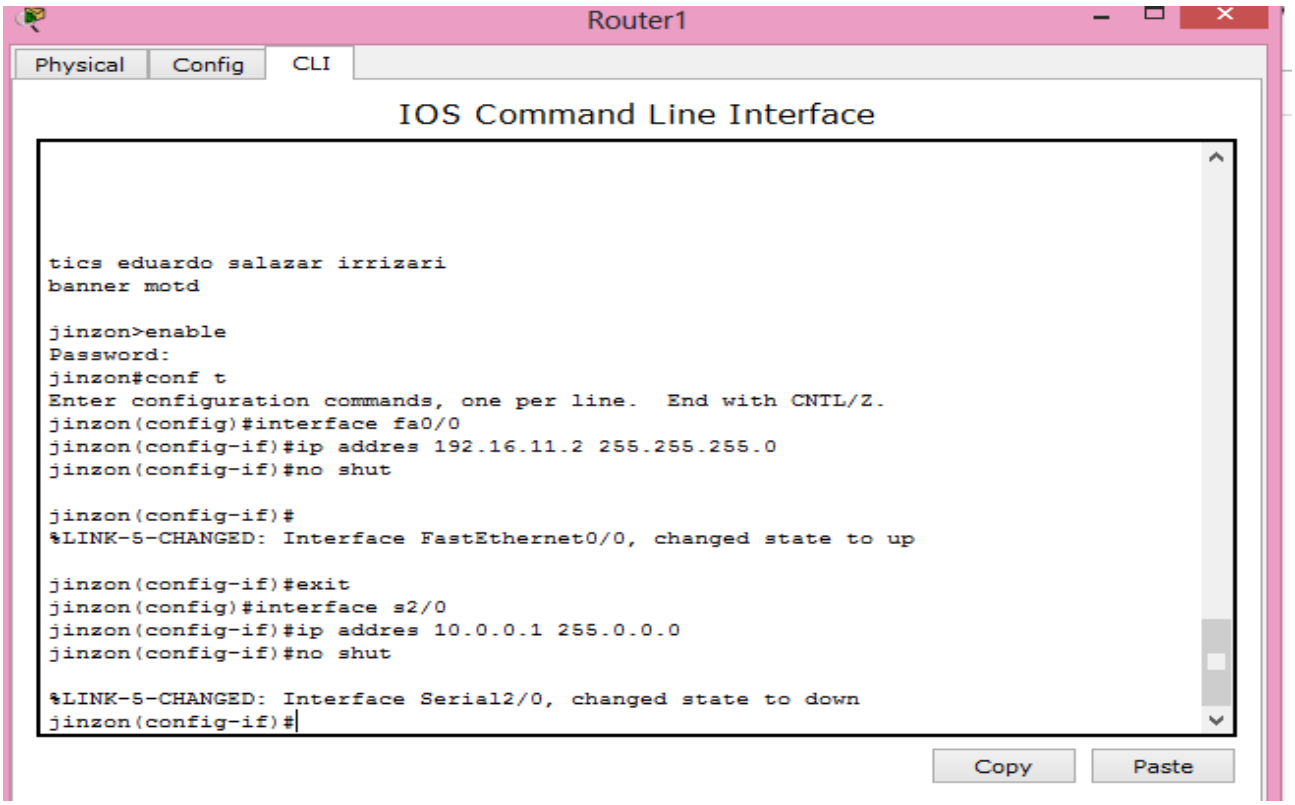
Serial2/0.



