Tecnológico Nacional de México

INSTITUTO TECNOLÓGICO DE SALINA CRUZ

REDES DE COMPUTADORAS

Semestre Enero – Junio 2015

REPORTE DE PRÁCTICA

PRÁCTICA NO: 7

UNIDAD 2:

NOMBRE DEL ALUMNO:

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FECHA: 15/ABRIL/2015

INSTITUTO TECNOLOGICO DE SALINA CRUZ

REDES DE COMPUTADORAS

PRACTICAS 7

INSTRUCCIONES: Realice las rutas estáticas para los siguientes escenarios, construya los cuatro pasos vistos en las practicas anteriores.

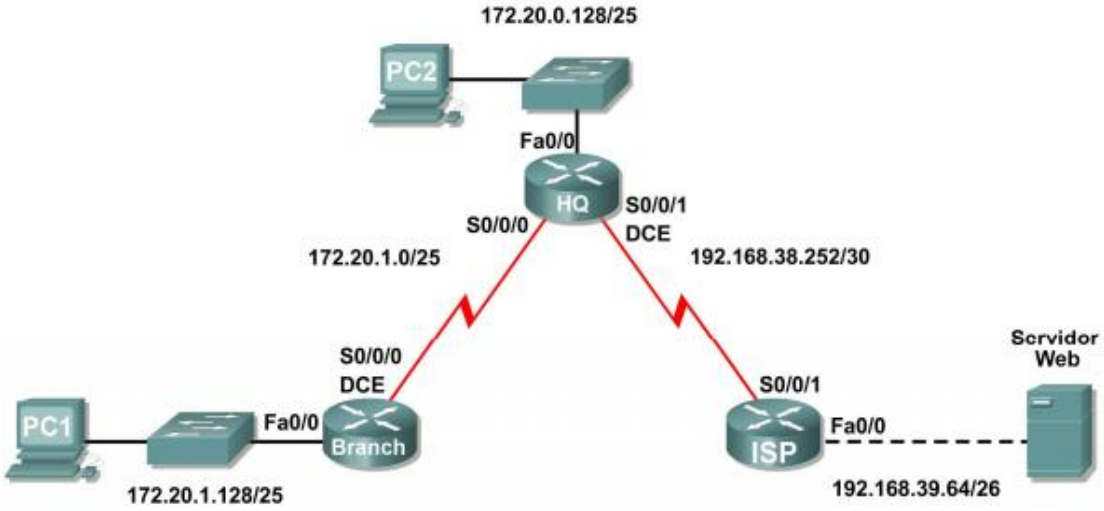


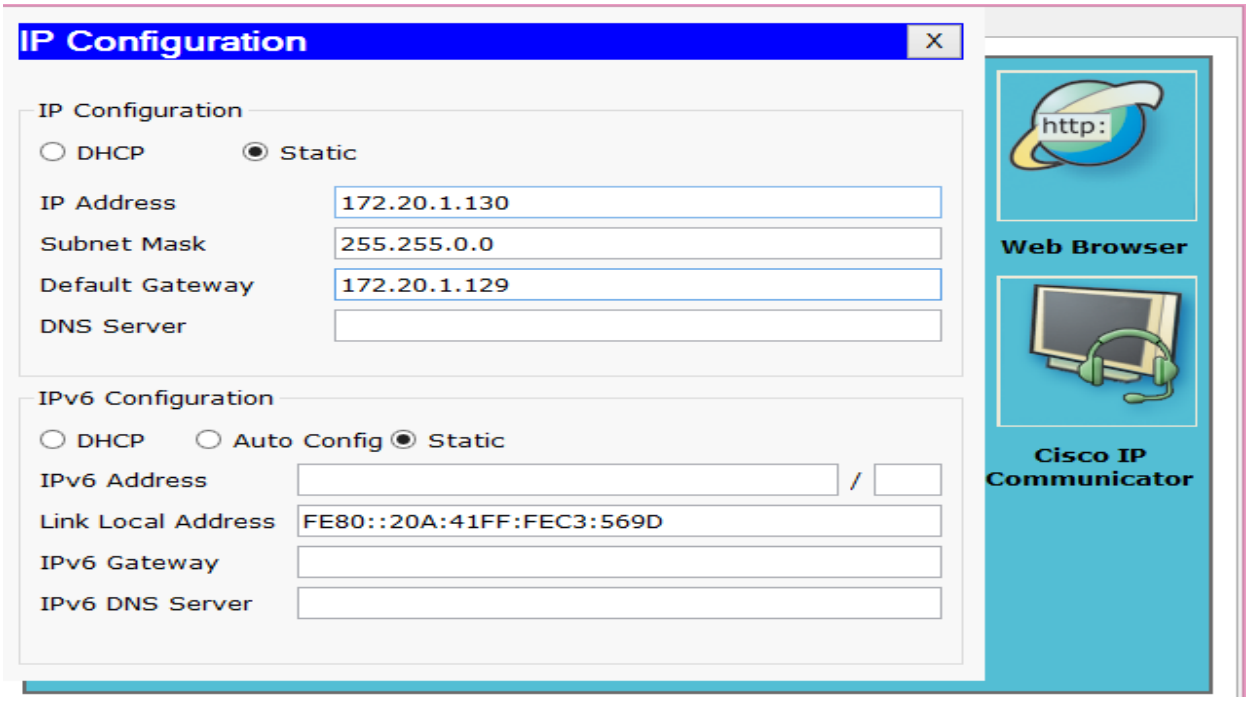
Tabla de ruteo.

Dispositivo	Interfaz	Dirección IP	Mascara de subred.	Gateway
Branch	Fa0/0	172.20.1.129	255.255.0.0	No aplicable
	S2/0	192.20.1.1	255.255.255.0	No aplicable
HQ	Fa0/0	172.20.0.129	255.255.0.0	No aplicable
	S2/0	192.20.1.2	255.255.255.0	No aplicable
	S3/0	192.168.38.253	255.255.255.0	No aplicable
ISP	Fa0/0	192.168.39.65	255.255.255.0	No aplicable
	S2/0	192.168.38.254	255.255.255.0	No aplicable
PC1	No aplicable	172.20.1.130	255.255.0.0	172.20.1.129
PC2	No aplicable	172.20.0.130	255.255.0.0	172.20.0.129
Servidor	No aplicable	192.168.39.70	255.255.255.0	192.168.39.65

