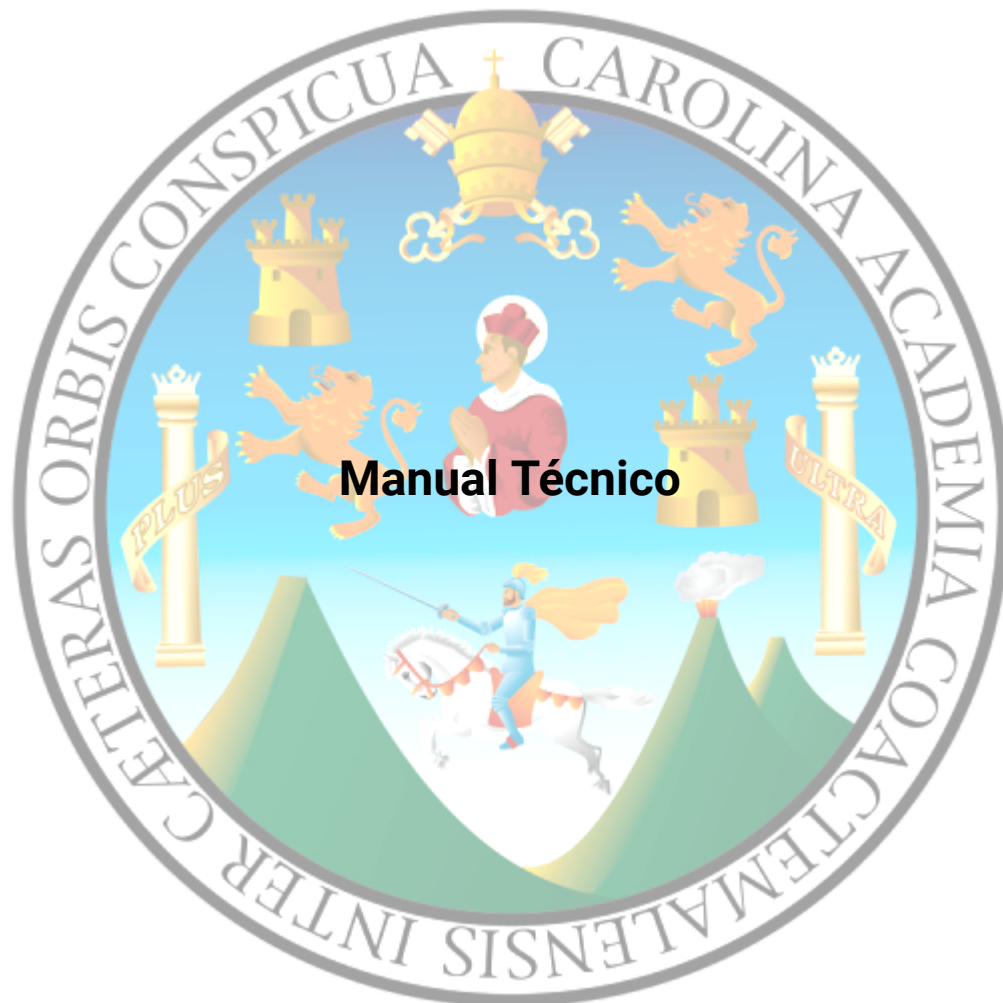


UNIVERSIDAD DE SAN CARLOS DE GUATEMALA
FACULTAD DE INGENIERÍA
ESCUELA DE CIENCIAS Y SISTEMAS
REDES DE COMPUTADORAS 2
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201900450

