Redes

Laboratorio 10 (EJERCICIO FINAL)

Tener en cuenta el valor asignado de **x**. Para efectos de la realización de este laboratorio, es 85.
Enlace a este mismo documento en Notion: https://befitting-raja-418.notion.site/Redes-52c2824d994e4a1189a4f092d5de9d45?pvs=4 (Si no funciona, es probable a que el enlace ha expirado)

EJERCICIO final 2023-1.docx

▼ Configuración de parámetros básicos R2

```
Router> enable
Router# conf t
Router(config)# hostname R2
R2(config)# no ip domain-lookup
R2(config)# enable secret 2122637
R2(config)# line console 0
R2(config-line)# pass cisco
R2(config-line)# login
R2(config-line)# exit
R2(config)# banner motd *Advertencia, no entre si no esta a
R2(config)# service password-encryption
```

▼ Configuración de acceso por SSH en R2

Configurando lineas VTY para acceso por SSH

```
R2(config)# ip domain-name cisco.com
R2(config)# username Admin secret P4ssw0rd123
R2(config)# crypto key generate rsa
R2(config)# line vty 0 4
R2(config-line)# transport input ssh
```

Configurando una ACL para acceso SSH

- Debido a que se desea configurar un acceso SSH a los switch y routers donde solo la VLAN de gestión tenga acceso al VTY, se utiliza la dirección `192.168.85.129` porque fue la asignada a la respectiva VLAN de gestión en R2
    - Para calcular la wildcard, es posible usar Subnet calculator. Para esto ingresamos la dirección (`192.168.85.129`) y su respectiva máscara (`255.255.255.224`). Usando la wildcard podemos configurar la respectiva ACL. En este caso: `0.0.0.31`

Ya con la respectiva wildcard, es posible ingresar los siguientes comandos

```
R2(config)# access-list 1 permit 192.168.85.128 0.0.0.31
R2(config)# line vty 0 4
R2(config-line)# access-class 1 in
R2(config-line)# login local
```

▼ Configuración de opciones de seguridad puertos switch S2

- Creando las respectivas VLANS

```
Switch> enable
Switch# conf t
Switch(config)# hostname S2
S2(config)# vlan 11
S2(config-vlan)# name Planta
S2(config-vlan)# vlan 12
S2(config-vlan)# name Oficinas
S2(config-vlan)# vlan 13
S2(config-vlan)# name Servidores
```

```
S2(config-vlan)# vlan 14
S2(config-vlan)# name Gestion
S2(config-vlan)# vlan 15
S2(config-vlan)# name Native
```

- Habilitando los puertos de acceso de S2 en modo acceso y configurando las VLANS en sus respectivos puertos de acceso

```
S2(config-vlan)# int r f0/1-6
S2(config-if-range)# switchport mode access
S2(config-if-range)# switchport access vlan 11
S2(config-if-range)#
S2(config-if-range)# int r f0/7-12
S2(config-if-range)# switchport mode access
S2(config-if-range)# switchport access vlan 12
S2(config-if-range)#
S2(config-if-range)# int r f0/13-18
S2(config-if-range)# switchport mode access
S2(config-if-range)# switchport access vlan 13
S2(config-if-range)#
S2(config-if-range)# int r f0/19-24
S2(config-if-range)# switchport mode access
S2(config-if-range)# switchport access vlan 14
S2(config-if-range)#
```

- Configurando el respectivo puerto troncal (*Native*)

```
S2(config-if-range)# int g0/1
S2(config-if)# switchport mode trunk
S2(config-if)# switchport trunk native vlan 15
S2(config-if)# switchport trunk allowed vlan 11,12,13,14
```

- Deshabilitando los puertos sin utilizar

```
S2(config)# int r f 0/2-6
S2(config-if-range)# sh
[...]
S2(config-if-range)# int r f 0/8-12
```

```
S2(config-if-range)# sh
[...]
S2(config-if-range)# int r f 0/14-24
S2(config-if-range)# sh
[...]
S2(config-if-range)# int g0/2
S2(config-if)# sh
[...]
```

- Configurando las opciones de seguridad
  - **DARLE ENTER A `switchport port-security` O SINO NO SE ACTIVA**
  - `Switchport port-security 2`: Para que solo dos macs sean permitidas
  - `Switchport port-security mac-address sticky`: Para agregar las macs que se encuentran ya conectadas a la configuración
  - `Switchport port-security violation restrict`: Enviar un mensaje al log pero no deshabilita el puerto
    - `shutdown`: para que lo apague
    - `protect`: Denegar sin notificar

```
S2(config-if)# int r f0/1-24
S2(config-if-range)# switchport port-security
S2(config-if-range)# switchport port-security mac-addres
S2(config-if-range)# switchport port-security maximum 2
S2(config-if-range)# switchport port-security violation
```