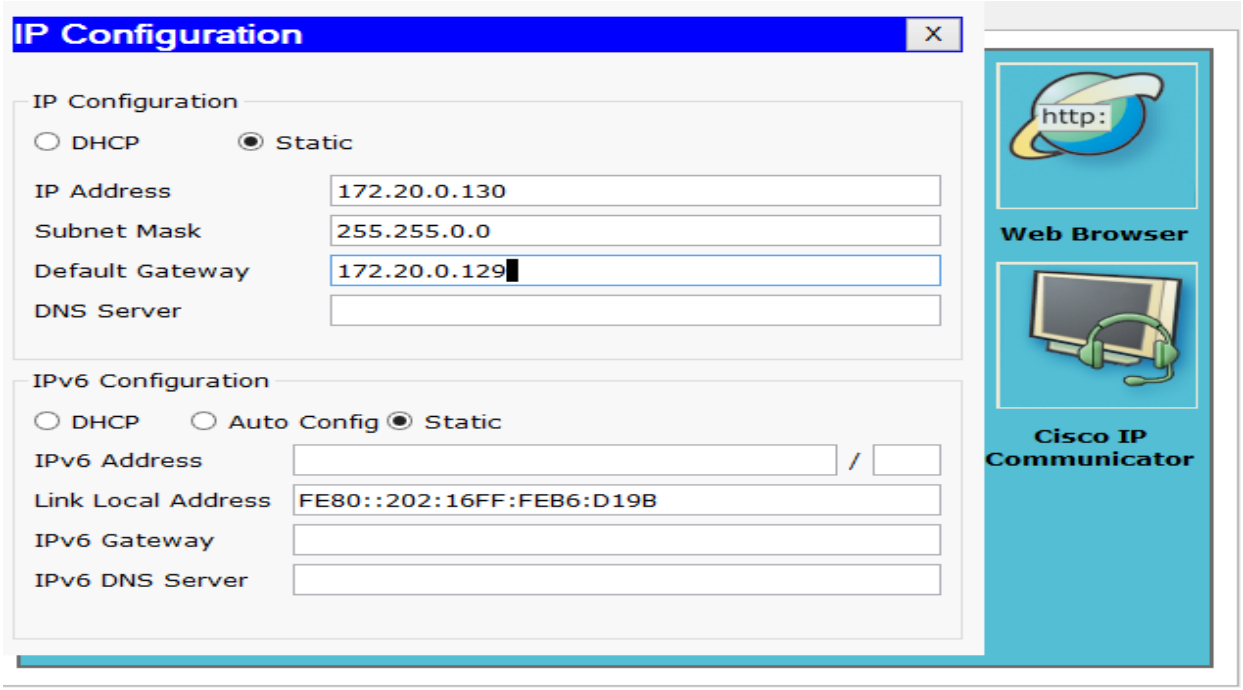
Configuración Inicial.

Cambio de direcciones a las PC´S.

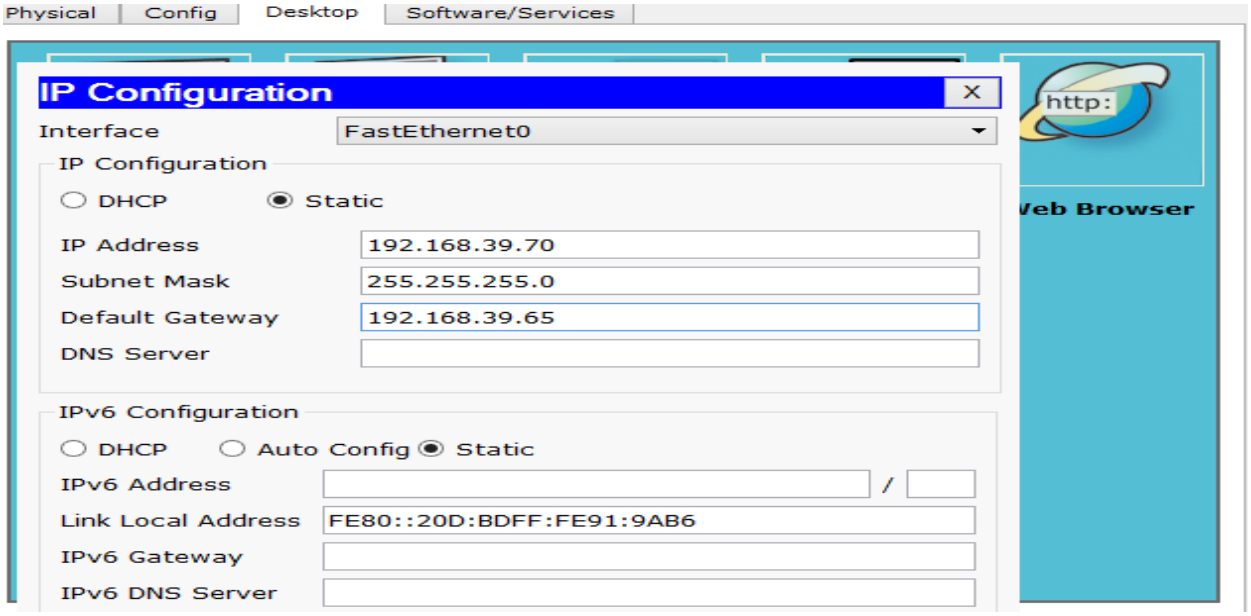
PC1.


IP Configuration
IP Configuration
DHCP
Static
IP Address
172.20.1.130
Subnet Mask
255.255.0.0
Default Gateway
172.20.1.129
DNS Server
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::20A:41FF:FEC3:569D
IPv6 Gateway
IPv6 DNS Server
http:
Web Browser
Cisco IP Communicator

PC2.


IP Configuration
IP Configuration
DHCP
Static
IP Address
172.20.0.130
Subnet Mask
255.255.0.0
Default Gateway
172.20.0.129
DNS Server
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::202:16FF:FEB6:D19B
IPv6 Gateway
IPv6 DNS Server
http:
Web Browser
Cisco IP Communicator

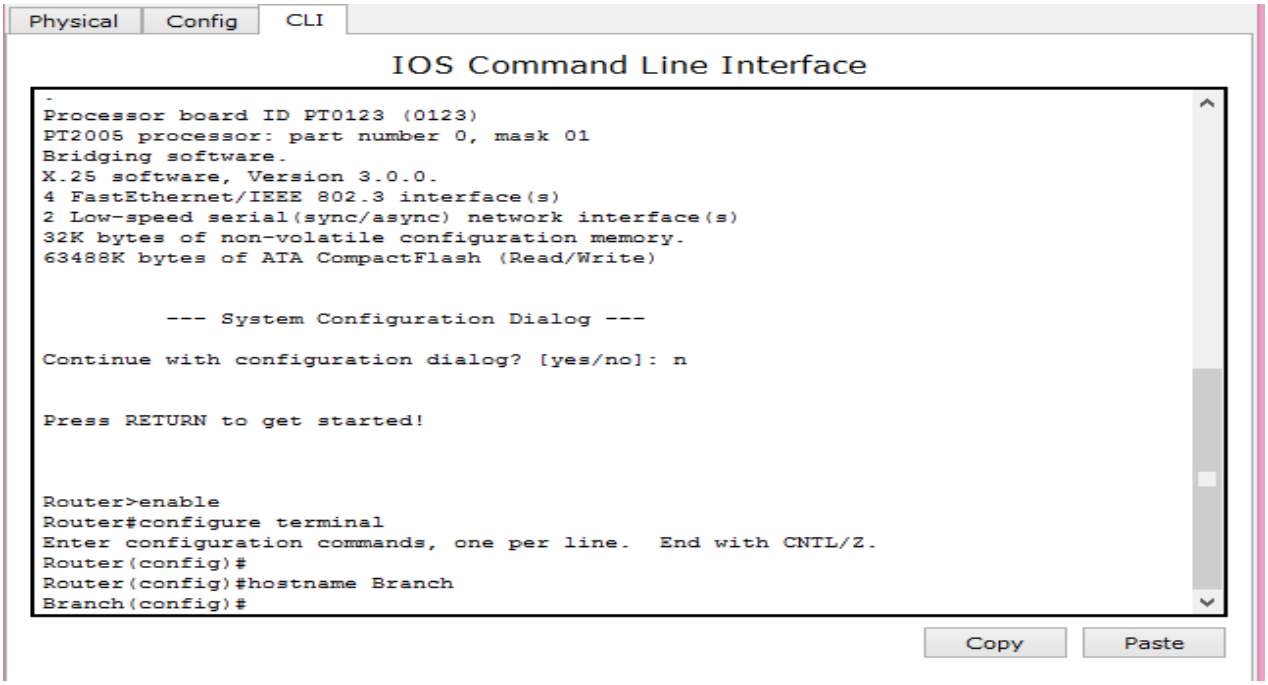
Servidor.