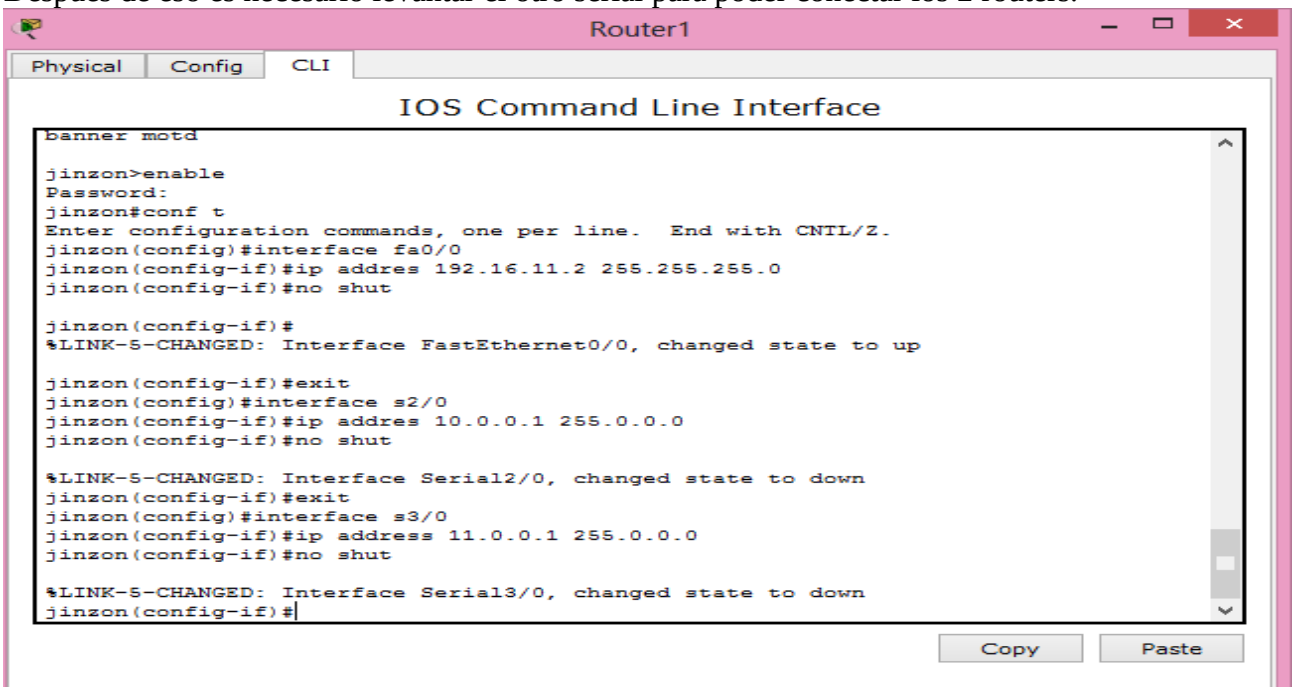
ROUTER2.
Levantar el puerto fa0/0



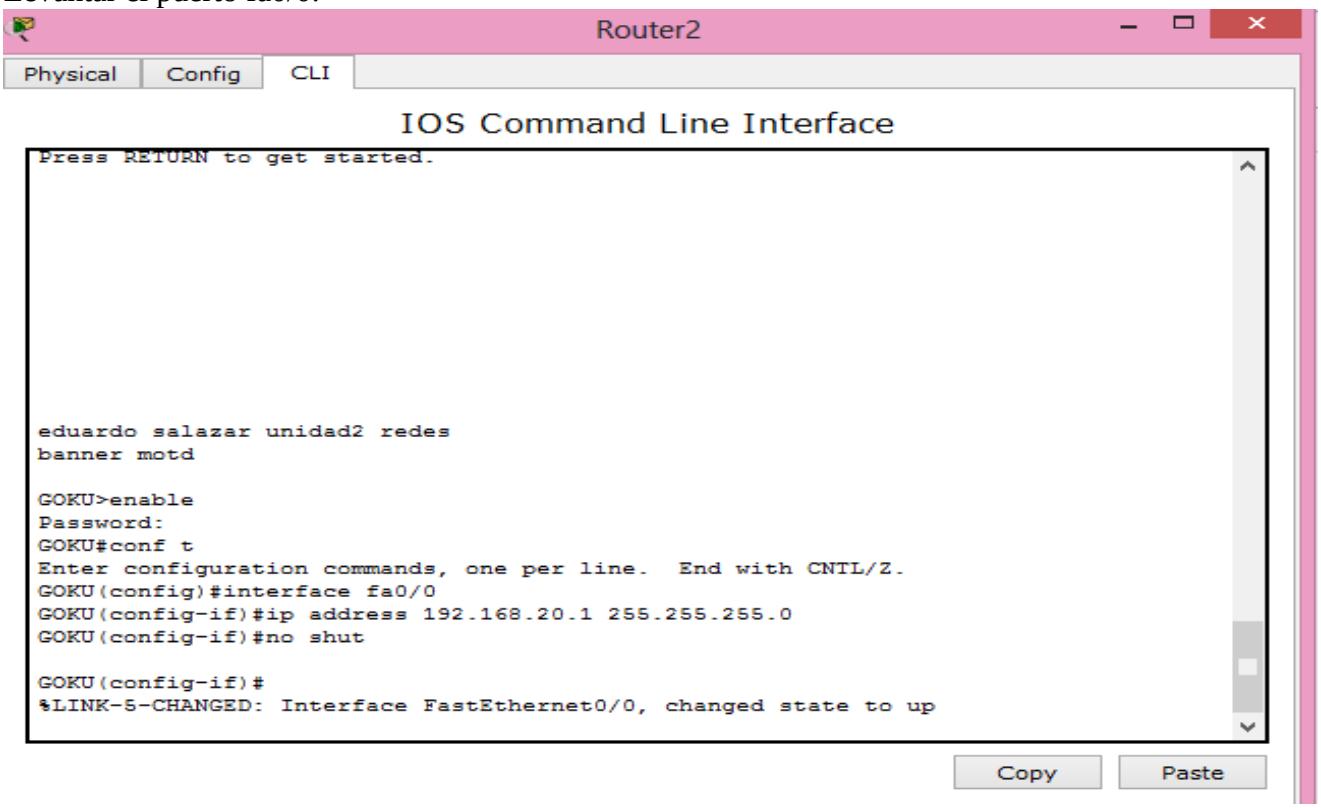
Posteriormente levantar el serial2/0.



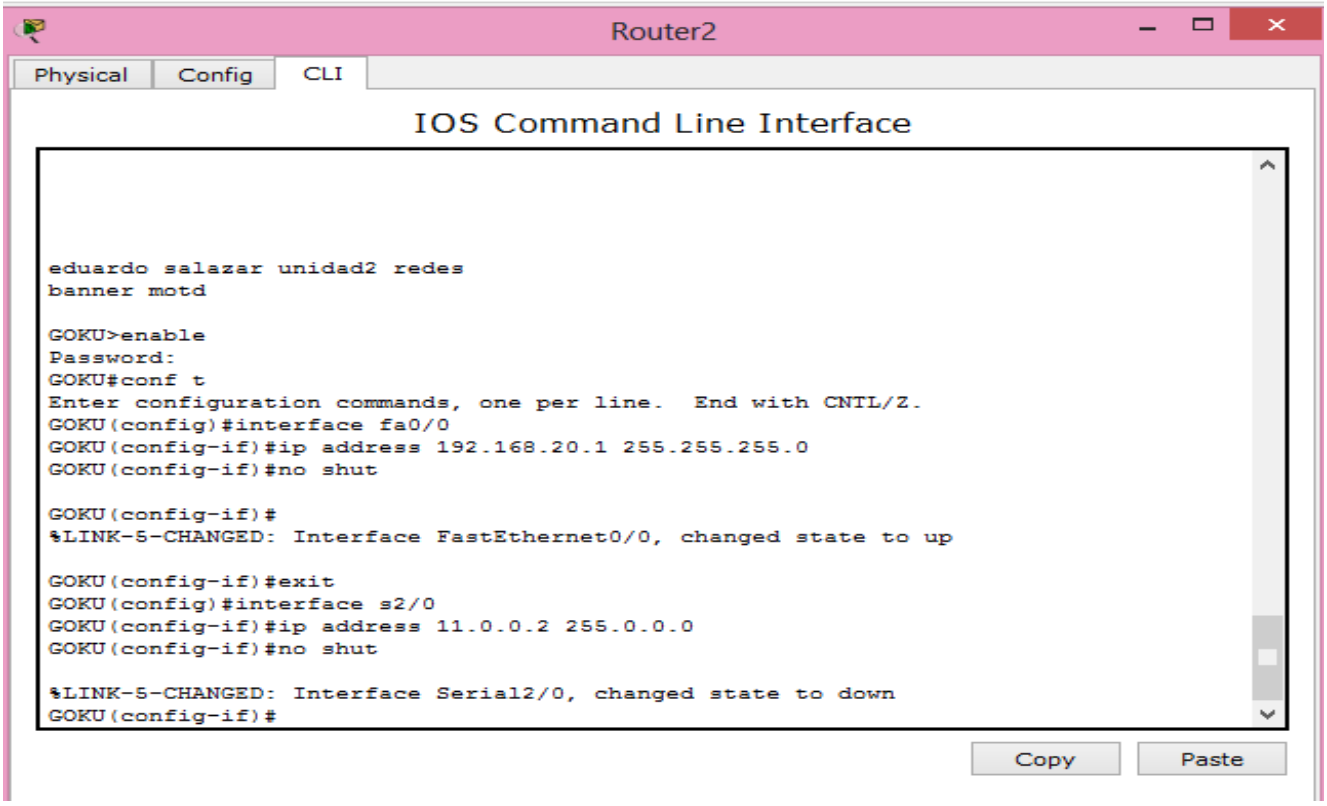
Después de eso es necesario levantar el otro serial para poder conectar los 2 routers.