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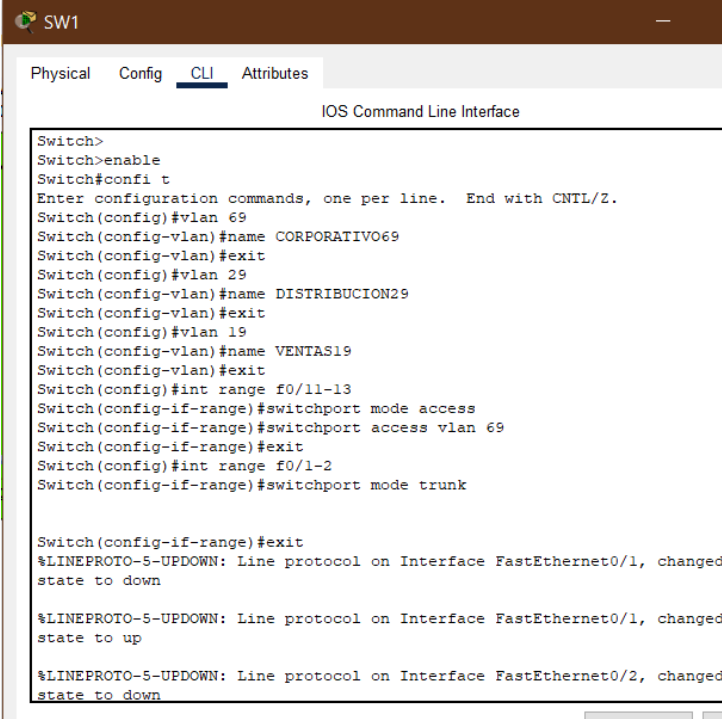
Comandos utilizados

Estos fueron los comandos generales utilizados durante la práctica para la configuración y realización de pruebas en la topología:

Protocolos

1. EIGRP: Es un protocolo de enrutamiento de vector de distancia avanzado, pero también tiene características de enrutamiento de estado de enlace. Fue desarrollado por Cisco Systems, por lo que es un protocolo propietario. Es un protocolo de enrutamiento utilizado en redes IP para determinar las mejores rutas de enrutamiento para el tráfico de datos. Utiliza métricas basadas en ancho de banda, retraso, confiabilidad y carga para tomar decisiones de enrutamiento.
2. OSPF: Es un protocolo de enrutamiento de estado de enlace, lo que significa que mantiene una base de datos de estado de enlace actualizada para tomar decisiones de enrutamiento. Es un protocolo de enrutamiento de código abierto y es ampliamente utilizado en redes IP. Se utiliza para determinar las rutas más cortas en una red IP. Divide la red en áreas y permite un enrutamiento escalable y eficiente al calcular rutas óptimas utilizando algoritmos Dijkstra. Es altamente escalable y adecuado para redes grandes y complejas. También es resistente a bucles de enrutamiento y admite la redundancia a través de áreas de enrutamiento.
3. LACP:

SW1



```
SW1
Physical Config CLI Attributes
IOS Command Line Interface

Switch>
Switch>enable
Switch#confi t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 69
Switch(config-vlan)#name CORPORATIVO69
Switch(config-vlan)#exit
Switch(config)#vlan 29
Switch(config-vlan)#name DISTRIBUCION29
Switch(config-vlan)#exit
Switch(config)#vlan 19
Switch(config-vlan)#name VENTAS19
Switch(config-vlan)#exit
Switch(config)#int range f0/11-13
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 69
Switch(config-if-range)#exit
Switch(config)#int range f0/1-2
Switch(config-if-range)#switchport mode trunk

Switch(config-if-range)#exit
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed
state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed
state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed
state to down
```

SW2

SW2

Physical Config CLI Attributes

IOS Command Line Interface

```

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0,
state to up

%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0,
state to up

Switch>
Switch>enable
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 69
Switch(config-vlan)#name CORPORATIVO69
Switch(config-vlan)#exit
Switch(config)#vlan 29
Switch(config-vlan)#name DISTRIBUCION29
Switch(config-vlan)#exit
Switch(config)#vlan 19
Switch(config-vlan)#name VENTAS19
Switch(config-vlan)#exit
Switch(config)#int f0/11
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 69
Switch(config-if)#exit
Switch(config)#

