

Instituto Tecnológico de Salina Cruz

Fundamentos de Redes

Semestre Enero – Julio 2015

Reporte de Practica

Practica nº 1

Unidad 3

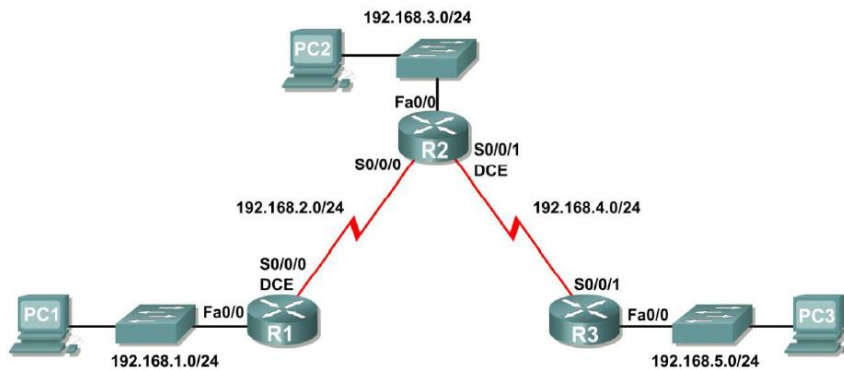
**Nombre:** MARCOS ANTONIO GARCIA IBAÑEZ

**Fecha:** 16 de Abril del 2015

**Objetivo:** Conocer los comandos básicos de un router Cisco y configurar rutas estáticas para los mismos

**Instrucciones:**

Realice, La tabla de direccionamiento, la configuración inicial Y verifique las conexiones entre las PC's. Agregar al menos 5 pcs por subred



Dispositivo	Interfaz	Dirección IP	Mascara de subred	Gateway
usb	Fa0/0	192.168.1.1	255.255.255.0	No aplicable
	S2/0	192.168.2.1	255.255.255.0	
oro	Fa0/	192.168.3.1	255.255.255.0	No aplicable
	S2/0	192.168.2.2	255.255.255.0	
	S3/0	192.168.4.1	255.255.255.0	
paza	Fa0/0	192.168.5.1	255.255.255.0	No aplicable
	S2/0	192.168.4.2	255.255.255.0	
PC1	No aplicable	192.168.1.10	255.255.255.0	192.168.1.1
PC2	No aplicable	192.168.1.11	255.255.255.0	192.168.1.1
PC3	No aplicable	192.168.1.12	255.255.255.0	192.168.1.1
PC4	No aplicable	192.168.1.13	255.255.255.0	192.168.1.1
PC5	No aplicable	192.168.1.14	255.255.255.0	192.168.1.1
PC6	No aplicable	192.168.3.10	255.255.255.0	192.168.3.1
PC7	No aplicable	192.168.3.11	255.255.255.0	192.168.3.1
PC8	No aplicable	192.168.3.12	255.255.255.0	192.168.3.1
PC9	No aplicable	192.168.3.13	255.255.255.0	192.168.3.1
PC10	No aplicable	192.168.3.14	255.255.255.0	192.168.3.1
PC11	No aplicable	192.168.5.10	255.255.255.0	192.168.5.1
PC12	No aplicable	192.168.5.11	255.255.255.0	192.168.5.1
PC13	No aplicable	192.168.5.12	255.255.255.0	192.168.5.1
PC14	No aplicable	192.168.5.13	255.255.255.0	192.168.5.1
PC15	No aplicable	192.168.5.14	255.255.255.0	192.168.5.1

**Materiales:**

Programa de simulacion Packet Tracer

Como primer paso, se configura la dirección ip, y la máscara de subred de las pc's iniciando con la pc1 de la siguiente manera.

