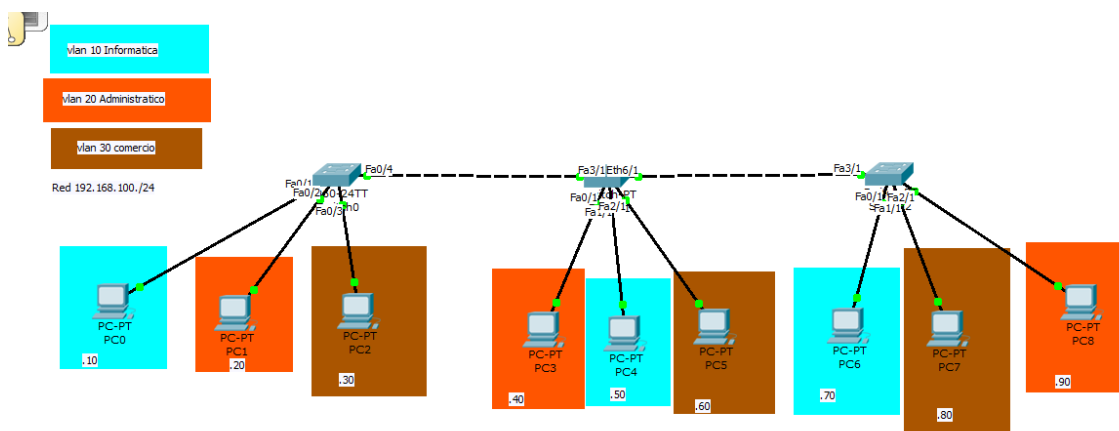


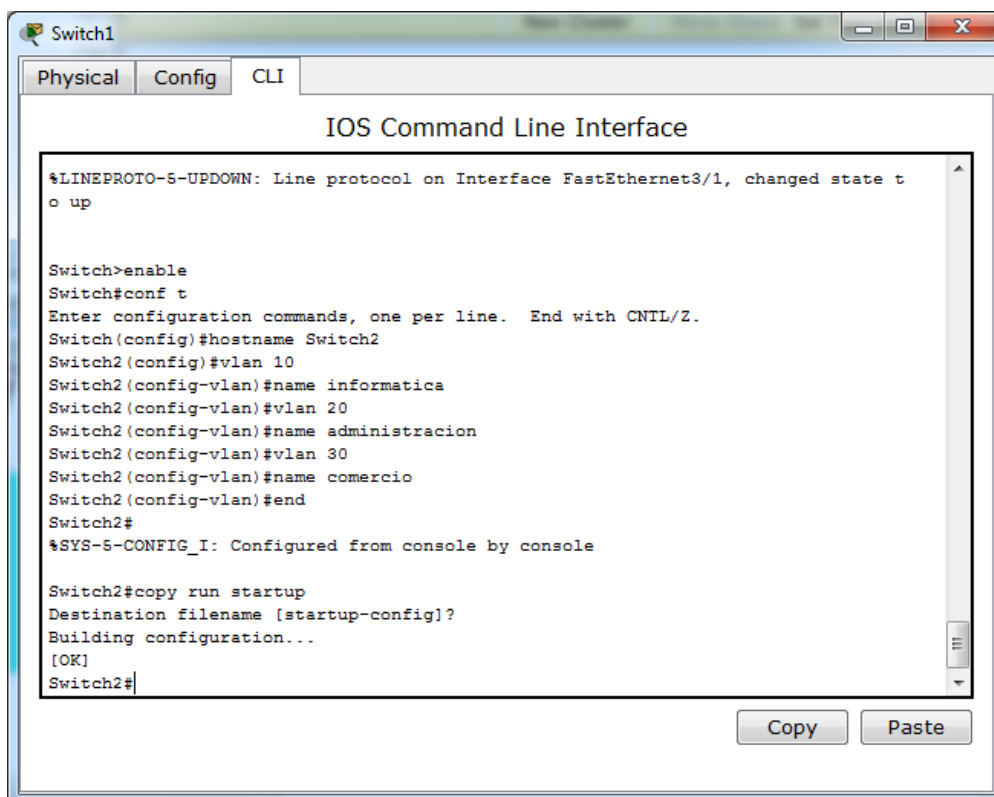