ROUTER3.
Levantar el puerto fa0/0.



Posteriormente levantar el serial2/0.



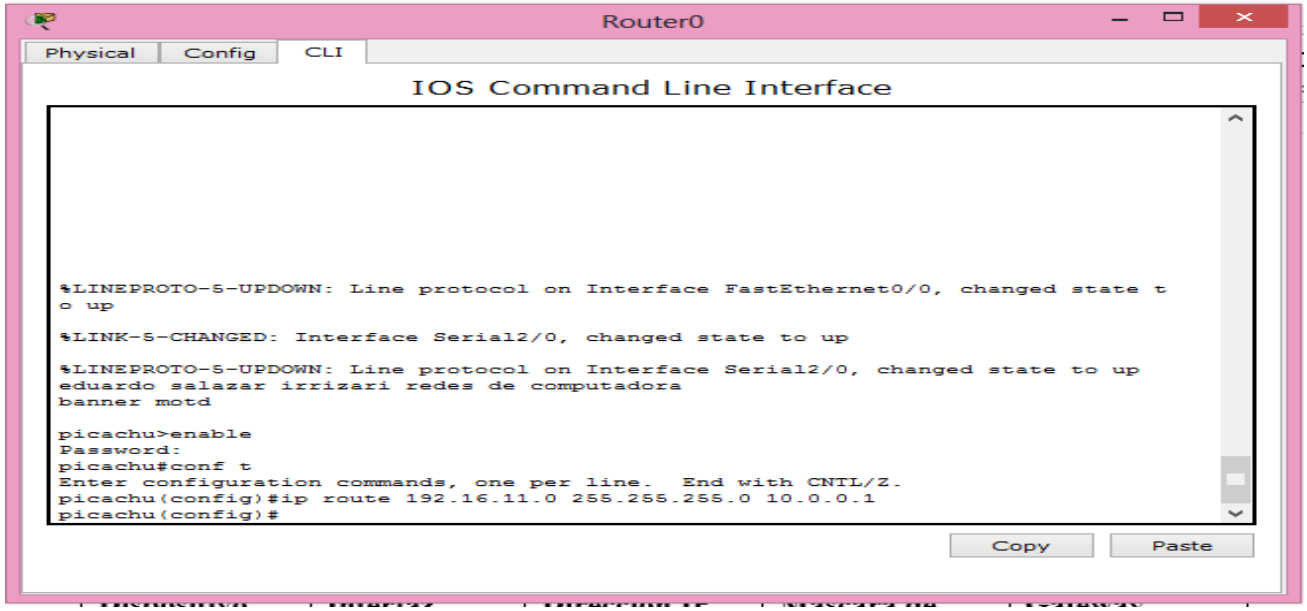
PASO 3

Configurar Rutas Estáticas

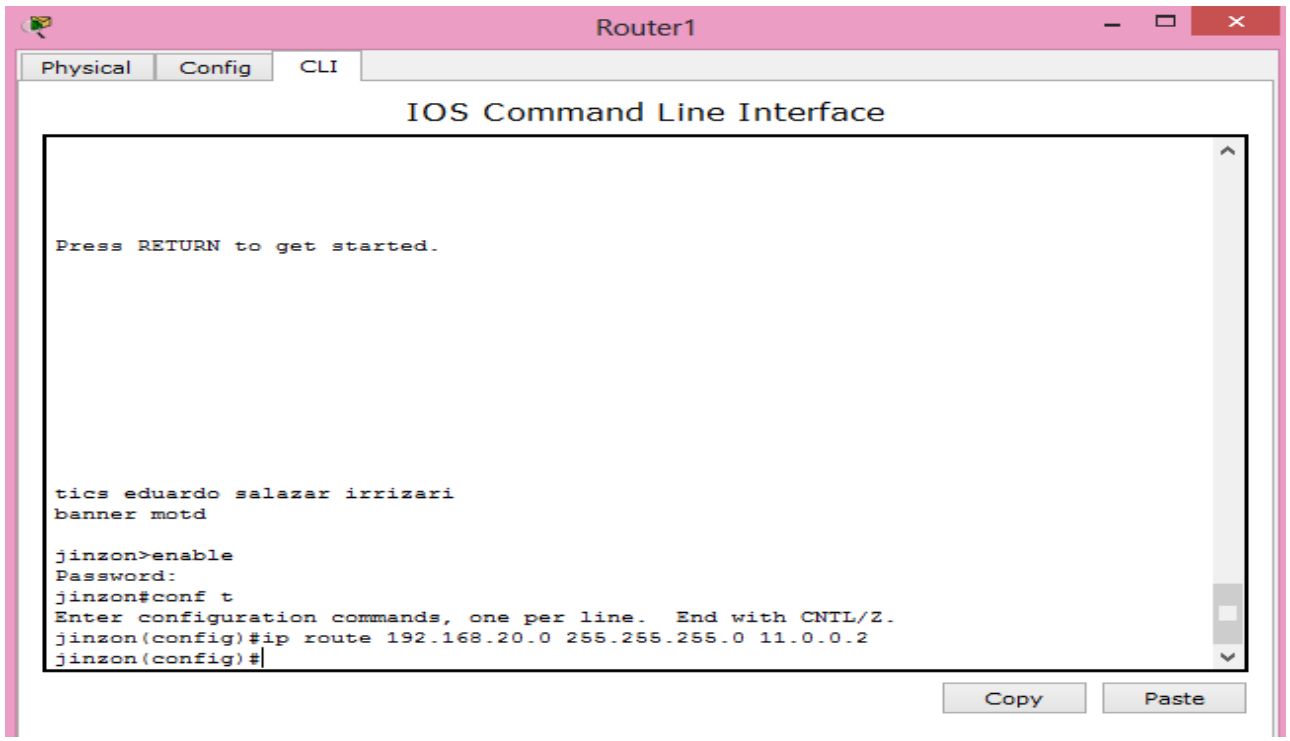
a) IP del siguiente salto
b) Interfaz desalida