**IP Configuration** X

IP Configuration

DHCP  Static

IP Address: 192.168.1.10

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.1.1

DNS Server:

IPv6 Configuration

DHCP  Auto Config  Static

IPv6 Address: /

Link Local Address: FE80::2D0:BAFF:FE9E:3E64

IPv6 Gateway:

IPv6 DNS Server:

Web Browser

Cisco IP Communicator

A continuación se iniciara en la configuración primaria de un router el cual se cambiara el nombre a los mismos.

El primer router se llamara USB

Physical Config CLI

IOS Command Line Interface

```
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)

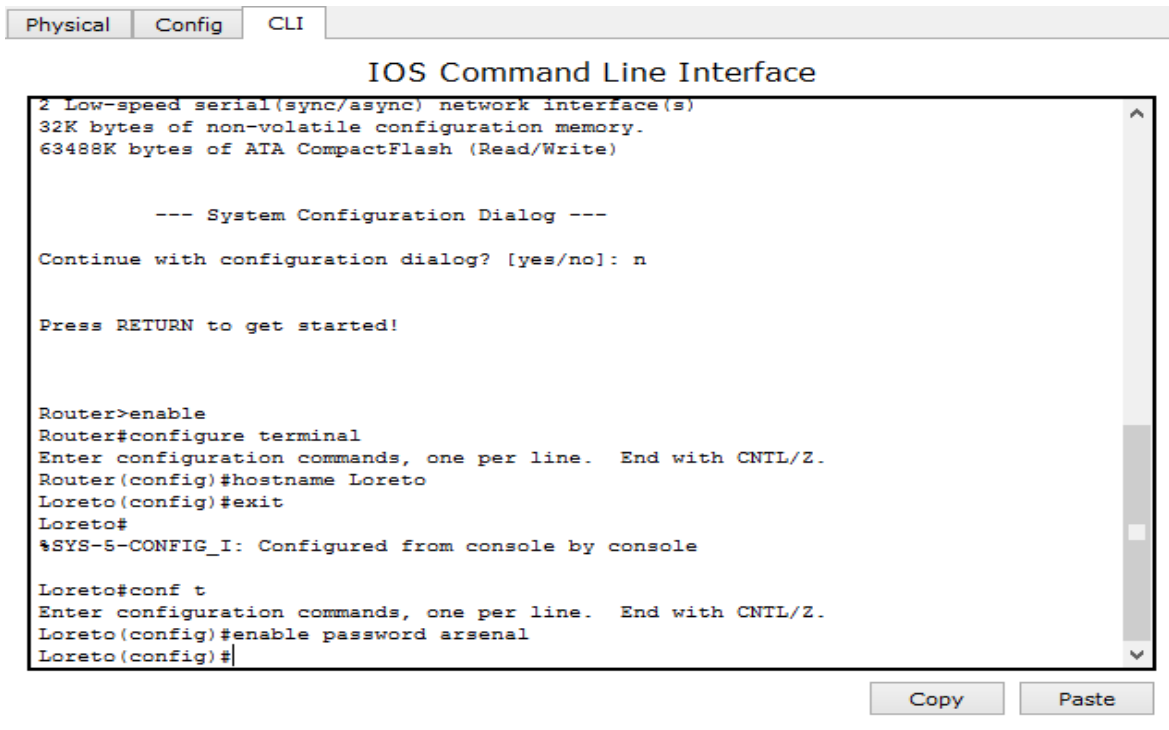
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

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

Copy Paste

Se le asignara una contraseña



The screenshot shows the IOS Command Line Interface with tabs for Physical, Config, and CLI. The main window displays the following text:

```
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

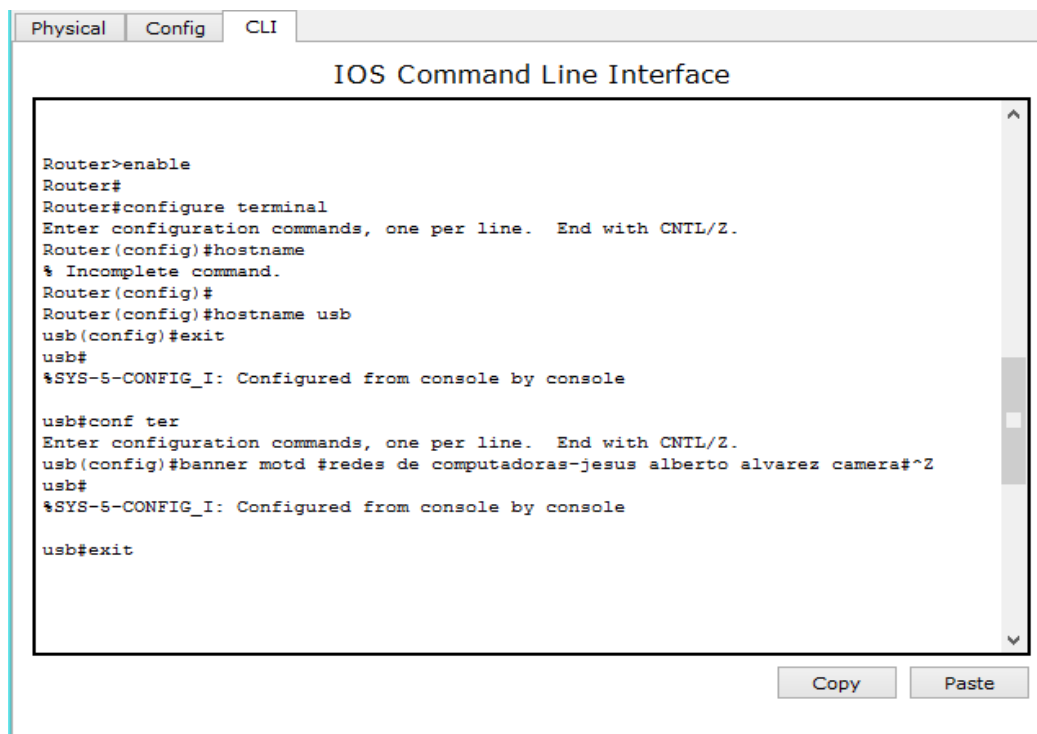
Press RETURN to get started!

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

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

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

Asignando un mensaje del banner.



The screenshot shows the IOS Command Line Interface with tabs for Physical, Config, and CLI. The main window displays the following text:

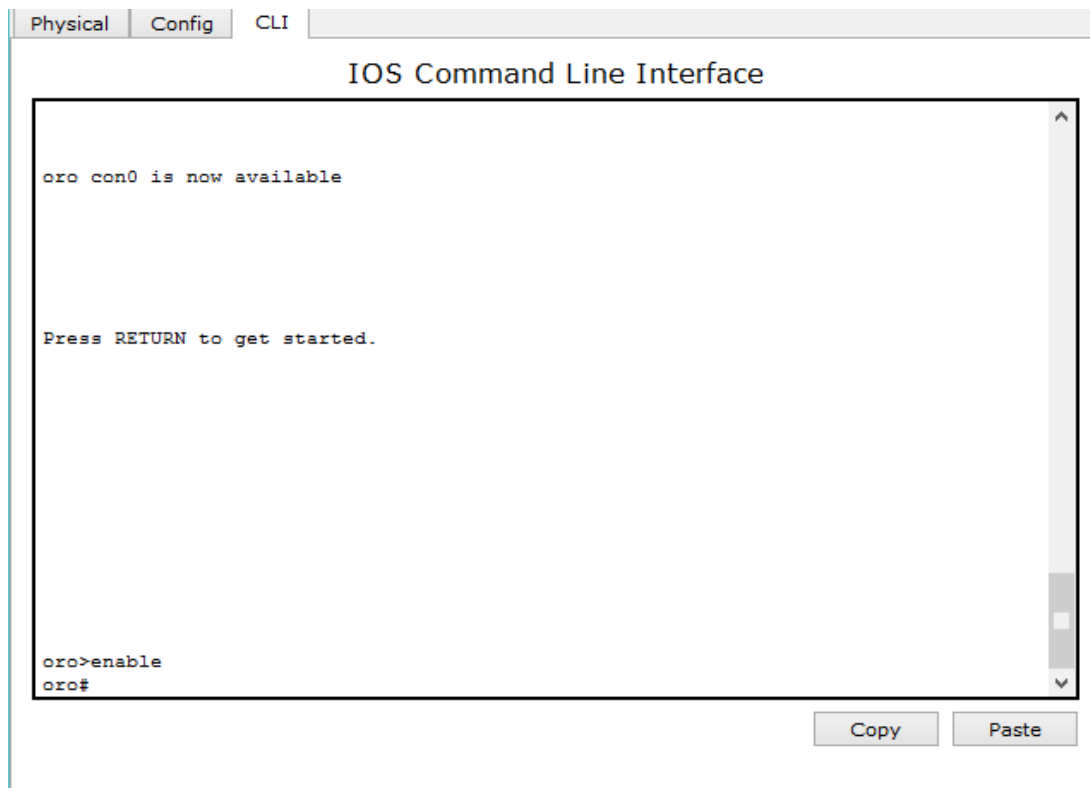
```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname
% Incomplete command.
Router(config)#
Router(config)#hostname usb
usb(config)#exit
usb#
%SYS-5-CONFIG_I: Configured from console by console

usb#conf ter
Enter configuration commands, one per line. End with CNTL/Z.
usb(config)#banner motd #redes de computadoras-jesus alberto alvarez camera#^Z
usb#
%SYS-5-CONFIG_I: Configured from console by console

usb#exit
```