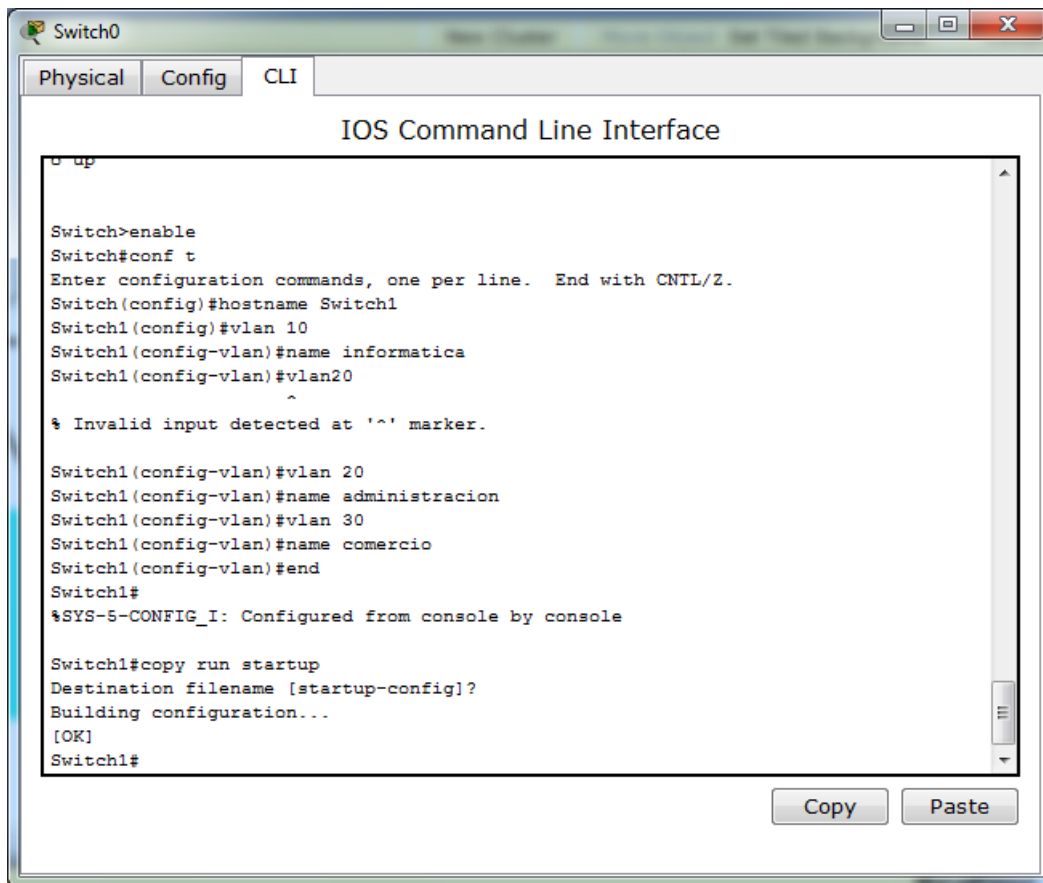
José Carlos Roncero Blanco