```

SW3

SW3

Physical Config CLI Attributes

IOS Command Line Interface

```

%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/11, ch
state to up

%LINK-5-CHANGED: Interface FastEthernet0/12, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/12, ch
state to up

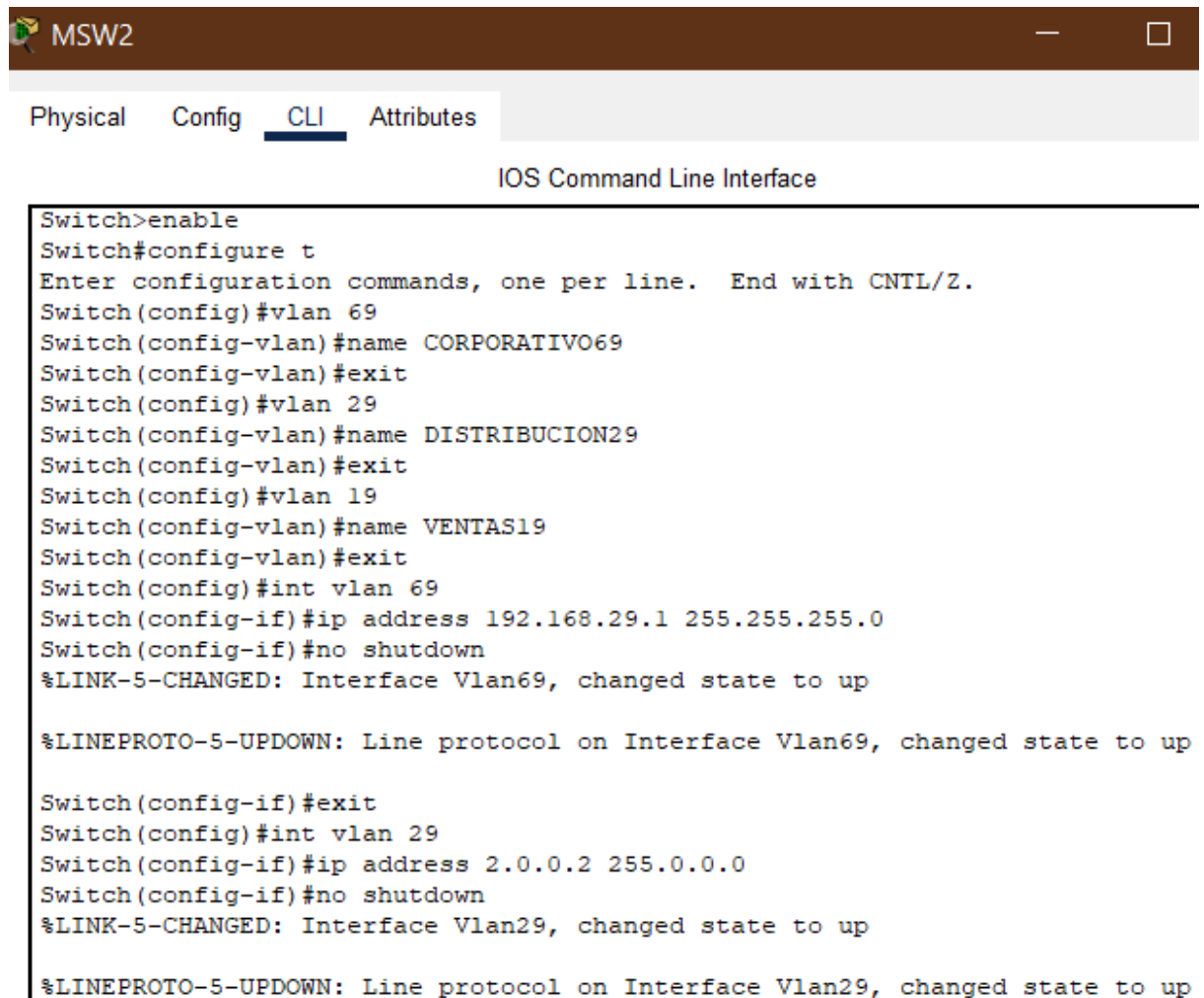
Switch>
Switch>
Switch>
Switch>enable
Switch#confi t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 69
Switch(config-vlan)#name CORPORATIVO69
Switch(config-vlan)#vlan 29
Switch(config-vlan)#name DISTRIBUCION29
Switch(config-vlan)#vlan 19
Switch(config-vlan)#name VENTAS19
Switch(config-vlan)#EXIT
Switch(config)#int range f0/11-12
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 69
Switch(config-if-range)#
Switch(config-if-range)#exit
Switch(config)#