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

## Cambiando el nombre del router 2 ORO



The screenshot shows the IOS Command Line Interface with tabs for Physical, Config, and CLI. The main window displays the following text:

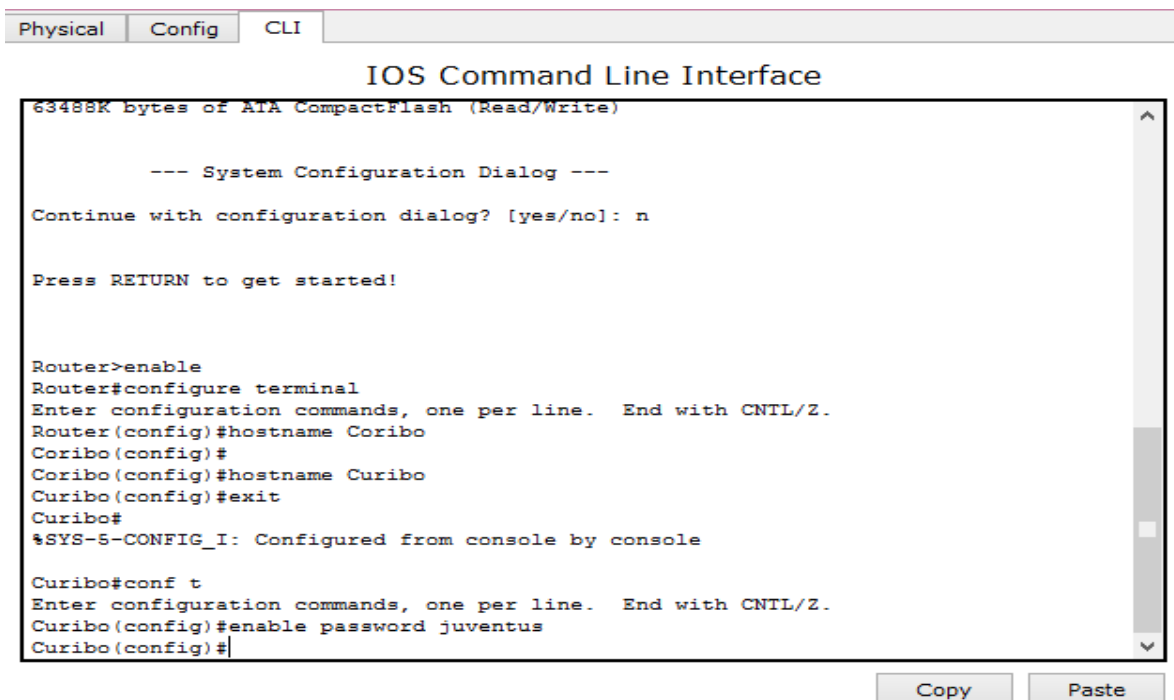
```
oro con0 is now available

Press RETURN to get started.

oro>enable
oro#
```