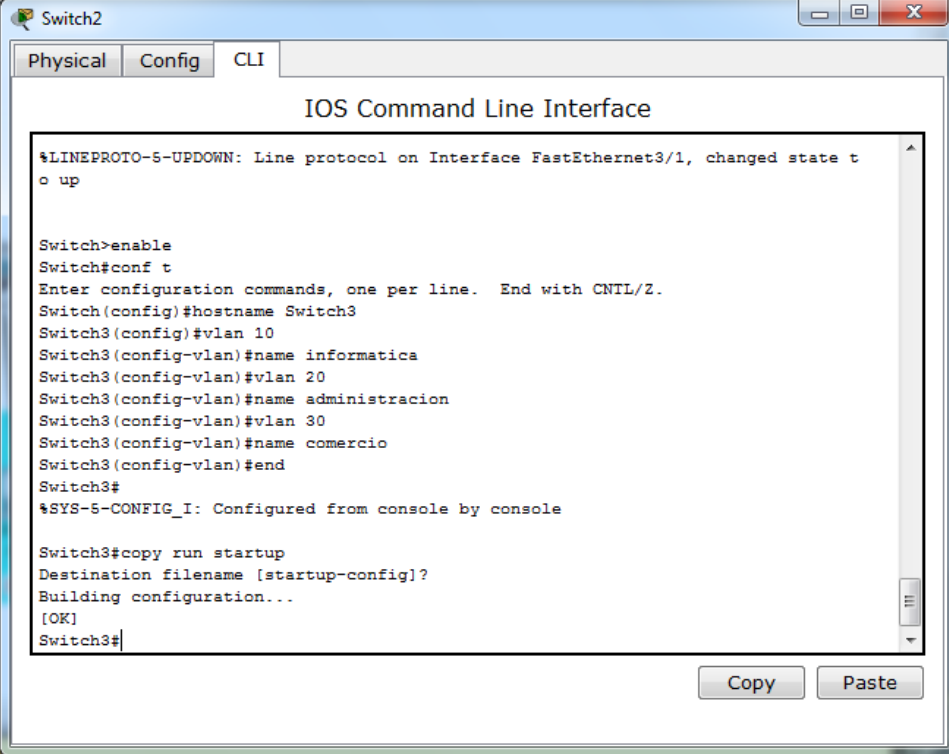
Ejercicio sobre los 3 Switch

En este supuesto práctico estaremos en una empresa donde contaremos con 3 switch para realizar una red local donde tendremos 3 departamentos y cada departamento tiene que verse con sus propios equipos de cada departamento. La red será la 192.168.100.0/24 y tendremos las ip distribuidas por los diferentes equipos



Lo primero que tendremos que realizar será crear las vlan y darle un nombre a la vlan. Vamos a empezar por el Switch uno (el de la izquierda) y continuaremos en orden.





The image shows a window titled "Switch2" with tabs for "Physical", "Config", and "CLI". The "CLI" tab is active, displaying the "IOS Command Line Interface". The terminal output shows the following sequence of commands and responses:

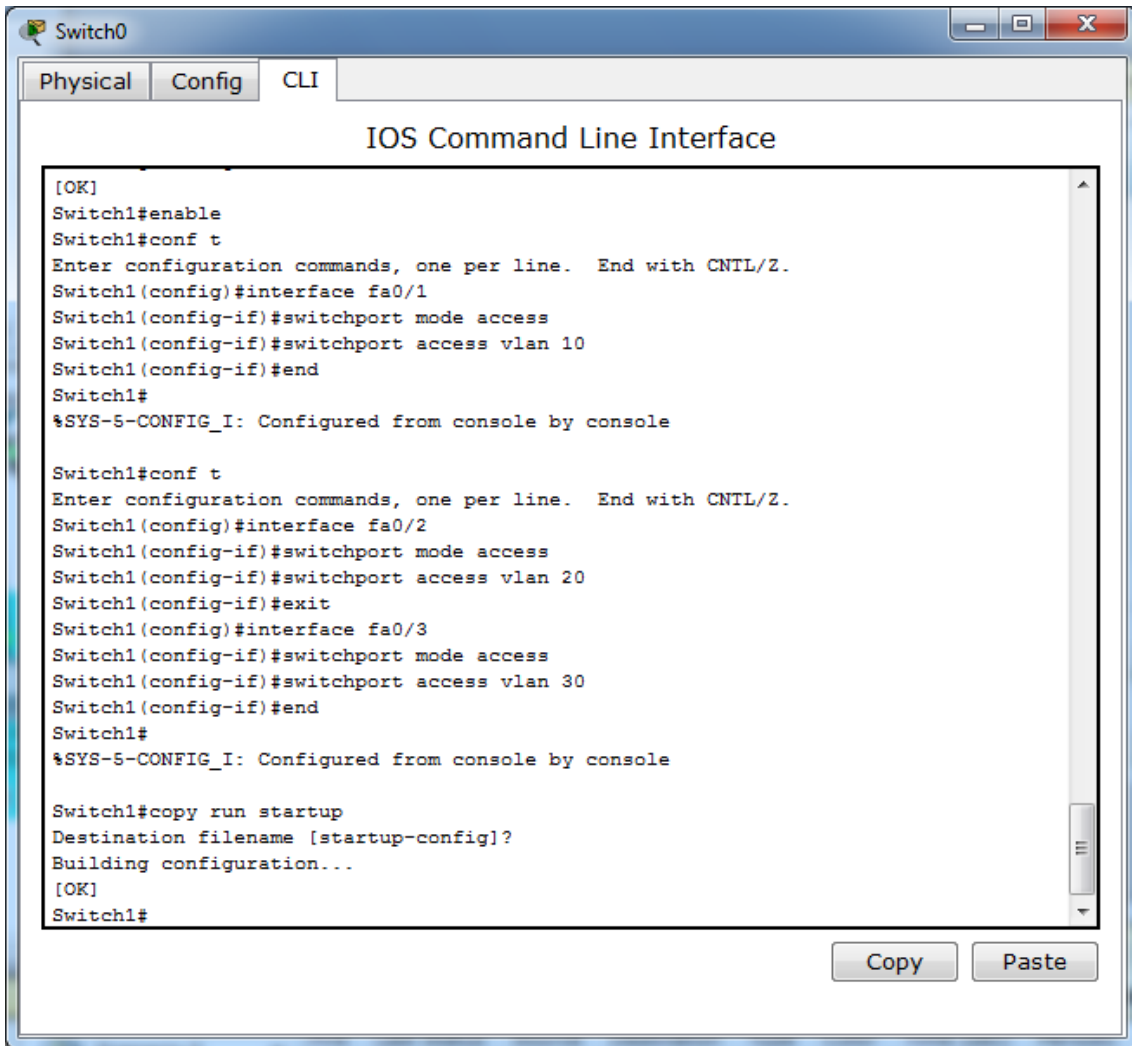
```
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet3/1, changed state to up

Switch>enable
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch3(config)#hostname Switch3
Switch3(config)#vlan 10
Switch3(config-vlan)#name informatica
Switch3(config-vlan)#vlan 20
Switch3(config-vlan)#name administracion
Switch3(config-vlan)#vlan 30
Switch3(config-vlan)#name comercio
Switch3(config-vlan)#end
Switch3#
%SYS-5-CONFIG_I: Configured from console by console

Switch3#copy run startup
Destination filename [startup-config]?
Building configuration...
[OK]
Switch3#
```

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

Ahora lo que realizaremos será asignar los puertos a cada vlan. Se quedaría así:



Switch1

Physical Config CLI

IOS Command Line Interface

```
Switch2#copy run startup
Destination filename [startup-config]?
Building configuration...
[OK]
Switch2#enable
Switch2#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch2(config)#interface fa0/1
Switch2(config-if)#switchport mode access
Switch2(config-if)#switchport mode access vlan 20
^
% Invalid input detected at '^' marker.

Switch2(config-if)#switchport access vlan 20
Switch2(config-if)#exit
Switch2(config)#interface fa1/1
Switch2(config-if)#switchport mode access
Switch2(config-if)#switchport access vlan 10
Switch2(config-if)#exit
Switch2(config)#interface fa2/1
Switch2(config-if)#switchport mode access
Switch2(config-if)#switchport access vlan 30
Switch2(config-if)#end
Switch2#
%SYS-5-CONFIG_I: Configured from console by console

Switch2#copy run startup
Destination filename [startup-config]?
Building configuration...
[OK]
Switch2#
```