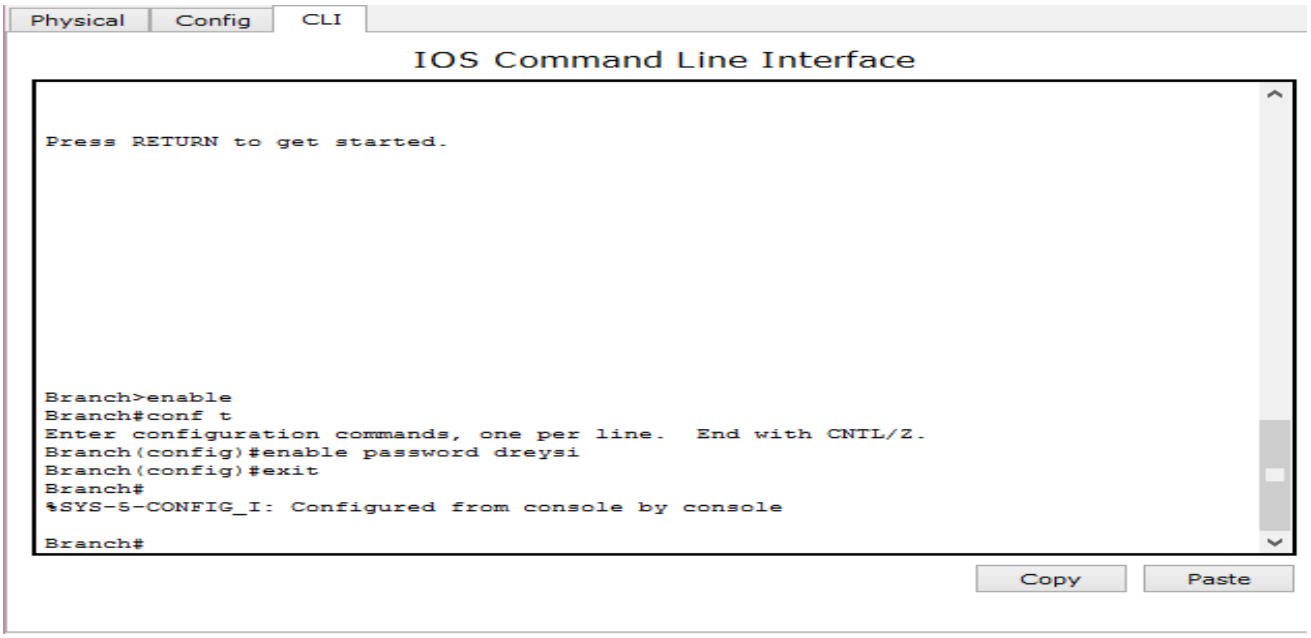
RUTEADORES.

Router1.

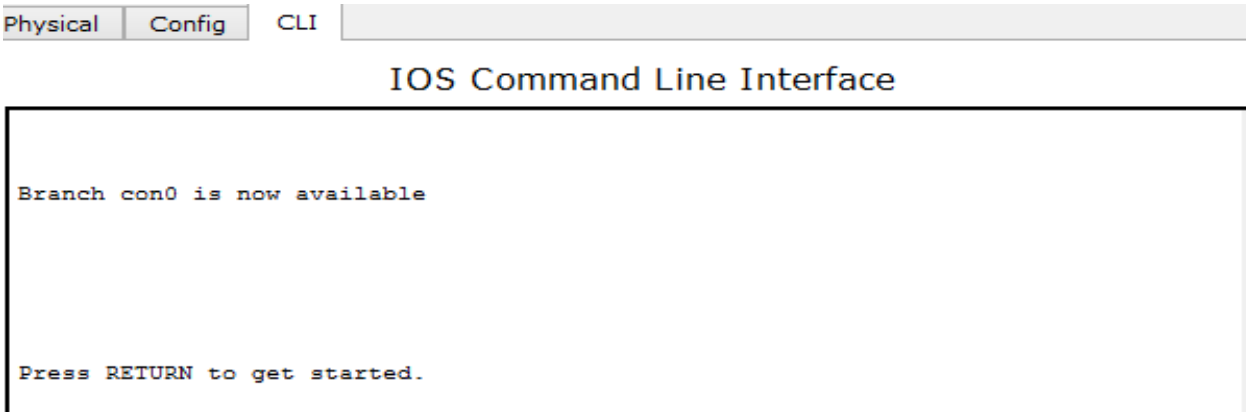
Cambio de nombre.



Asignación de password.

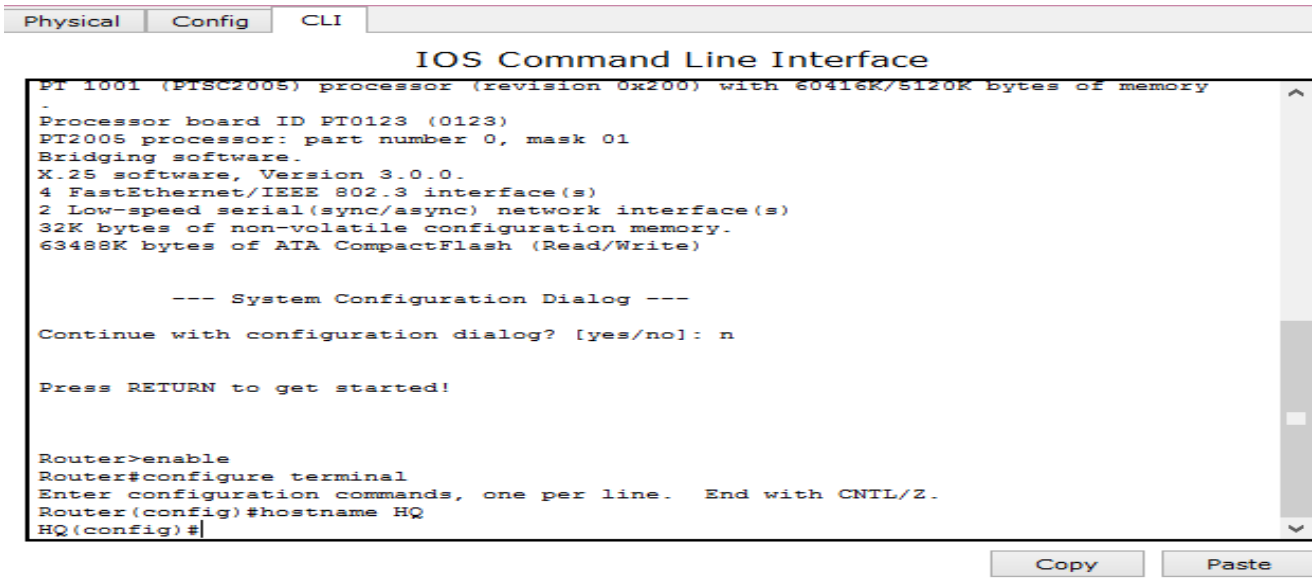


Asignación de banner.