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

Como paso siguiente se le asigna una contraseña al router 2.



The screenshot shows the IOS Command Line Interface with tabs for Physical, Config, and CLI. The main window displays the following text:

```
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 Coribo
Coribo(config)#
Coribo(config)#hostname Curibo
Curibo(config)#exit
Curibo#
%SYS-5-CONFIG_I: Configured from console by console

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

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

A continuación se realizan las configuraciones para el router 3, primero asignándole un nombre.

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

Copy Paste

Asignando una contraseña al router

Physical Config CLI

### IOS Command Line Interface

```
Mandrill con0 is now available

Press RETURN to get started.

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

Copy Paste

A continuación se procede a levantar los fa0/0, y los seriales para cada router, como se muestra a continuación

### Para el router 1

Puerto fa0/0.

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

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

Copy Paste

Serial2/0.

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

Loreto(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
Loreto(config-if)#
Loreto(config-if)#exit
Loreto(config)#interface s2/0
Loreto(config-if)#ip address 192.168.2.1
% Incomplete command.
Loreto(config-if)#ip address 192.168.2.1 255.255.255.0
Loreto(config-if)#no shut

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

Copy Paste

### Configurando puertos, del router 2

Puerto fa0/0.

```
Curibo>enable
Password:
Curibo#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Curibo(config)#interface fa0/0
Curibo(config-if)#ip address 192.168.2.1 255.255.255.0
Curibo(config-if)#no shut

Curibo(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

Curibo(config-if)#
```

Copy

Paste

Serial2/0.

```
Curibo(config-if)#ip address 192.168.2.1 255.255.255.0
Curibo(config-if)#no shut

Curibo(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

Curibo(config-if)#exit
Curibo(config)#interface s2/0
Curibo(config-if)#ip address 192.168.2.2 255.255.255.0
% 192.168.2.0 overlaps with FastEthernet0/0
Curibo(config-if)#exit
Curibo(config)#interface fa0/0
Curibo(config-if)#ip address 192.168.3.1 255.255.255.0
Curibo(config-if)#no shut
Curibo(config-if)#exit
Curibo(config)#interface s2/0
Curibo(config-if)#ip address 192.168.2.2 255.255.255.0
Curibo(config-if)#no shut

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

Copy

Paste

A continuación se levantarán 2 puertos, para permitir la conexión entre dos Routers a un tercero.

Serial3/0.

```
Curibo(config-if)#exit
Curibo(config)#interface fa0/0
Curibo(config-if)#ip address 192.168.3.1 255.255.255.0
Curibo(config-if)#no shut
Curibo(config-if)#exit
Curibo(config)#interface s2/0
Curibo(config-if)#ip address 192.168.2.2 255.255.255.0
Curibo(config-if)#no shut

Curibo(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

Curibo(config-if)#exit
Curibo(config)#interface s3/0
Curibo(config-if)#ip address 192.168.2.2 255.255.255.0
% 192.168.2.0 overlaps with Serial2/0
Curibo(config-if)#ip address 192.168.4.1 255.255.255.0
Curibo(config-if)#no shut

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

Copy

Paste

## Configurando puertos para el router 3

Puerto fa0/0.

```
Mandrill>enable
Password:
Mandrill#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Mandrill(config)#interface fa0/0
Mandrill(config-if)#ip address 192.168.5.1
% Incomplete command.
Mandrill(config-if)#ip address 192.168.5.1 255.255.255.0
Mandrill(config-if)#no shut

Mandrill(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

Mandrill(config-if)#
```