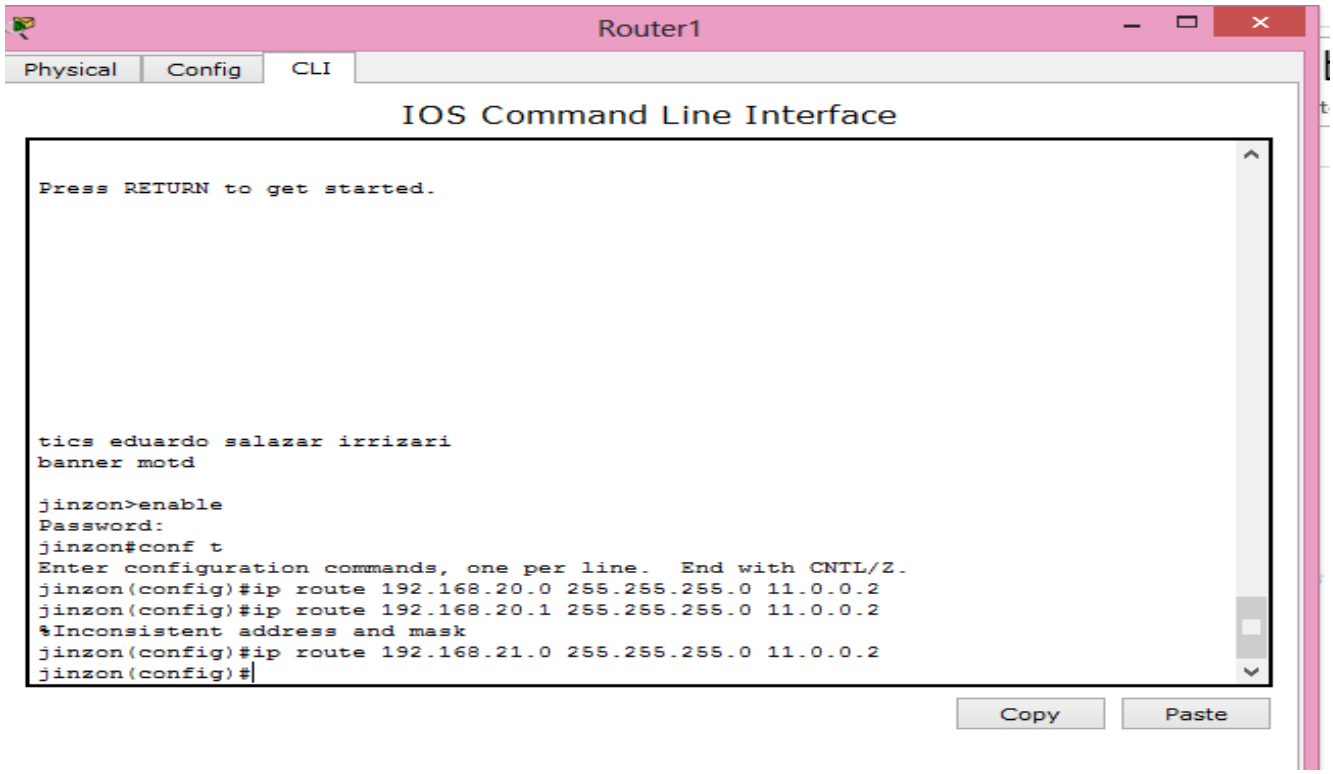
NOTA: Normalmente se usa la "IP del siguiente salto" que es la IP de la interfaz del router directamente conectado, pero si entre los datos no se tiene, se puede usar la "interfaz de salida" que es la interfaz del router local. No hay forma de hacer rutas estáticas sin conocer la dirección de red destino, para ese caso se usan "rutas por defecto" o un "default gateway" en el router.