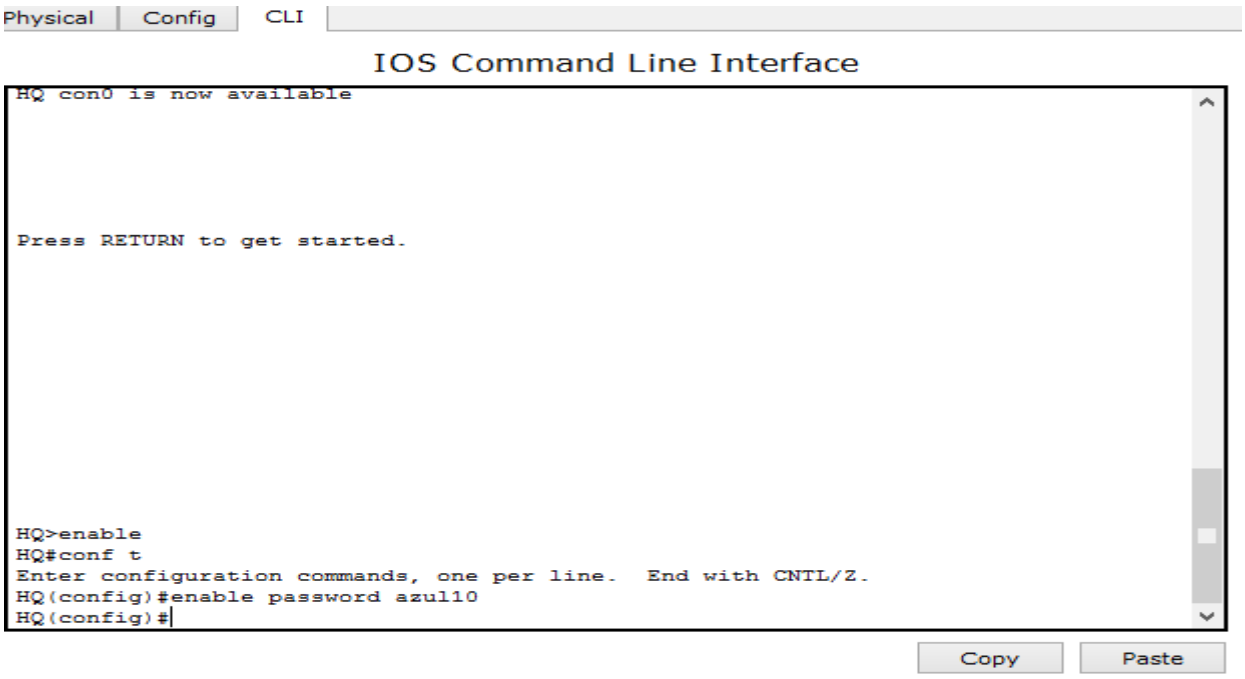


ROUTER2.

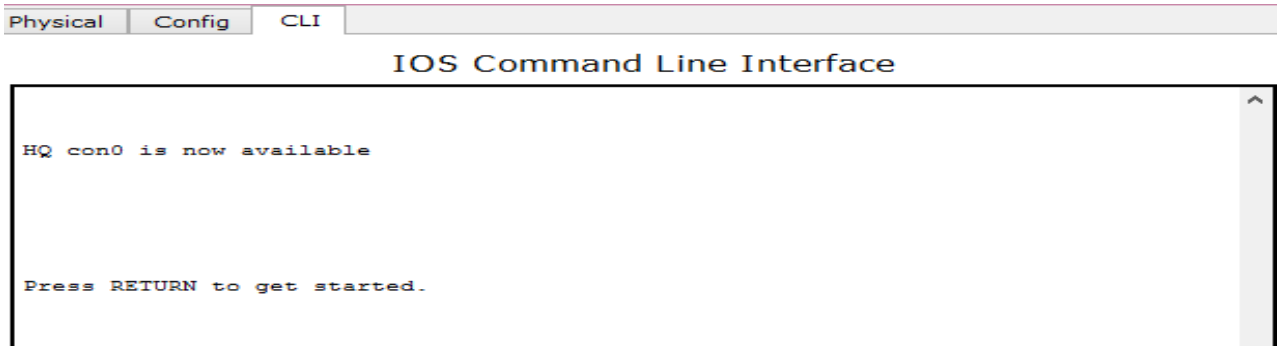
Cambio de nombre.



Asignación de password.

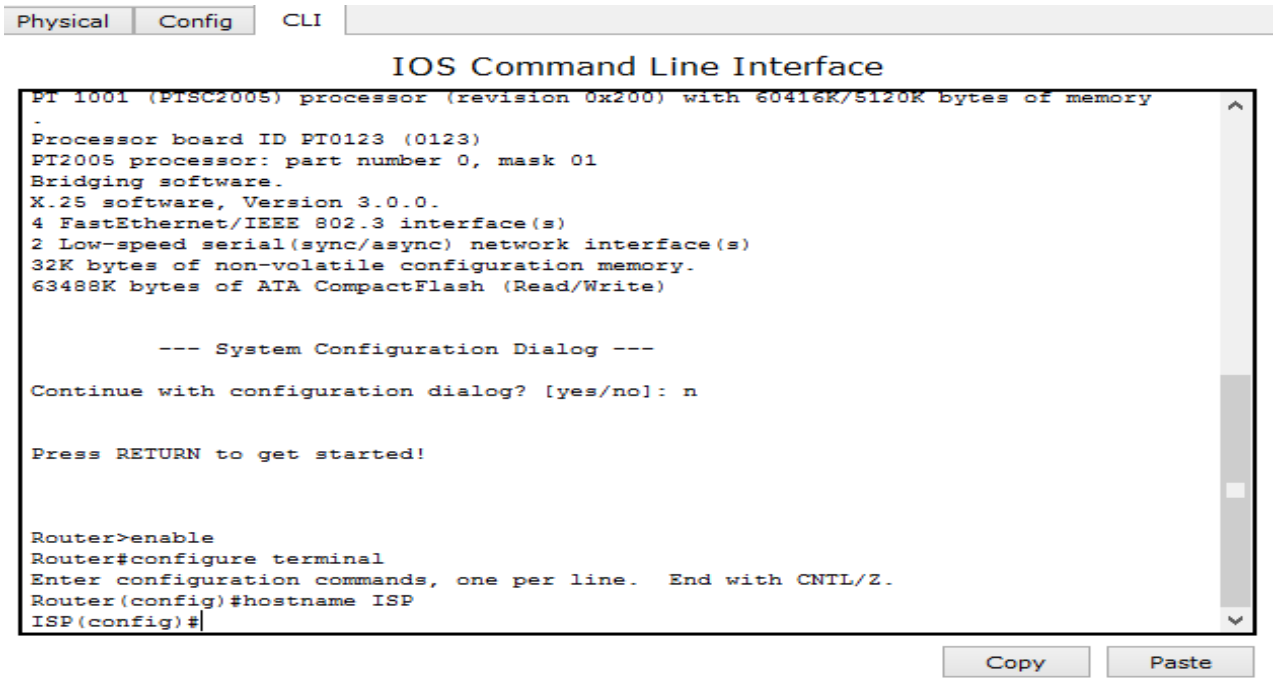


Asignación de un banner.

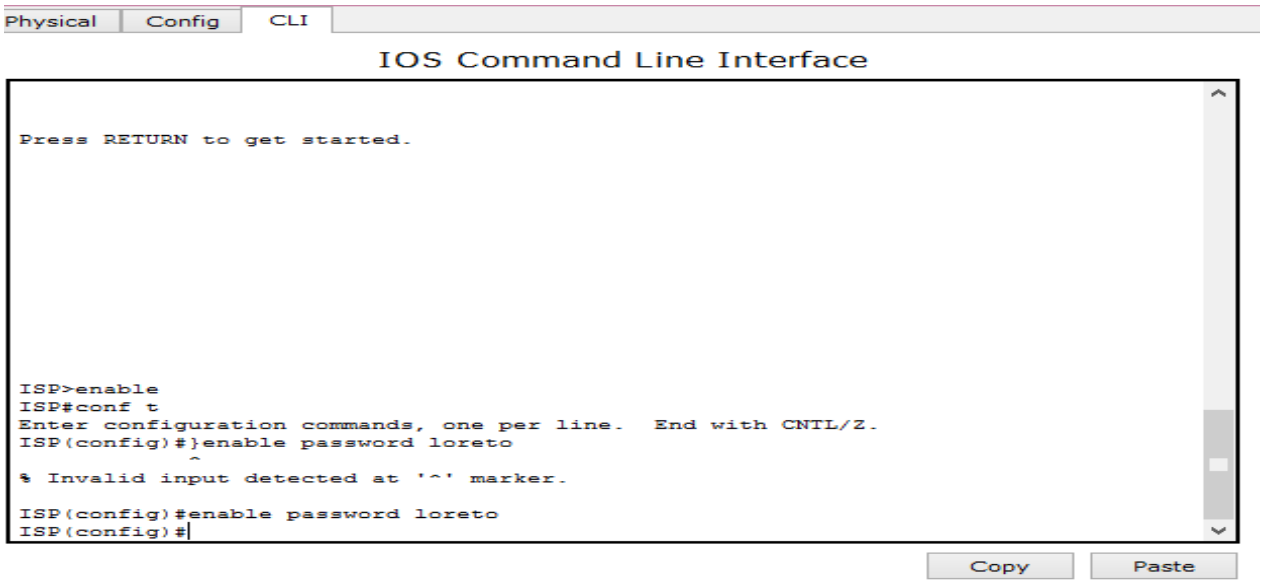


ROUTER3.