▼ Configurando el direccionamiento para todos los dispositivos

- Configurando el **direccionamiento** para todos los dispositivos de acuerdo con la tabla de direccionamiento (Aquí también se configura el *DNS* y *Gateway)*.
  - **R1**

```
Router> enable
Router# conf t
Router(config)# hostname R1
R1(config)# int g0/0
R1(config-if)# ip add 192.168.85.1 255.255.255.224
R1(config-if)# no sh
R1(config-if)#
R1(config-if)# int g0/0/0
R1(config-if)# ip add 192.168.85.225 255.255.255.252
R1(config-if)# no sh
R1(config-if)# int g0/1/0
R1(config-if)# ip add 192.168.85.229 255.255.255.252
R1(config-if)# no sh
```

- **R2**

```
R2> enable
R2# conf t
R2(config)# int g0/0
R2(config-if)# no sh
R2(config-if)#
R2(config-if)# int g0/0.11
R2(config-subif)# encapsulation dot1Q 11
R2(config-subif)# ip add 192.168.85.33 255.255.255.22
R2(config-subif)#
R2(config-subif)# int g0/0.12
R2(config-subif)# encapsulation dot1Q 12
R2(config-subif)# ip add 192.168.85.65 255.255.255.22
R2(config-subif)#
R2(config-subif)# int g0/0.13
R2(config-subif)# encapsulation dot1Q 13
R2(config-subif)# ip add 192.168.85.97 255.255.255.22
R2(config-subif)#
R2(config-subif)# int g0/0.14
R2(config-subif)# encapsulation dot1Q 14
R2(config-subif)# ip add 192.168.85.129 255.255.255.2
R2(config-subif)#
R2(config-subif)# int g0/0.15
```

```
R2(config-subif)# encapsulation dot1Q 15 native
R2(config-subif)# ip add 192.168.85.161 255.255.255.2
R2(config-subif)#
R2(config-subif)# int g0/0/0
R2(config-if)# ip add 192.168.85.226 255.255.255.252
R2(config-if)# no sh
R2(config-if)#
R2(config-if)# int g0/1/0
R2(config-if)# ip add 192.168.85.234 255.255.255.252
R2(config-if)# no sh
R2(config-if)#
R2(config-if)# int g0/3/0
R2(config-if)# ip add 200.31.12.1 255.255.255.252
R2(config-if)# no sh
```

- **R3**

```
Router> enable
Router# conf t
Router(config)# hostname R3
R3(config)# int g0/0
R3(config-if)# ip add 192.168.85.193 255.255.255.252
R3(config-if)# no sh
R3(config-if)#
R3(config-if)# int g0/0/0
R3(config-if)# ip add 192.168.85.230 255.255.255.252
R3(config-if)# no sh
R3(config-if)#
R3(config-if)# int g0/1/0
R3(config-if)# ip add 192.168.85.233 255.255.255.252
R3(config-if)# no sh
```

- No olvidar de configurar manualmente (Desde la ventana de *IP Configuration*) el direccionamiento de los dispositivos (PC y Server).
- Para el gateway del server debe sere el de la vlan que le corresponda, dado que nuestro servidor se conecta a S2 por f0/13, R2 lo entiende como G0/0.13 cuya ip es 192.168.X.97 que es el gateway del servidor

- **S1**

```
S1> enable
S1# conf t
S1(config)# int vlan 1
S1(config-if)# ip add 192.168.85.30 255.255.255.224
S1(config-if)# no sh
S1(config-if)#
S1(config-if)# exit
S1(config)# ip default-gateway 192.168.85.1
```

- **S2**

```
S2> enable
S2# conf t
S2(config)# int vlan 14
S2(config-if)# ip add 192.168.85.130 255.255.255.224
S2(config-if)# no sh
S2(config-if)#
S2(config-if)# exit
S2(config)# ip default-gateway 192.168.85.129
```

- **S3**

```
Switch> enable
Switch# conf t
Switch(config)# hostname S3
S3(config)# int vlan 1
S3(config-if)# ip add 192.168.85.222 255.255.255.224
S3(config-if)# no sh
S3(config-if)# exit
S3(config)# ip default-gateway 192.168.85.193
```

- **Servidor:** Para el servidor asignar la dirección **PRIVADA**.