Copy

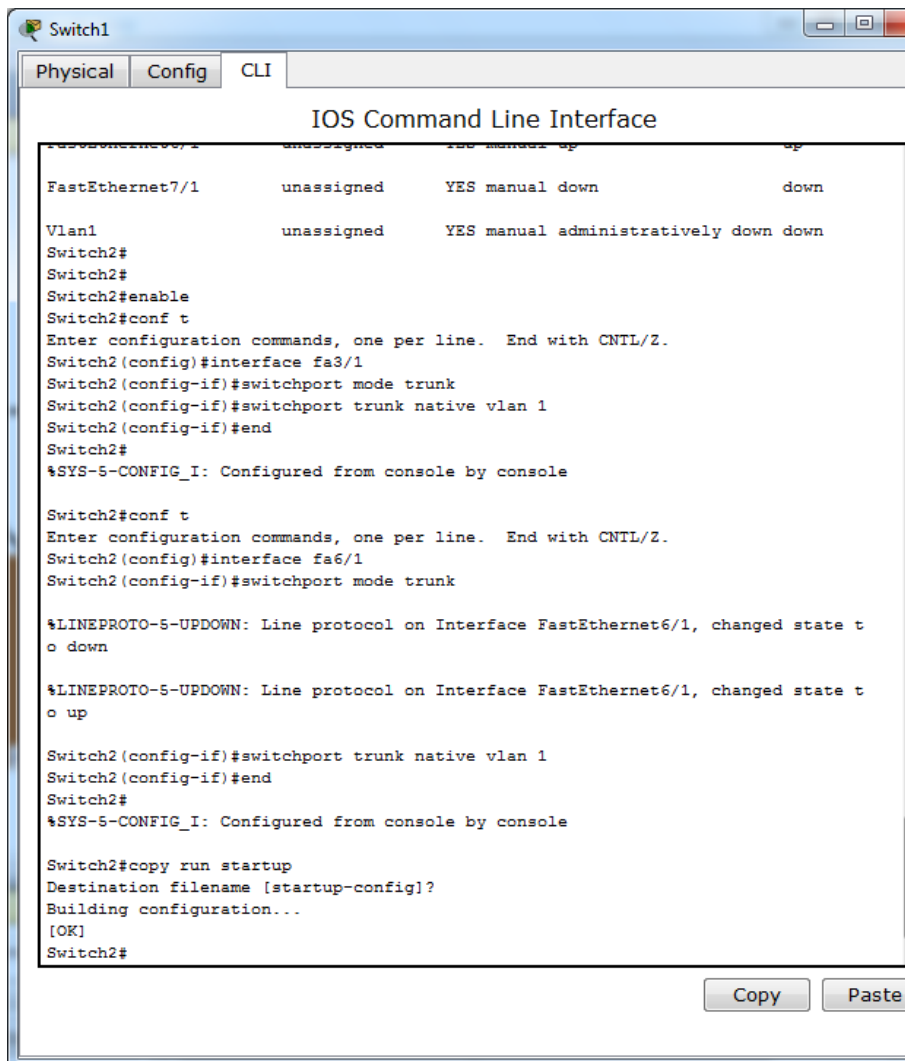
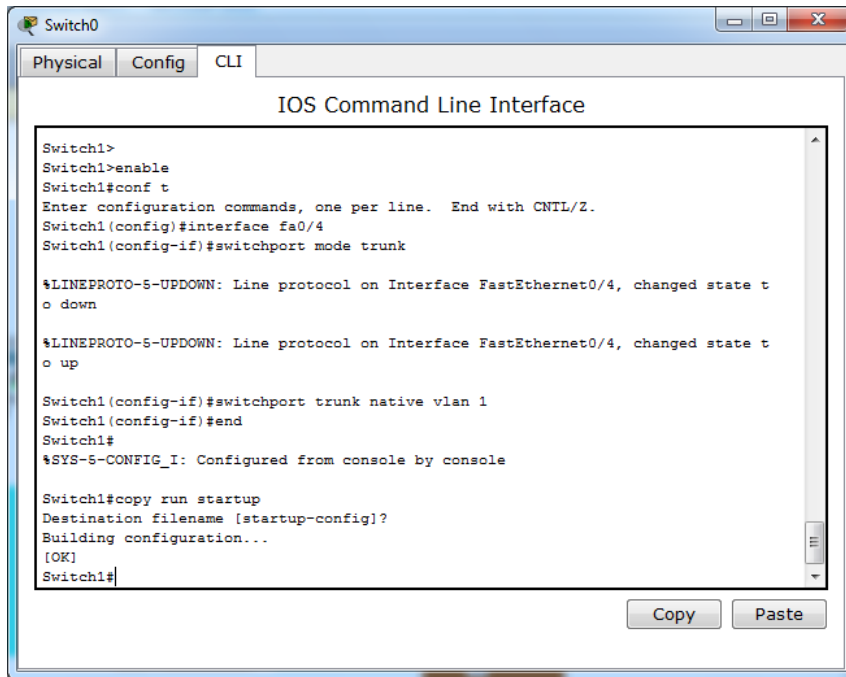
The screenshot shows a window titled "Switch2" with tabs for "Physical", "Config", and "CLI". The main area is titled "IOS Command Line Interface" and contains a terminal window with the following text:

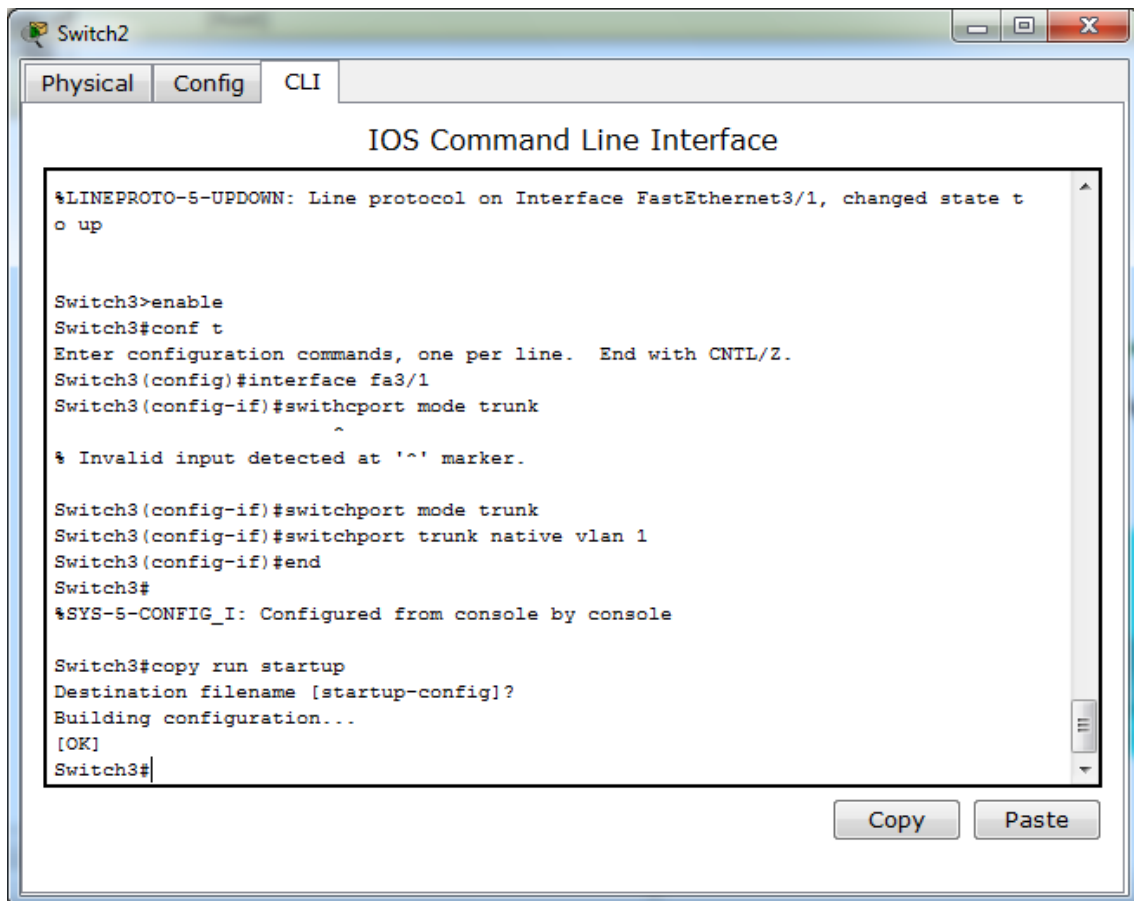
```
Primary Secondary Type          Ports
-----
Switch3#
Switch3#enable
Switch3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch3(config)#interface fa0/1
Switch3(config-if)#switchport mode access
Switch3(config-if)#switchport access vlan 10
Switch3(config-if)#exit
Switch3(config)#interface fa1/1
Switch3(config-if)#switchport mode access
Switch3(config-if)#switchport access vlan 30
Switch3(config-if)#exit
Switch3(config)#interface fa2/1
Switch3(config-if)#switchport mode access
Switch3(config-if)#switchport access vlan 20
Switch3(config-if)#end
Switch3#
%SYS-5-CONFIG_I: Configured from console by console

Switch3#copy run startup
Destination filename [startup-config]? +
%Error copying nvram:+ (Invalid argument)
Switch3#copy run startup
Destination filename [startup-config]?
Building configuration...
[OK]
Switch3#
```