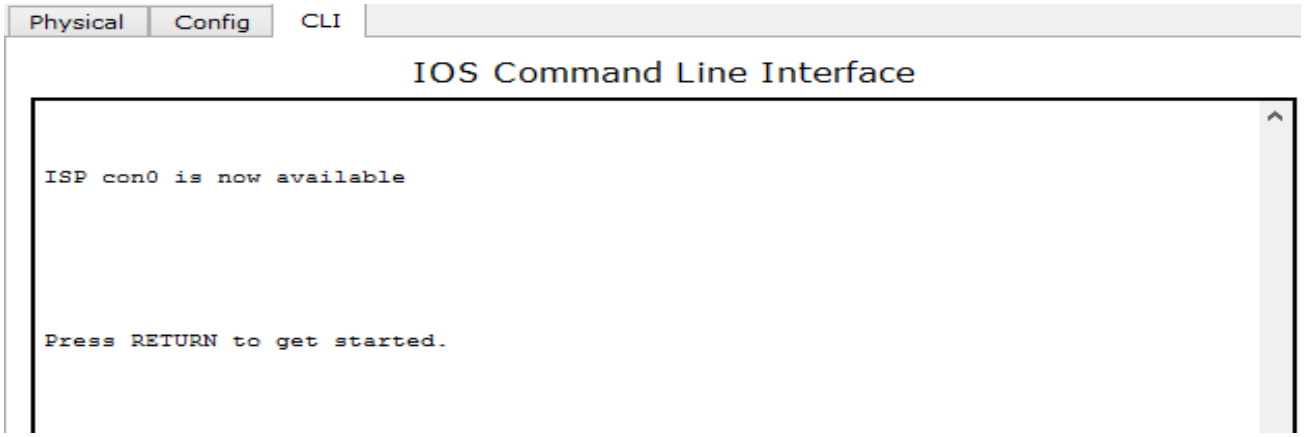
Cambio de nombre.



Asignación de password.



Asignación del banner.



Después de realizar estas configuraciones iniciales, es necesario realizar otras configuraciones para levantar los puertos de conexión tanto el puerto Fa0/0 y los seriales.

Router1.

```
Branch>enable
Password:
Branch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Branch(config)#interface fa0/0
Branch(config-if)#ip address 172.20.1.129 255.255.0.0
Branch(config-if)#no shut

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

Copy Paste

Serial2/0.

Physical Config CLI

IOS Command Line Interface

```
Branch>enable
Password:
Branch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Branch(config)#interface fa0/0
Branch(config-if)#ip address 172.20.1.129 255.255.0.0
Branch(config-if)#no shut

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

Branch(config-if)#exit
Branch(config)#interface s2/0
Branch(config-if)#ip address 172.20.1.1 255.255.0.0
% 172.20.0.0 overlaps with FastEthernet0/0
Branch(config-if)#ip address 172.20.2.1 255.255.0.0
% 172.20.0.0 overlaps with FastEthernet0/0
Branch(config-if)#ip address 172.20.1.0 255.255.0.0
% 172.20.0.0 overlaps with FastEthernet0/0
Branch(config-if)#ip address 172.20.1.1 255.255.0.0
% 172.20.0.0 overlaps with FastEthernet0/0
Branch(config-if)#ip address 192.20.1.1 255.255.0.0
Branch(config-if)#no shut

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

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ROUTER2.