- Respecto a **DHCP.** Se encuentra configurado mas abajo.

▼ Configurando enrutamiento entre vlans

Esto ya se hizo en **“Configuración de opciones de seguridad puertos switch S2”**

▼ Configuración de server Local de LAN 2

- **Configurar el server HTTP:** Servidor > Services > HTTP > Modifique el index.html para alimentos saludables > Save
- **Configurar el server DNS:** Servidor > Services > DNS
  - DNS Service > ON
  - **Name:** www.alimentosaludables.com, **Address:** 192.168.85.98
  - **Name:** www,google.com, **Address:** 216.58.222.196

▼ Configurando enrutamiento dinámico con OSPF

- Se asigna el ID de proceso 10, ID del router y se asocian las redes directamente conectadas con su interfaz LAN como pasiva.
- **R1**

```
R1> enable
R1# conf t
R1(config)# router ospf 10
R1(config-router)# router-id 1.1.1.1
R1(config-router)# do sh ip route

Gateway of last resort is not set

     192.168.85.0/24 is variably subnetted, 6 subnets, 3
C       192.168.85.0/27 is directly connected, GigabitEt
L       192.168.85.1/32 is directly connected, GigabitEt
C       192.168.85.224/30 is directly connected, Gigabit
L       192.168.85.225/32 is directly connected, Gigabit
C       192.168.85.228/30 is directly connected, Gigabit
L       192.168.85.229/32 is directly connected, Gigabit

R1(config-router)# net 192.168.85.0 0.0.0.31 area 0
R1(config-router)# net 192.168.85.224 0.0.0.3 area 0
R1(config-router)# net 192.168.85.228 0.0.0.3 area 0
```

```
R1(config-router)# passive-interface g0/0
R1(config-router)#
```

- `do sh ip route`: Sirve para mostrarme la tabla de enrutamiento y ayudarme a asociar las redes.

- **R2**

```
R2> enable
R2# conf t
R2(config)# do sh ip route

Gateway of last resort is not set

     192.168.85.0/24 is variably subnetted, 14 subnets,
C       192.168.85.32/27 is directly connected, GigabitE
L       192.168.85.33/32 is directly connected, GigabitE
C       192.168.85.64/27 is directly connected, GigabitE
L       192.168.85.65/32 is directly connected, GigabitE
C       192.168.85.96/27 is directly connected, GigabitE
L       192.168.85.97/32 is directly connected, GigabitE
C       192.168.85.128/27 is directly connected, Gigabit
L       192.168.85.129/32 is directly connected, Gigabit
C       192.168.85.160/27 is directly connected, Gigabit
L       192.168.85.161/32 is directly connected, Gigabit
C       192.168.85.224/30 is directly connected, Gigabit
L       192.168.85.226/32 is directly connected, Gigabit
C       192.168.85.232/30 is directly connected, Gigabit
L       192.168.85.234/32 is directly connected, Gigabit
     200.31.12.0/24 is variably subnetted, 2 subnets, 2
C       200.31.12.0/30 is directly connected, GigabitEth
L       200.31.12.1/32 is directly connected, GigabitEth

R2(config)# router ospf 10
R2(config-router)# router-id 2.2.2.2
R2(config-router)# net 192.168.85.32 0.0.0.31 area 0
R2(config-router)# net 192.168.85.64 0.0.0.31 area 0
R2(config-router)# net 192.168.85.96 0.0.0.31 area 0
R2(config-router)# net 192.168.85.128 0.0.0.31 area 0
```

```
R2(config-router)# net 192.168.85.160 0.0.0.31 area 0
R2(config-router)# net 192.168.85.224 0.0.0.3 area 0
R2(config-router)# net 192.168.85.232 0.0.0.3 area 0
R2(config-router)#
R2(config-router)# passive-interface g0/0
R2(config-router)# default-information originate
R2(config-router)# exit
R2(config)# ip route 0.0.0.0 0.0.0.0 g0/3/0
R2(config)#
```

- `ip route 0.0.0.0 0.0.0.0 g0/3/0`: Indica que cualquier dirección que no tenga una ruta, dirigirla al puerto `g0/3/0`