A) Configurar Rutas Estáticas Utilizando la "IP del Siguiente Salto"
Router A

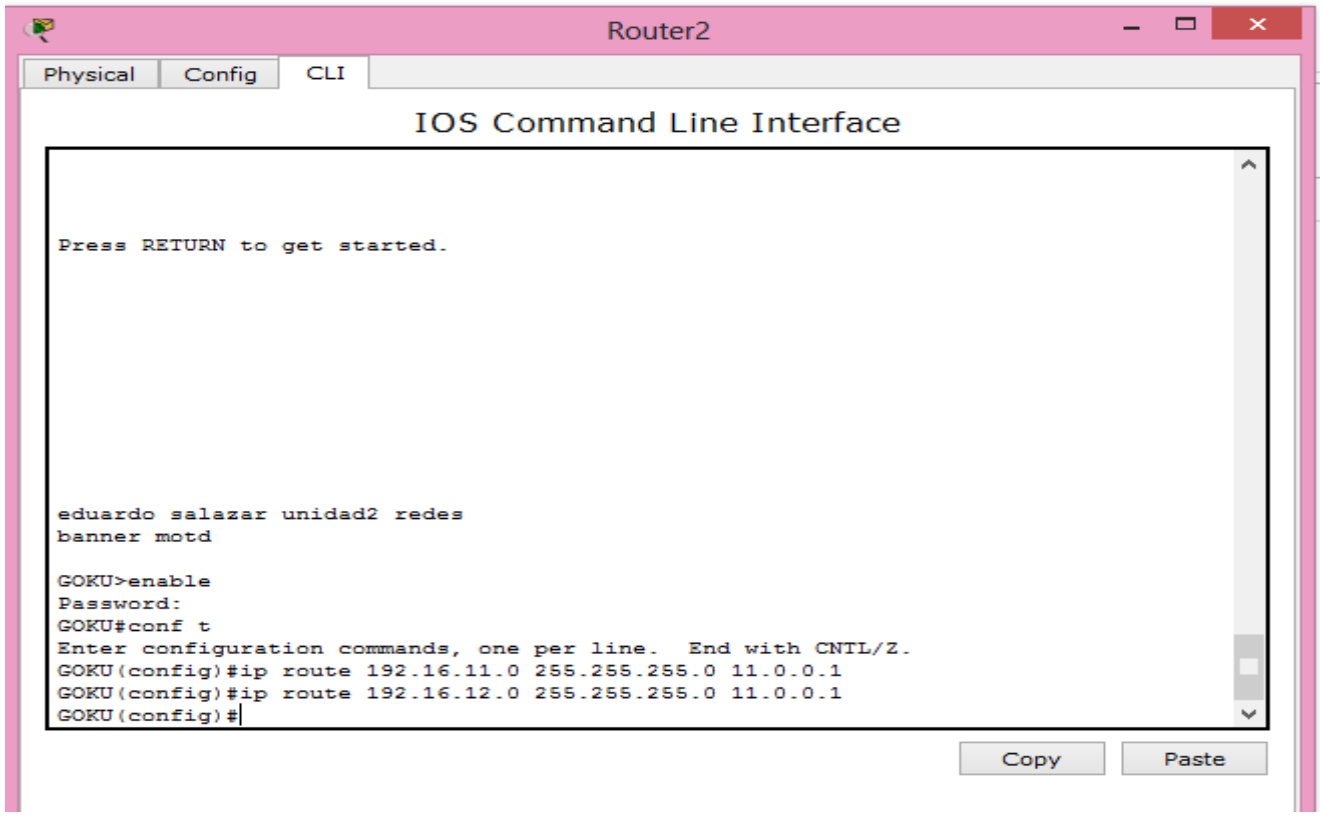

Router0
Physical
Config
CLI
IOS Command Line Interface
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state t
o up
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
eduardo salazar irrizari redes de computadora
banner motd
picachu>enable
Password:
picachu#conf t
Enter configuration commands, one per line. End with CNTL/Z.
picachu(config)#ip route 192.16.11.0 255.255.255.0 10.0.0.1
picachu(config)#
Copy
Paste

RouterB

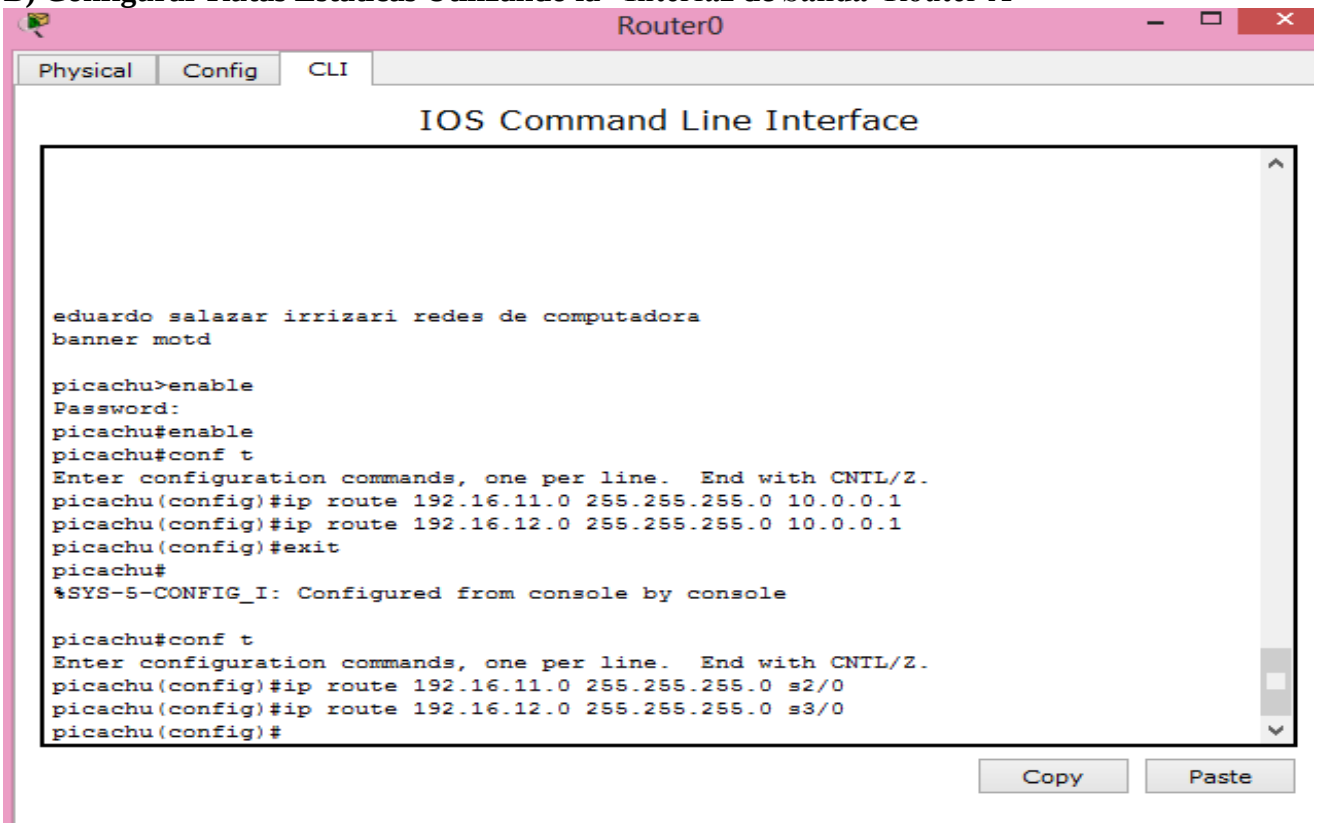

Router1
Physical
Config
CLI
IOS Command Line Interface
Press RETURN to get started.
tics eduardo salazar irrizari
banner motd
jinzon>enable
Password:
jinzon#conf t
Enter configuration commands, one per line. End with CNTL/Z.
jinzon(config)#ip route 192.168.20.0 255.255.255.0 11.0.0.2
jinzon(config)#
Copy
Paste


Router1
Physical
Config
CLI
IOS Command Line Interface
Press RETURN to get started.
tics eduardo salazar irrizari
banner motd
jinzon>enable
Password:
jinzon#conf t
Enter configuration commands, one per line. End with CNTL/Z.
jinzon(config)#ip route 192.168.20.0 255.255.255.0 11.0.0.2
jinzon(config)#ip route 192.168.20.1 255.255.255.0 11.0.0.2
%Inconsistent address and mask
jinzon(config)#ip route 192.168.21.0 255.255.255.0 11.0.0.2
jinzon(config)#
Copy
Paste