Puerto Fa0/0.

```
HQ>enable
Password:
HQ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
HQ(config)#interface fa0/0
HQ(config-if)#172.20.0.129 255.255.0.0
              ^
% Invalid input detected at '^' marker.

HQ(config-if)#ip address 172.20.0.129 255.255.0.0
HQ(config-if)#no shut

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

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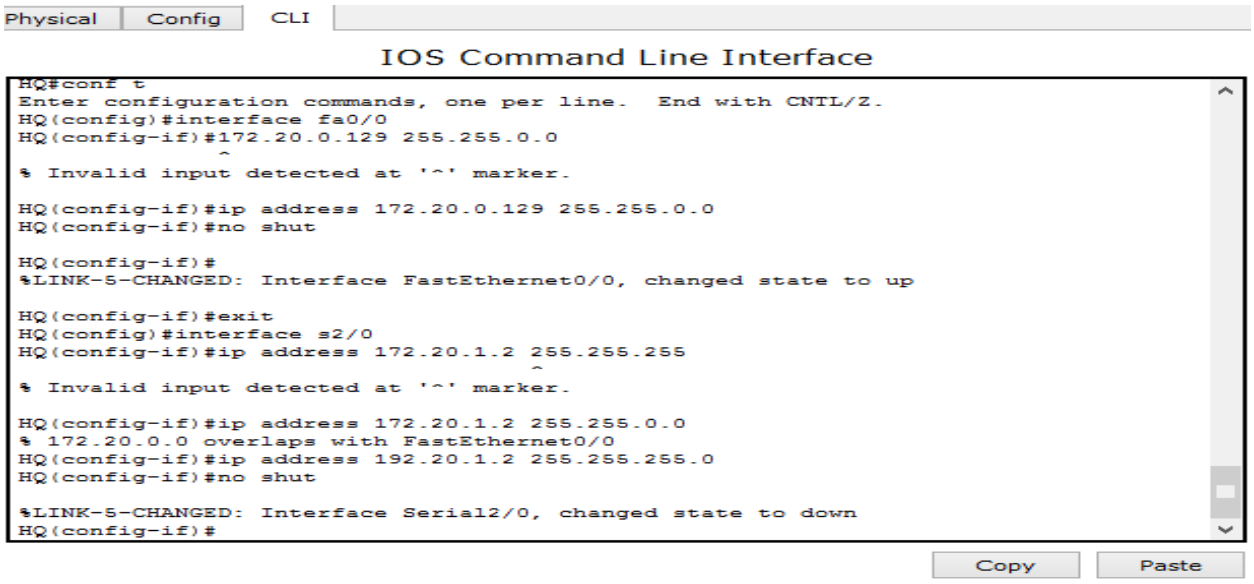
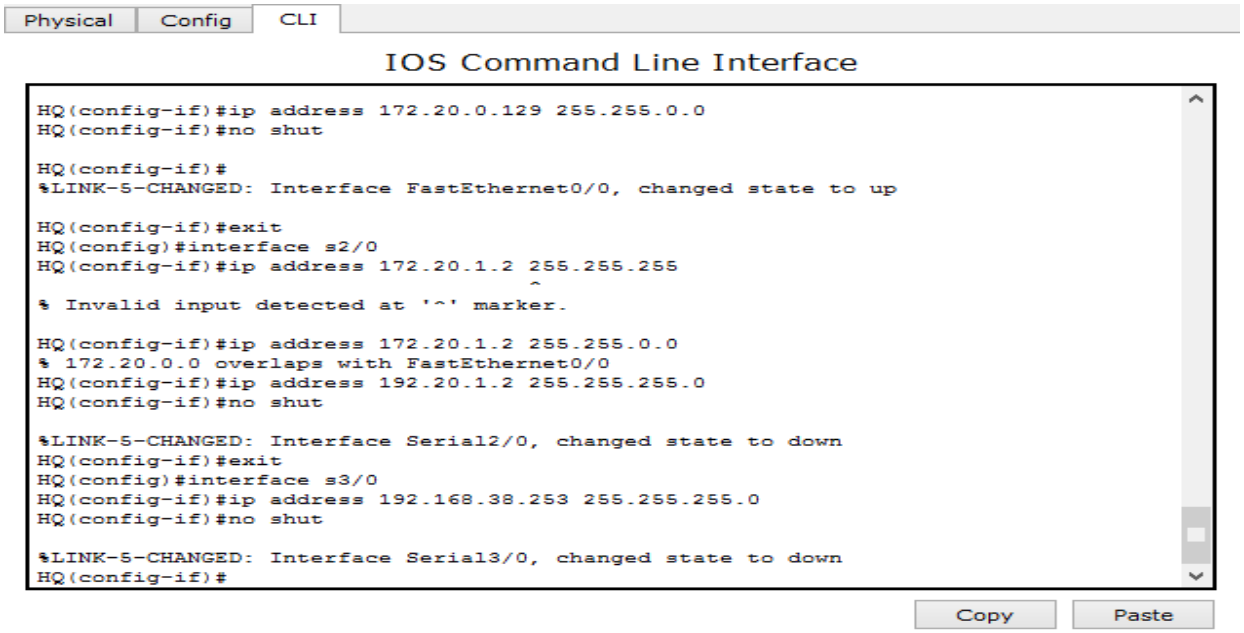
Serial2/0.

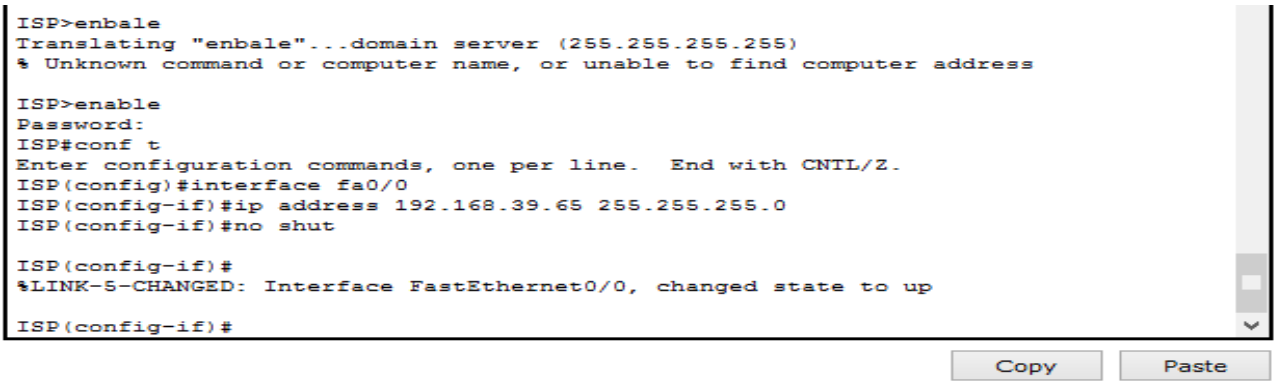

Physical
Config
CLI
IOS Command Line Interface
HQ#conf t
Enter configuration commands, one per line. End with CNTL/Z.
HQ(config)#interface fa0/0
HQ(config-if)#172.20.0.129 255.255.0.0
                ^
% Invalid input detected at '^' marker.
HQ(config-if)#ip address 172.20.0.129 255.255.0.0
HQ(config-if)#no shut
HQ(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
HQ(config-if)#exit
HQ(config)#interface s2/0