Copy

Paste

Serial2/0.

```

Mandrill>enable
Password:
Mandrill#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Mandrill(config)#interface fa0/0
Mandrill(config-if)#ip address 192.168.5.1
% Incomplete command.
Mandrill(config-if)#ip address 192.168.5.1 255.255.255.0
Mandrill(config-if)#no shut

Mandrill(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

Mandrill(config-if)#exit
Mandrill(config)#interface s2/0
Mandrill(config-if)#ip address 192.168.4.2 255.255.255.0
Mandrill(config-if)#no shut

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

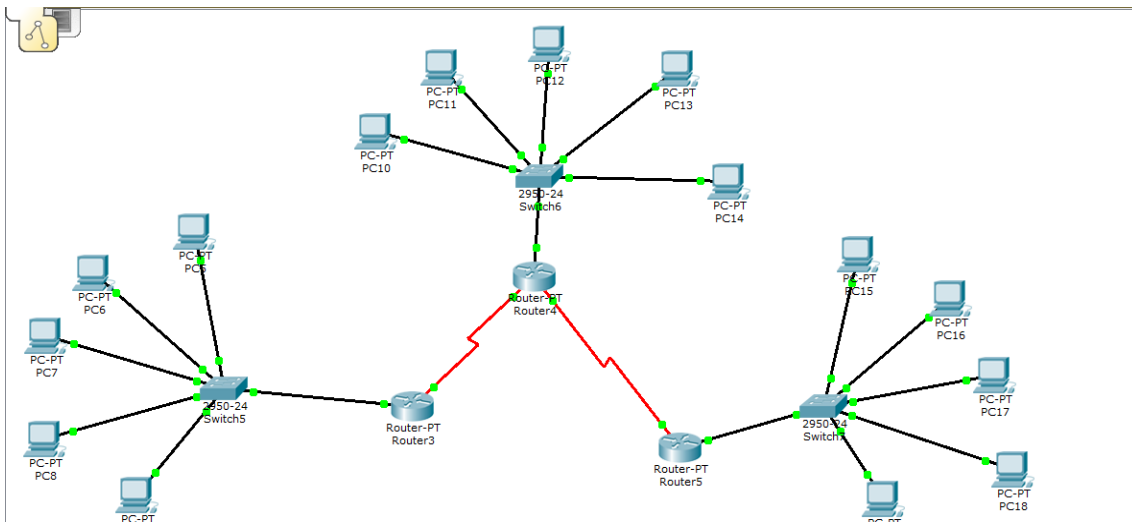
Mandrill(config-if)#

```

Copy

Paste

Una vez levantados los puertos seriales y los fast Ethernet los dispositivos estarán interconectados.



A continuación se procede a comprobar la interconexión entre computadoras, dando ping a cada una de ellas de la siguiente

PC1 a USB

```
Physical Config Desktop Software/Services
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=70ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 70ms, Average = 17ms

PC>
```

Ping de la PC4 a oro.

```
Physical Config Desktop Software/Services
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 192.168.3.1

Pinging 192.168.3.1 with 32 bytes of data:

Reply from 192.168.3.1: bytes=32 time=1ms TTL=255
Reply from 192.168.3.1: bytes=32 time=0ms TTL=255
Reply from 192.168.3.1: bytes=32 time=1ms TTL=255
Reply from 192.168.3.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.3.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>
```

Ping de la PC7 a paza

Physical

Config

Desktop

Software/Services

## Command Prompt

X

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.5.1

Pinging 192.168.5.1 with 32 bytes of data:

Reply from 192.168.5.1: bytes=32 time=13ms TTL=255
Reply from 192.168.5.1: bytes=32 time=0ms TTL=255
Reply from 192.168.5.1: bytes=32 time=0ms TTL=255
Reply from 192.168.5.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.5.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 13ms, Average = 3ms

PC>
```