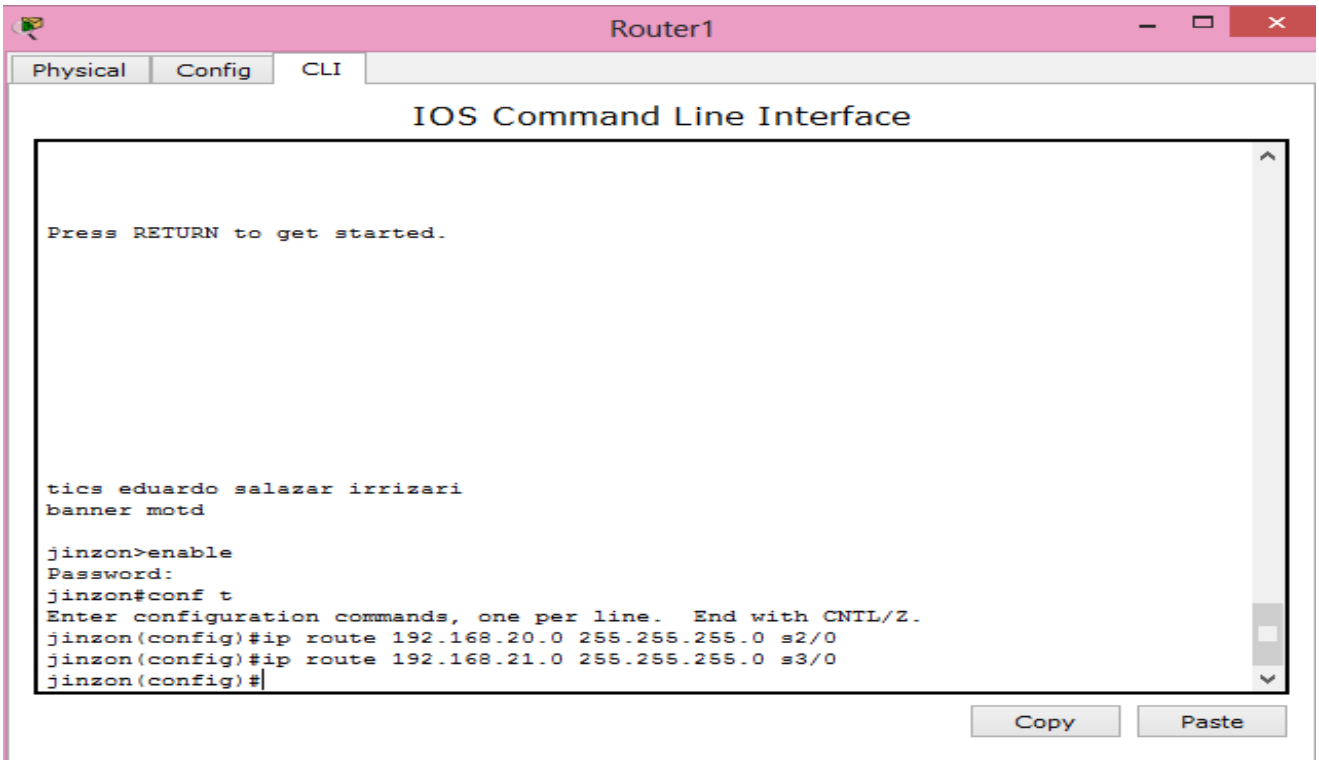
RouterC


Router2
Physical
Config
CLI
IOS Command Line Interface
Press RETURN to get started.
eduardo salazar unidad2 redes
banner motd
GOKU>enable
Password:
GOKU#conf t
Enter configuration commands, one per line. End with CNTL/Z.
GOKU(config)#ip route 192.16.11.0 255.255.255.0 11.0.0.1
GOKU(config)#ip route 192.16.12.0 255.255.255.0 11.0.0.1
GOKU(config)#
Copy
Paste

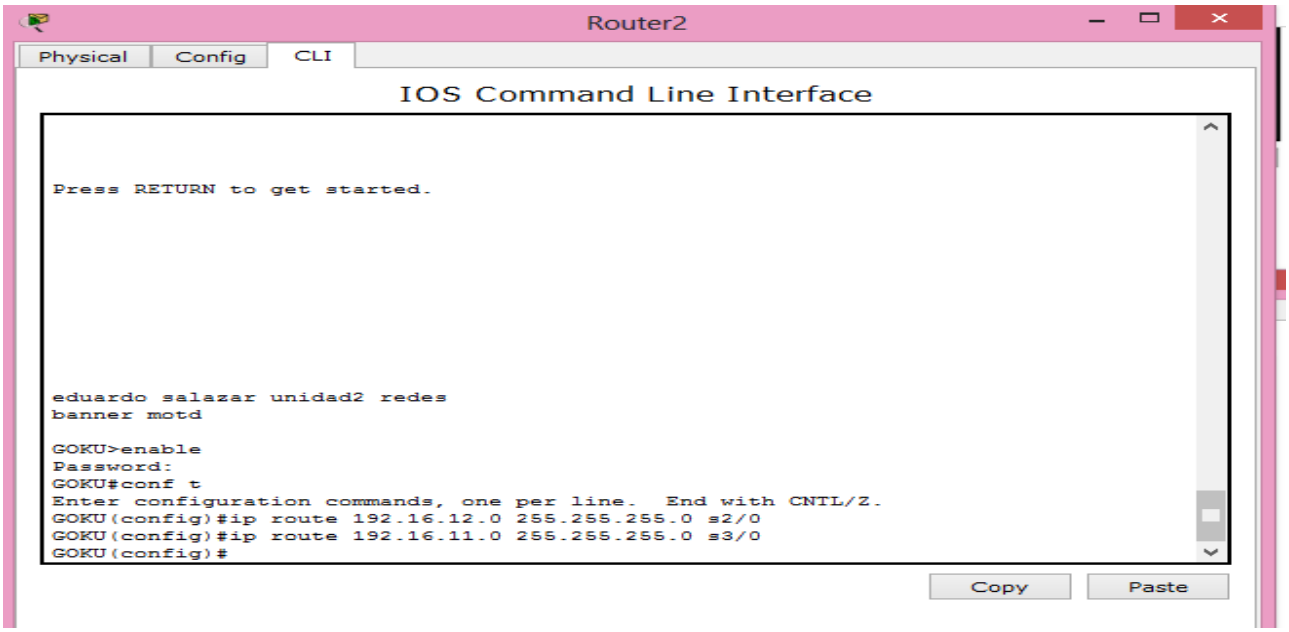
B) Configurar Rutas Estáticas Utilizando la “Interfaz de Salida”Router A