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

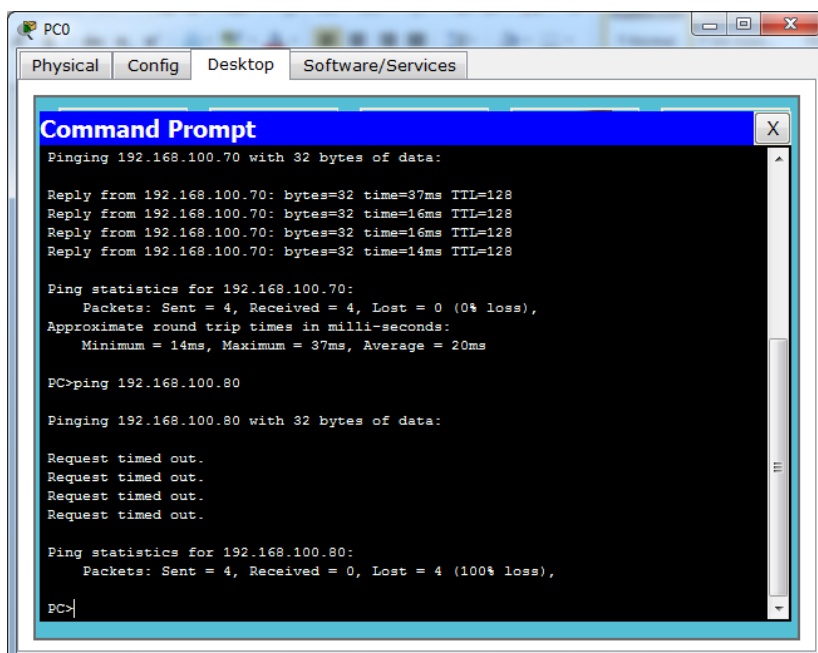
Ahora lo que vamos a realizar será el enlace troncal.