HQ(config-if)#ip address 172.20.1.2 255.255.255
                                    ^
% Invalid input detected at '^' marker.
HQ(config-if)#ip address 172.20.1.2 255.255.0.0
% 172.20.0.0 overlaps with FastEthernet0/0
HQ(config-if)#ip address 192.20.1.2 255.255.255.0
HQ(config-if)#no shut
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
HQ(config-if)#
Copy
Paste

Serial3/0.

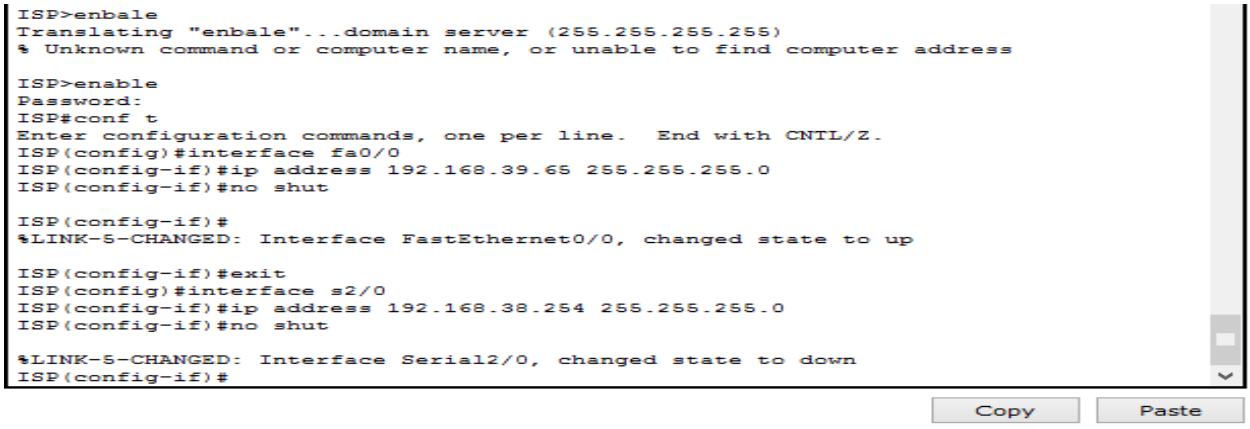


ROUTER3.

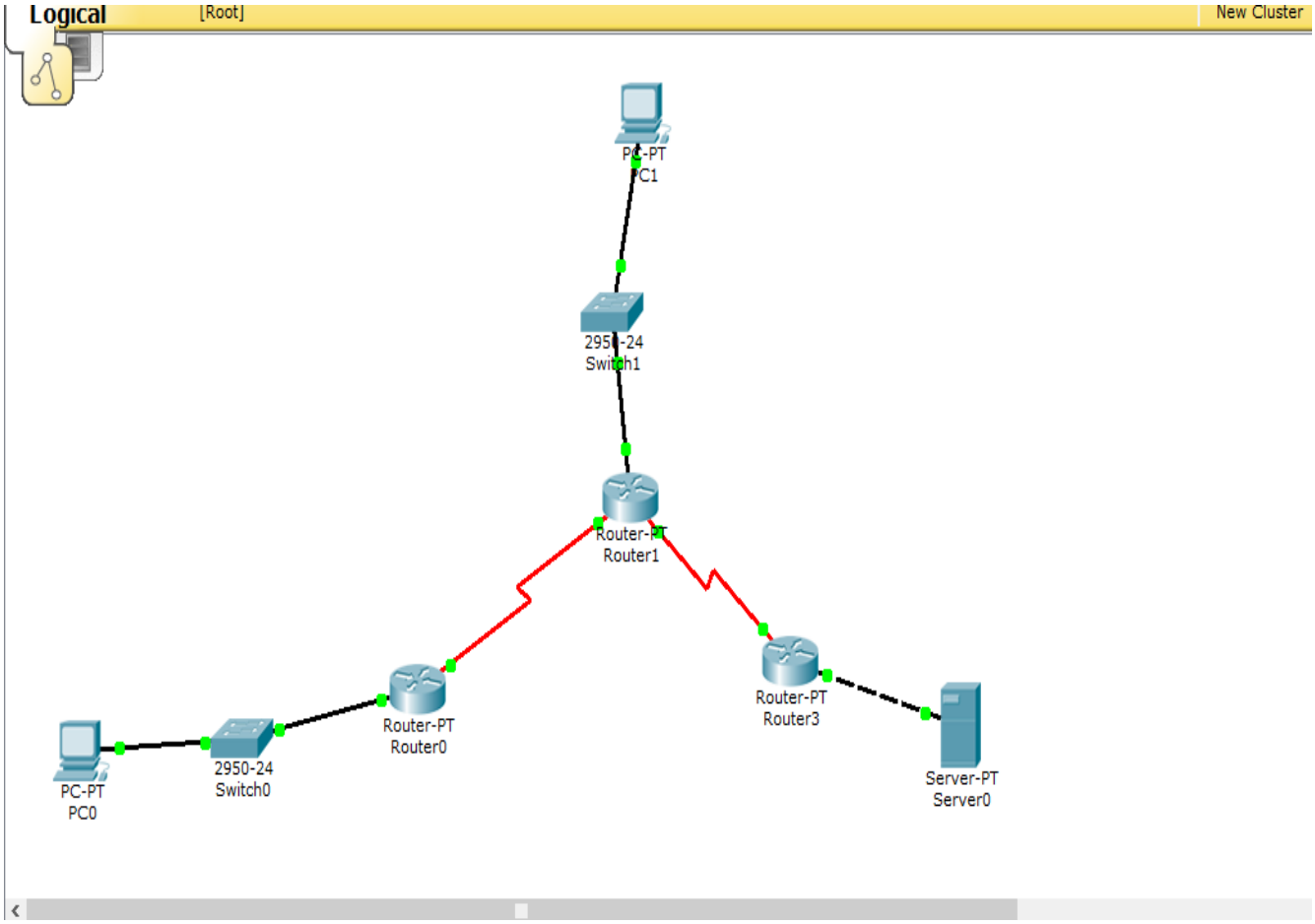
Puerto Fa0/0.



Serial2/0.

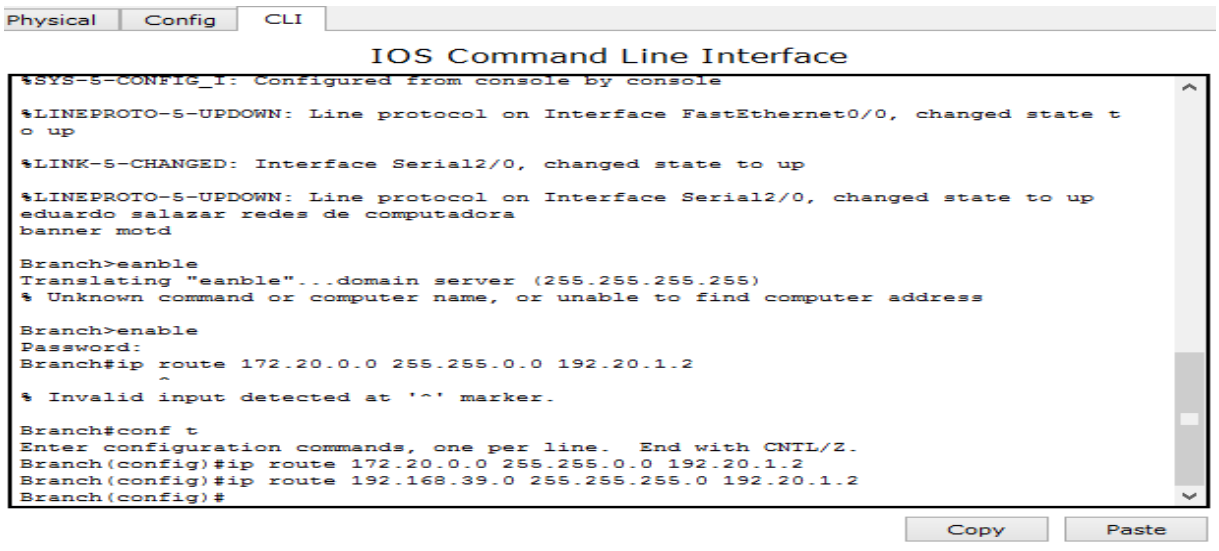


Después de levantar todos los puertos las conexiones se muestran en verde, es decir, que están ya conectados.

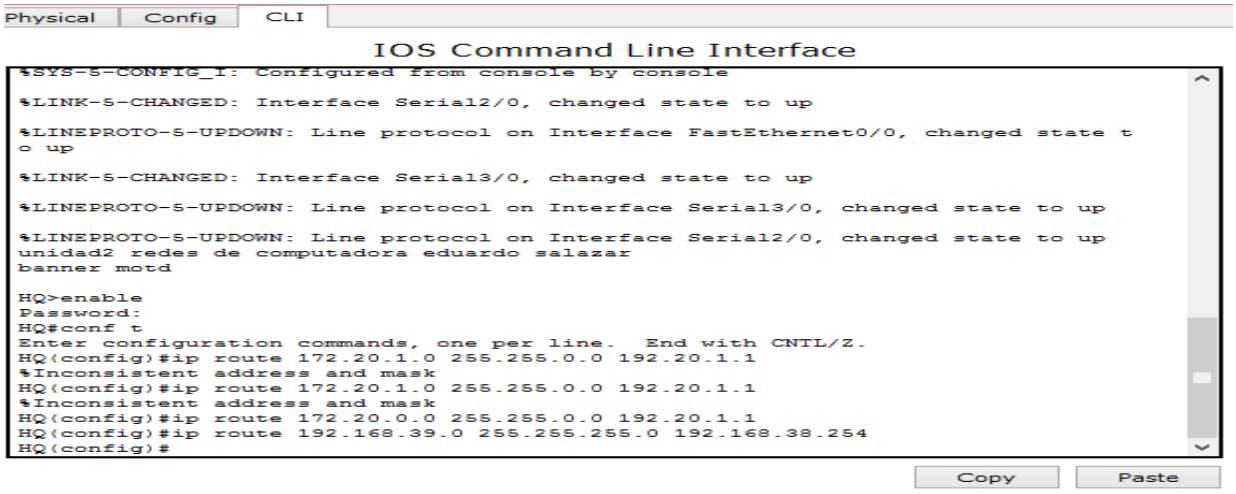


Como último paso es necesario configurar las rutas estáticas, para ello se asignan IP se siguiente salto.

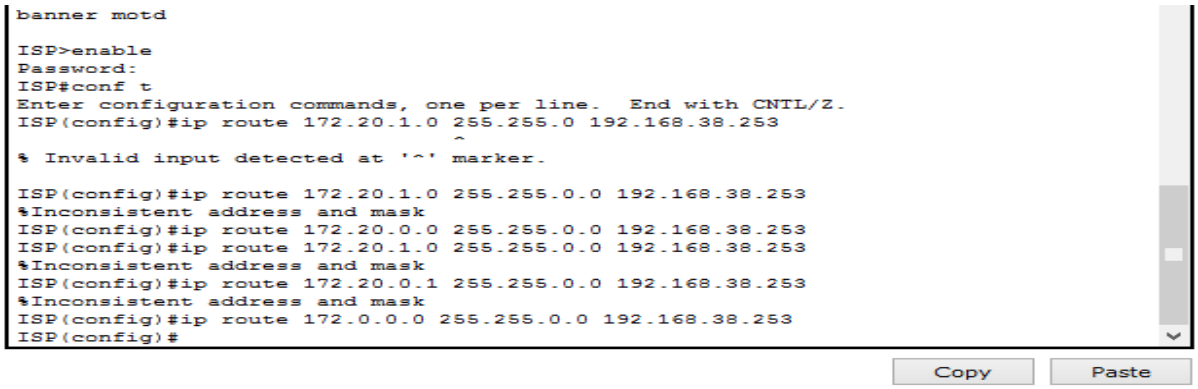
Branch.



HQ.

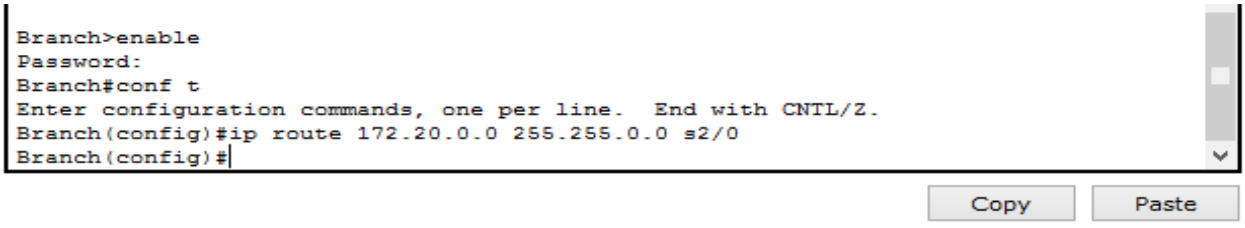


ISP.



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

Router1



Router2.