RouterB



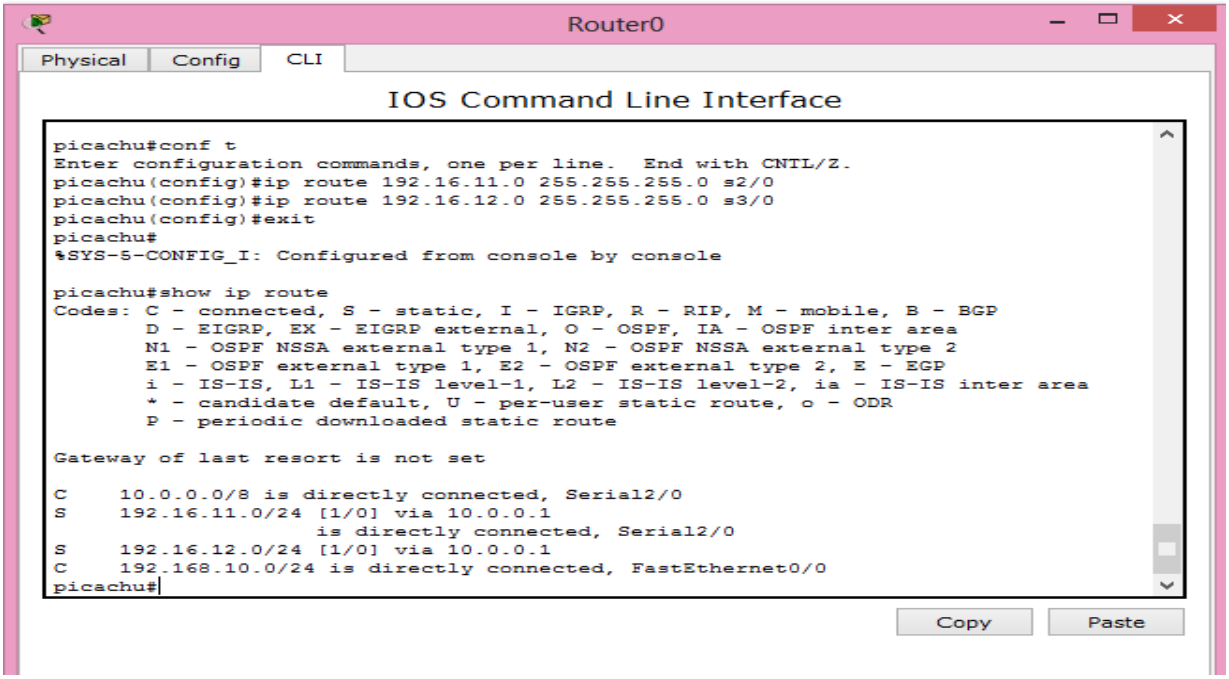
RouterC



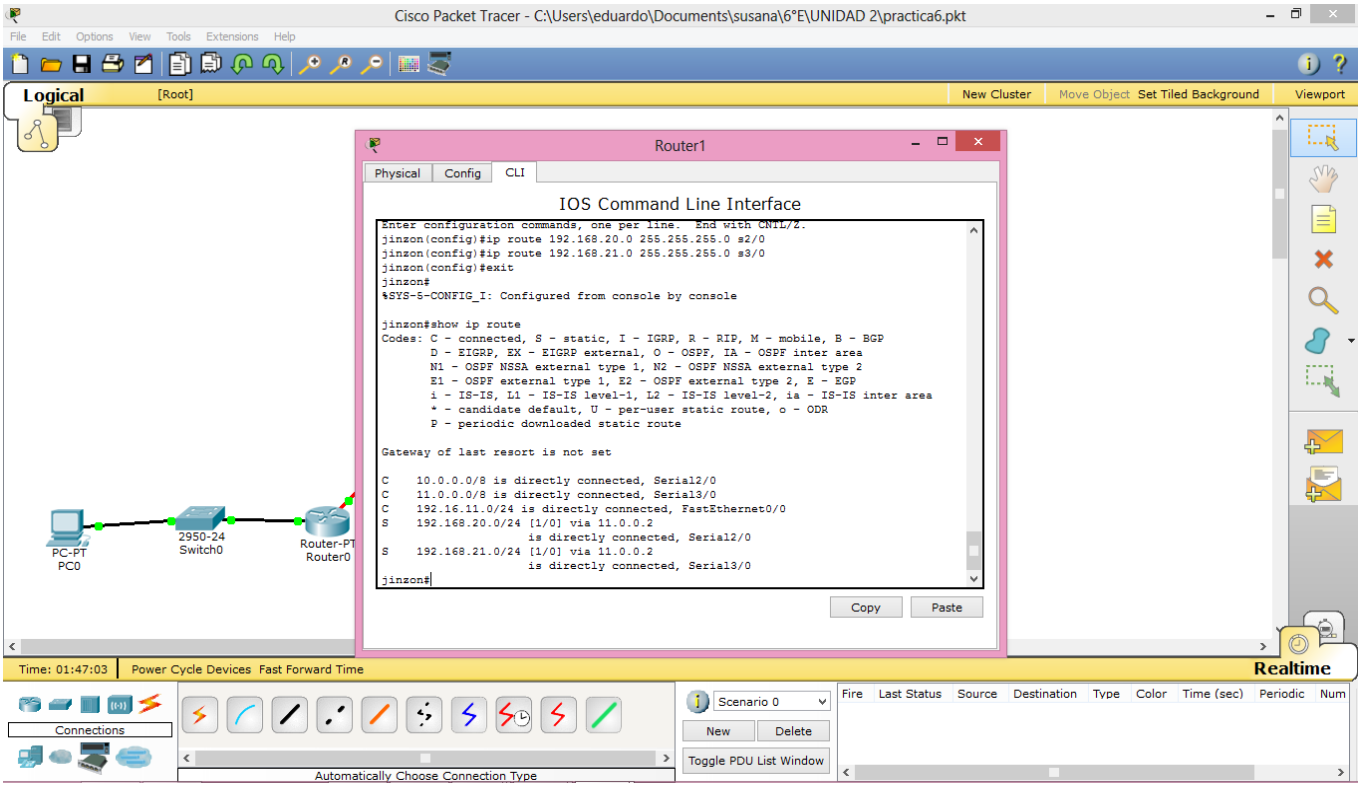
PASO 5

Comprobación de Rutas Estáticas usando la IP del Siguiente Salto
El comando “show ip route” muestra la tabla de enrutamiento del dispositivo.