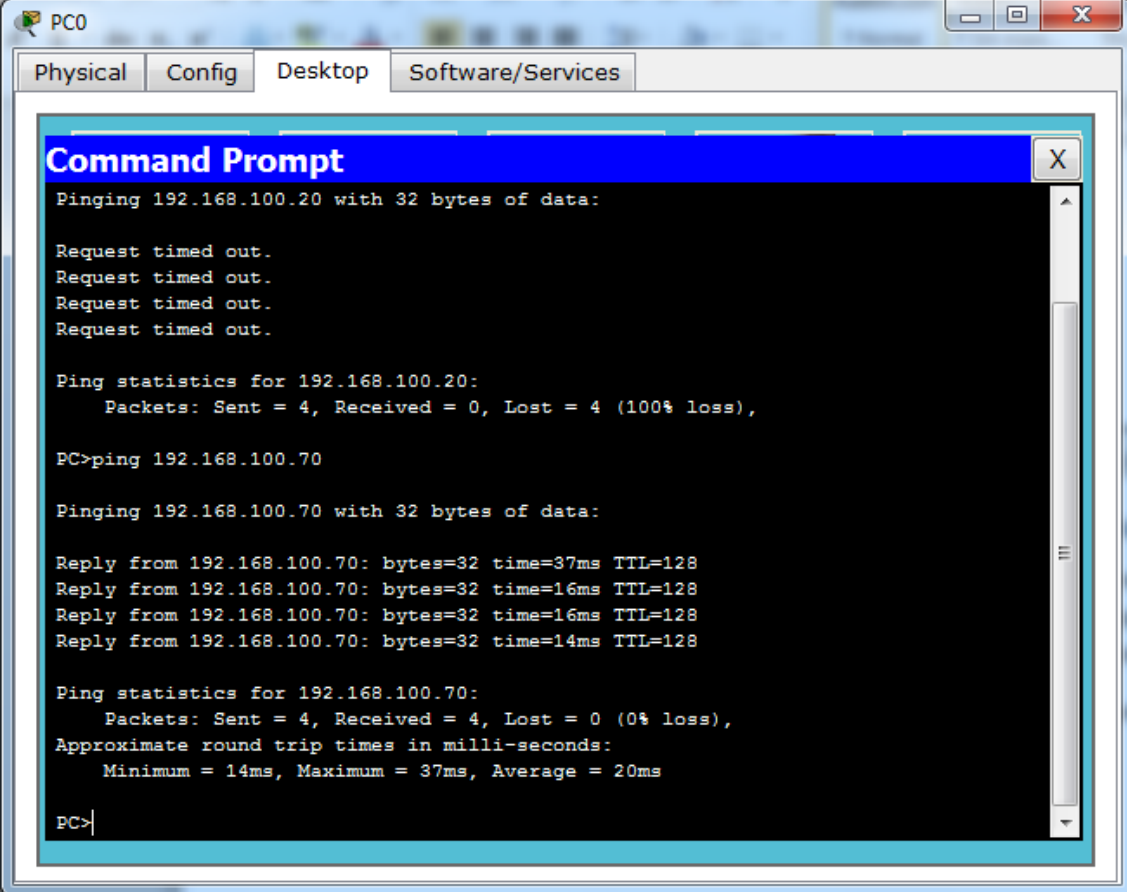


Ya tenemos los switch unidos mediante el modo troncal . Ahora simplemente realizaremos unos pings para ver si lo hemos realizado bien. Realizaremos ping a los que son de nuestro departamento para ver que llegan y aremos ping a otro departamento para ver que no llega

En la siguiente foto veremos un ping realizado de el equipo 1 a otro departamento de otro switch y no llegan los paquetes



En esta foto hemos realizado un ping desde el pc 1 al 7 y veremos que pasando por los diferentes switch podemos comunicarnos entre ellos.



The image shows a screenshot of a PC0 Command Prompt window. The window has a blue title bar with the text "Command Prompt" and a close button. Below the title bar, there are four tabs: "Physical", "Config", "Desktop", and "Software/Services". The main content area of the window is black with white text. The text shows the results of two ping commands. The first command is "ping 192.168.100.20", which results in four "Request timed out." messages and a summary showing "Packets: Sent = 4, Received = 0, Lost = 4 (100% loss)". The second command is "ping 192.168.100.70", which results in four successful replies with varying times (37ms, 16ms, 16ms, 14ms) and a summary showing "Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)". The window also shows the approximate round trip times in milliseconds: Minimum = 14ms, Maximum = 37ms, Average = 20ms. The prompt "PC>" is visible at the bottom of the window.

```
PC0
Physical Config Desktop Software/Services

Command Prompt
Pinging 192.168.100.20 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.100.20:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>ping 192.168.100.70

Pinging 192.168.100.70 with 32 bytes of data:

Reply from 192.168.100.70: bytes=32 time=37ms TTL=128
Reply from 192.168.100.70: bytes=32 time=16ms TTL=128
Reply from 192.168.100.70: bytes=32 time=16ms TTL=128
Reply from 192.168.100.70: bytes=32 time=14ms TTL=128

Ping statistics for 192.168.100.70:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 14ms, Maximum = 37ms, Average = 20ms

PC>
```