```
HQ>enable
Password:
HQ#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
HQ(config)#ip route 172.20.0.0 255.255.0.0 s2/0
HQ(config)#ip route 192.168.39.0 255.255.0.0 s3/0
%Inconsistent address and mask
HQ(config)#ip route 192.168.39.0 255.255.0.0 s3/0
%Inconsistent address and mask
HQ(config)#ip route 192.168.0.0 255.255.0.0 s3/0
HQ(config)#
```

Copy Paste

Router3.

Physical Config CLI

IOS Command Line Interface

```
Enter configuration commands, one per line.  End with CNTL/Z.
ISP(config)#ip route 172.20.1.0 255.255.0 192.168.38.253
                                          ^
% Invalid input detected at '^' marker.

ISP(config)#ip route 172.20.1.0 255.255.0.0 192.168.38.253
%Inconsistent address and mask
ISP(config)#ip route 172.20.0.0 255.255.0.0 192.168.38.253
ISP(config)#ip route 172.20.1.0 255.255.0.0 192.168.38.253
%Inconsistent address and mask
ISP(config)#ip route 172.20.0.1 255.255.0.0 192.168.38.253
%Inconsistent address and mask
ISP(config)#ip route 172.0.0.0 255.255.0.0 192.168.38.253
ISP(config)#exit
ISP#
%SYS-5-CONFIG_I: Configured from console by console

ISP#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
ISP(config)#ip route172.20.0.0 255.255.0.0 s2/0
                  ^
% Invalid input detected at '^' marker.

ISP(config)#ip route 172.20.0.0 255.255.0.0 s2/0
ISP(config)#ip route 172.0.0.0 255.255.0.0 s3/0
ISP(config)#
```

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

Branch.

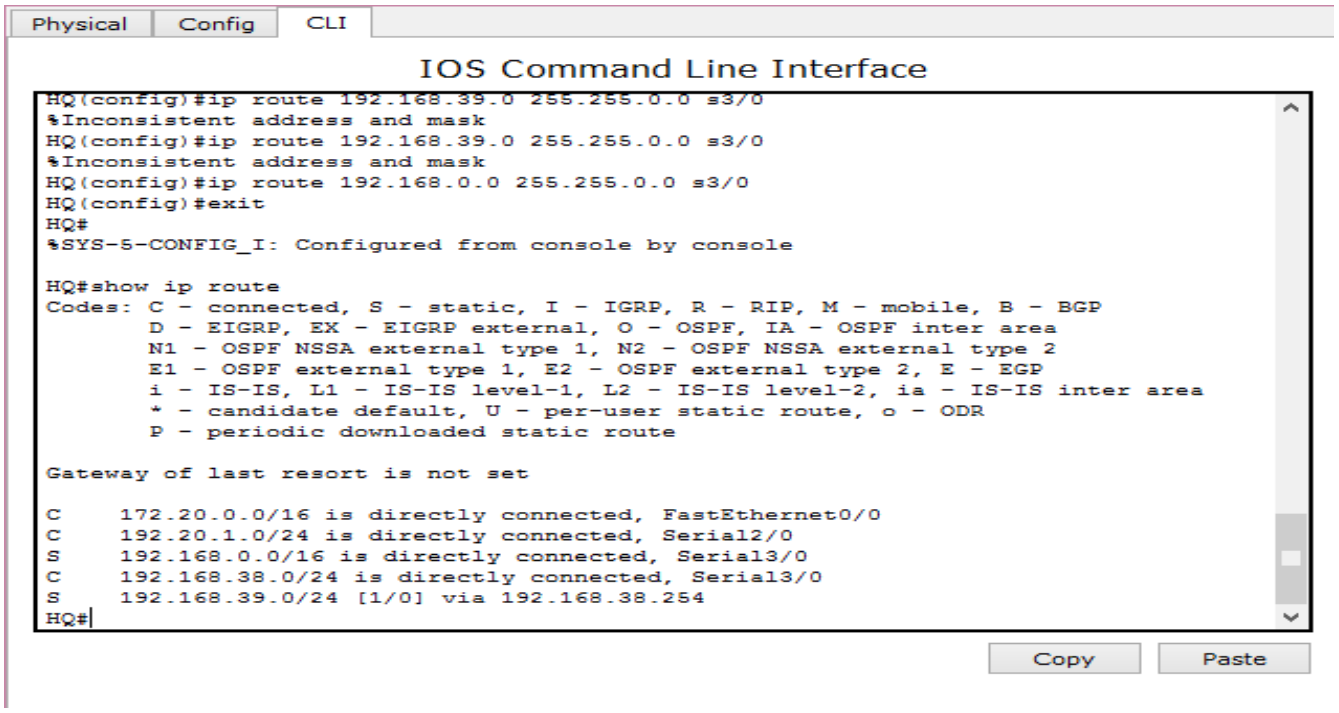
Physical Config CLI

IOS Command Line Interface

```
banner motd

Branch>enable
Password:
Branch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Branch(config)#ip route 172.20.0.0 255.255.0.0 s2/0
Branch(config)#exit
Branch#
%SYS-5-CONFIG_I: Configured from console by console

Branch#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     172.20.0.0/16 is directly connected, FastEthernet0/0
C     192.20.0.0/16 is directly connected, Serial2/0
S     192.168.39.0/24 [1/0] via 192.20.1.2
Branch#
```

Copy Paste

HQ.



Conclusión

Para concluir con esta práctica podemos decir que con estas prácticas estamos ampliando nuestros conocimientos acerca de cómo poder configurar dispositivos utilizando el puerto Fast/Ethernet y seriales (s2/0/, aunque hay que tener en cuenta que solo se levantaron estos puertos, porque los router cuentan con otros puertos, asi como también ponerles una contraseña a nuestros dispositivos y un nombre. Asi mismo mostramos un banner.