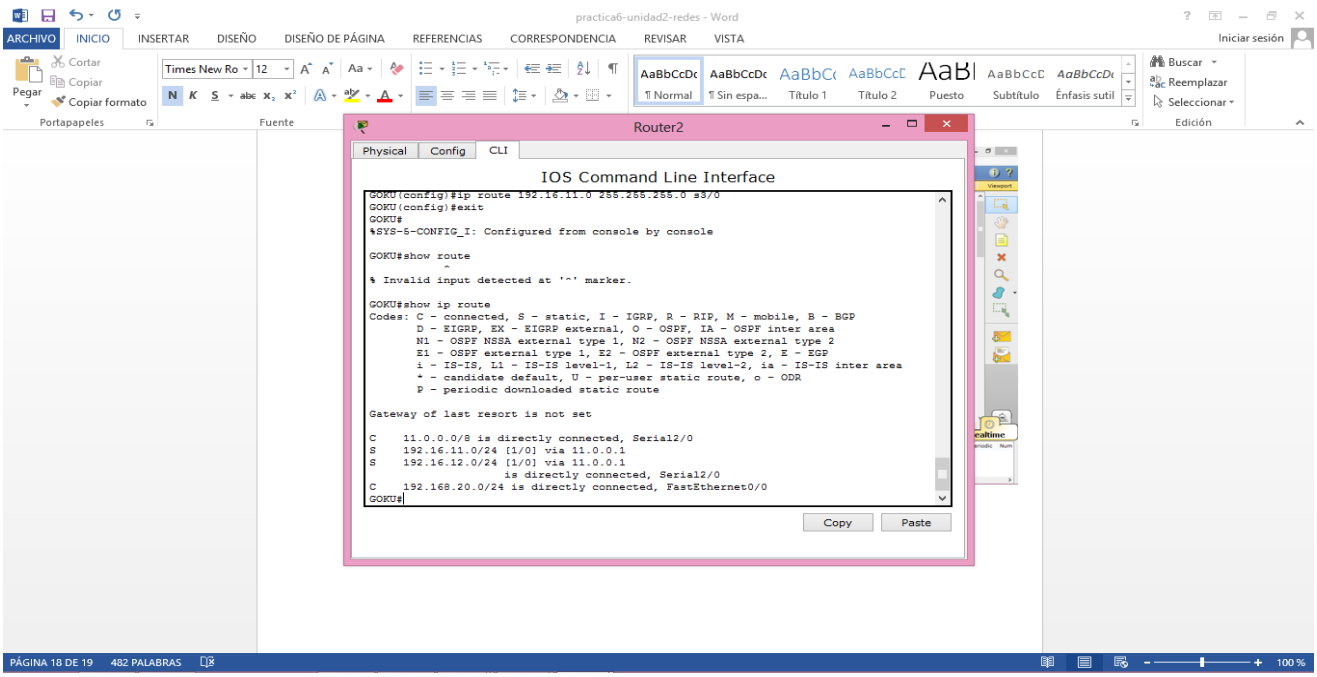
Las rutas marcadascon “c” pertenecen a las redes directamente conectadas y las marcadas con “s” son las rutas estáticas configuradas.
Picachu



Jinzon.


Cisco Packet Tracer - C:\Users\eduardo\Documents\susana\6°E\UNIDAD 2\practica6.pkt
Logical
[Root]
New Cluster
Move Object
Set Tiled Background
Viewport
Router1
Physical
Config
CLI
IOS Command Line Interface
Enter configuration commands, one per line. End with CNTL/Z.
jinzon(config)#ip route 192.168.20.0 255.255.255.0 s2/0
jinzon(config)#ip route 192.168.21.0 255.255.255.0 s3/0
jinzon(config)#exit
jinzon#
%SYS-5-CONFIG_I: Configured from console by console
jinzon#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, Serial2/0
C 11.0.0.0/8 is directly connected, Serial3/0
C 192.16.11.0/24 is directly connected, FastEthernet0/0
S 192.168.20.0/24 [1/0] via 11.0.0.2
is directly connected, Serial2/0
S 192.168.21.0/24 [1/0] via 11.0.0.2
is directly connected, Serial3/0
jinzon#
Copy
Paste
PC-PT
PC0
2950-24
Switch0
Router-PT
Router0
Time: 01:47:03
Power Cycle Devices
Fast Forward Time
Realtime
Connections
Automatically Choose Connection Type
Scenario 0
New
Delete
Toggle PDU List Window
Fire
Last Status
Source
Destination
Type
Color
Time (sec)
Periodic
Num

GOKU


practica6-unidad2-redes - Word
ARCHIVO
INICIO
INSERTAR
DISEÑO
DISEÑO DE PÁGINA
REFERENCIAS
CORRESPONDENCIA
REVISAR
VISTA
Iniciar sesión
Router2
Physical
Config
CLI
IOS Command Line Interface
GOKU(config)#ip route 192.16.11.0 255.255.255.0 s3/0
GOKU(config)#exit
GOKU#
%SYS-5-CONFIG_I: Configured from console by console
GOKU#show route
% Invalid input detected at '^' marker.
GOKU#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 11.0.0.0/8 is directly connected, Serial2/0
S 192.16.11.0/24 [1/0] via 11.0.0.1
S 192.16.12.0/24 [1/0] via 11.0.0.1
is directly connected, Serial2/0
C 192.168.20.0/24 is directly connected, FastEthernet0/0
GOKU#
Copy
Paste
PÁGINA 18 DE 19
482 PALABRAS
100 %

CONCLUSIÓN

Durante esta práctica pude apreciar más acerca de lo que veníamos viendo, ya que es algo consistente, como es el levantamiento de los puertos fa y los seriales para llevar a cabo la conexión de los dispositivos de trabajo, más que nada pude apreciar que los ip route es una forma de establecerle la ruta que debe utilizar. Adeás que es necesario decirle al router por cual ruta debe trasnmitir.