```

Copy

MSW1

MSW2



The screenshot shows a web-based configuration interface for a network switch named MSW2. The interface has a top navigation bar with tabs for Physical, Config, CLI, and Attributes. The CLI tab is selected. Below the tabs, the title "IOS Command Line Interface" is displayed. The main area shows a series of commands entered in the CLI, followed by their execution results. The commands configure three VLANs (69, 29, and 19) with names, and then configure interfaces for each VLAN with IP addresses and shutdown status. Status messages indicate that the interfaces are now up.

```
Switch>enable
Switch#configure t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 69
Switch(config-vlan)#name CORPORATIVO69
Switch(config-vlan)#exit
Switch(config)#vlan 29
Switch(config-vlan)#name DISTRIBUCION29
Switch(config-vlan)#exit
Switch(config)#vlan 19
Switch(config-vlan)#name VENTAS19
Switch(config-vlan)#exit
Switch(config)#int vlan 69
Switch(config-if)#ip address 192.168.29.1 255.255.255.0
Switch(config-if)#no shutdown
%LINK-5-CHANGED: Interface Vlan69, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan69, changed state to up

Switch(config-if)#exit
Switch(config)#int vlan 29
Switch(config-if)#ip address 2.0.0.2 255.0.0.0
Switch(config-if)#no shutdown
%LINK-5-CHANGED: Interface Vlan29, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan29, changed state to up
```

IOS Command Line Interface

```
Switch(config)#int g0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 19
Switch(config-if)#exit
Switch(config)#
%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
GigabitEthernet0/2 (1), with Switch GigabitEthernet0/1 (29).

Switch(config)#int g0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 29
Switch(config-if)#exit
Switch(config)#int range f0/1-2
Switch(config-if-range)#switchport mode trunk
Command rejected: An interface whose trunk encapsulation is "Autoc
configured to "trunk" mode.
Command rejected: An interface whose trunk encapsulation is "Autoc
configured to "trunk" mode.
Switch(config-if-range)#exit
Switch(config)#ip routing
Switch(config)#router ospf 10
Switch(config-router)#network 2.0.0.0 0.0.0.255 area 10
Switch(config-router)#
07:31:55: %OSPF-5-ADJCHG: Process 10, Nbr 192.168.39.1 on Vlan29
to FULL, Loading Done

Switch(config-router)#network 192.168.39.0 0.0.0.255 area 10
Switch(config-router)#network 192.168.29.0 0.0.0.255 area 10
Switch(config-router)#do wr
Building configuration...
```

MSW3

```
Switch>
Switch>enable
Switch#configure t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 69
Switch(config-vlan)#name CORPORATIVO69
Switch(config-vlan)#exit
Switch(config)#vlan 29
Switch(config-vlan)#name DISTRIBUCION29
Switch(config-vlan)#exit
Switch(config)#
Switch(config)#int vlan 69
Switch(config-if)#ip address 192.168.39.1 255.255.255.0
Switch(config-if)#no shutdown
%LINK-5-CHANGED: Interface Vlan69, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan69, changed
Switch(config-if)#exit
Switch(config)#int vlan 29
Switch(config-if)#ip address 2.0.0.1 255.0.0.0
Switch(config-if)#no shutdown
Switch(config-if)#exit
%LINK-5-CHANGED: Interface Vlan29, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan29, changed
```

```
Switch(config)#int g0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 29
Switch(config-if)#exit
Switch(config)#int range f0/1-2
Switch(config-if-range)#switchport mode trunk
Command rejected: An interface whose trunk encapsulation is "Auto" (
configured to "trunk" mode.
Command rejected: An interface whose trunk encapsulation is "Auto" (
configured to "trunk" mode.
Switch(config-if-range)#exit
Switch(config)#ip routing
Switch(config)#router ospf 10
Switch(config-router)#network 2.0.0.0 0.0.0.255 area 10
Switch(config-router)#network 192.168.39.0 0.0.0.255 area 10
^
% Invalid input detected at '^' marker.

Switch(config-router)#network 192.168.39.0 0.0.0.255 area 10
Switch(config-router)#network 192.168.29.0 0.0.0.255 area 10
Switch(config-router)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#wr
Building configuration...
[OK]
Switch#
```