- **R3**

```
R3> enable
R3# conf t
R3(config)# router ospf 10
R3(config-router)# router-id 3.3.3.3
R3(config-router)# do sh ip route

Gateway of last resort is not set

     192.168.85.0/24 is variably subnetted, 6 subnets, 2
C       192.168.85.192/30 is directly connected, Gigabit
L       192.168.85.193/32 is directly connected, Gigabit
C       192.168.85.228/30 is directly connected, Gigabit
L       192.168.85.230/32 is directly connected, Gigabit
C       192.168.85.232/30 is directly connected, Gigabit
L       192.168.85.233/32 is directly connected, Gigabit

R3(config-router)# net 192.168.85.192 0.0.0.31 area 0
R3(config-router)# net 192.168.85.228 0.0.0.3 area 0
R3(config-router)# net 192.168.85.232 0.0.0.3 area 0
R3(config-router)#
R3(config-router)# passive-interface g0/0
```

▼ Configurando una ruta predeterminada

- Eso ya se realizó en *“Configurando enrutamiento dinámico con OSPF”* con el siguiente comando:

```
R2(config)# ip route 0.0.0.0 0.0.0.0 g0/3/0
```

▼ Configurando la NAT

- **R2**

```
R2> enable
R2# conf t
R2(config)# ip nat inside source static 192.168.85.98 20
R2(config)# int g0/0
R2(config-if)# ip nat inside
R2(config-if)# int g0/0.11
R2(config-subif)# ip nat inside
R2(config-subif)# int g0/0.12
R2(config-subif)# ip nat inside
R2(config-subif)# int g0/0.13
R2(config-subif)# ip nat inside
R2(config-subif)# int g0/0.14
R2(config-subif)# ip nat inside
R2(config-subif)# int g0/0.15
R2(config-subif)# ip nat inside
R2(config-subif)# int g0/0/0
R2(config-if)# ip nat inside
R2(config-if)# int g0/1/0
R2(config-if)# ip nat inside
R2(config-if)# int g0/3/0
R2(config-if)# ip nat outside
R2(config-if)#
```

  - `ip nat inside source static 192.168.85.98 200.123.226.1`**:** Traduce la dirección IP fuente de los paquetes de viajan del interior al exterior. Primero va la dirección privada y después la dirección pública.
  - `ip nat inside`**:** Indica que se si va al determinado puerto, traduzca de pública a privada.

- `ip nat outside`: indica que si va a al determinado puerto, traduzca de privada a pública.

- Si deseas probar que está funcionando. Intenta realizar ping desde: *Servidor Google* > *Desktop* > *Command Prompt* > `ping 200.123.226.1`.
- Para acceder por medio del navegador web, debe de agregarse la dirección de www.alimentosaludables.com desde: *Servidor Google* > *Services* > *DNS* >
  - **Name:** www.alimentosaludables.com > **Address:** 200.123.226.1 > Add

▼ Configurando la PAT

```
R2(config)# access-list 2 permit 192.168.85.0 0.0.0.255
R2(config)# ip nat inside source list 2 interface g0/3/0 ov
```

▼ Configurando DHCP

- Se excluyen las 5 primeras IP de la red para asignación manual

```
R2(config)# ip dhcp excluded-address 192.168.85.1 192.16
R2(config)# ip dhcp excluded-address 192.168.85.33 192.1
R2(config)# ip dhcp excluded-address 192.168.85.65 192.1
R2(config)# ip dhcp excluded-address 192.168.85.193 192.
```

- Configurando red, default-gateway, y dns-server.
  - `ip dhcp pool`: Crea una determinada pool para asignar a una LAN
  - `net 192.168.85.0 255.255.255.224`: Asigna las determinadas direcciones IP a usar. En este caso estamos asignamos las direcciones IP de la LAN 0 indicando que empiezan desde `192.168.85.0` con máscara `255.255.255.224`.
  - `default-router`: Indica el router de la LAN
  - `dns-server`: Indica el servidor DNS.

```
R2(config)# ip dhcp pool DHCP-LAN1
R2(dhcp-config)# net 192.168.85.0 255.255.255.224
R2(dhcp-config)# default-router 192.168.85.1
```

```
R2(dhcp-config)# dns-server 192.168.85.98
R2(dhcp-config)#
R2(dhcp-config)# ip dhcp pool DHCP-LAN3
R2(dhcp-config)# net 192.168.85.192 255.255.255.224
R2(dhcp-config)# default-router 192.168.85.193
R2(dhcp-config)# dns-server 192.168.85.98
```

- Desde los demás routers (R1 y R3), se asigna el agente encargado de asignar las direcciones IP por medio de DHCP.

```
R3(config)# int g0/0
R3(config-if)# ip helper-address 192.168.85.33
```

```
R1(config)# int g0/0
R1(config)# ip helper-address 192.168.85.33
```

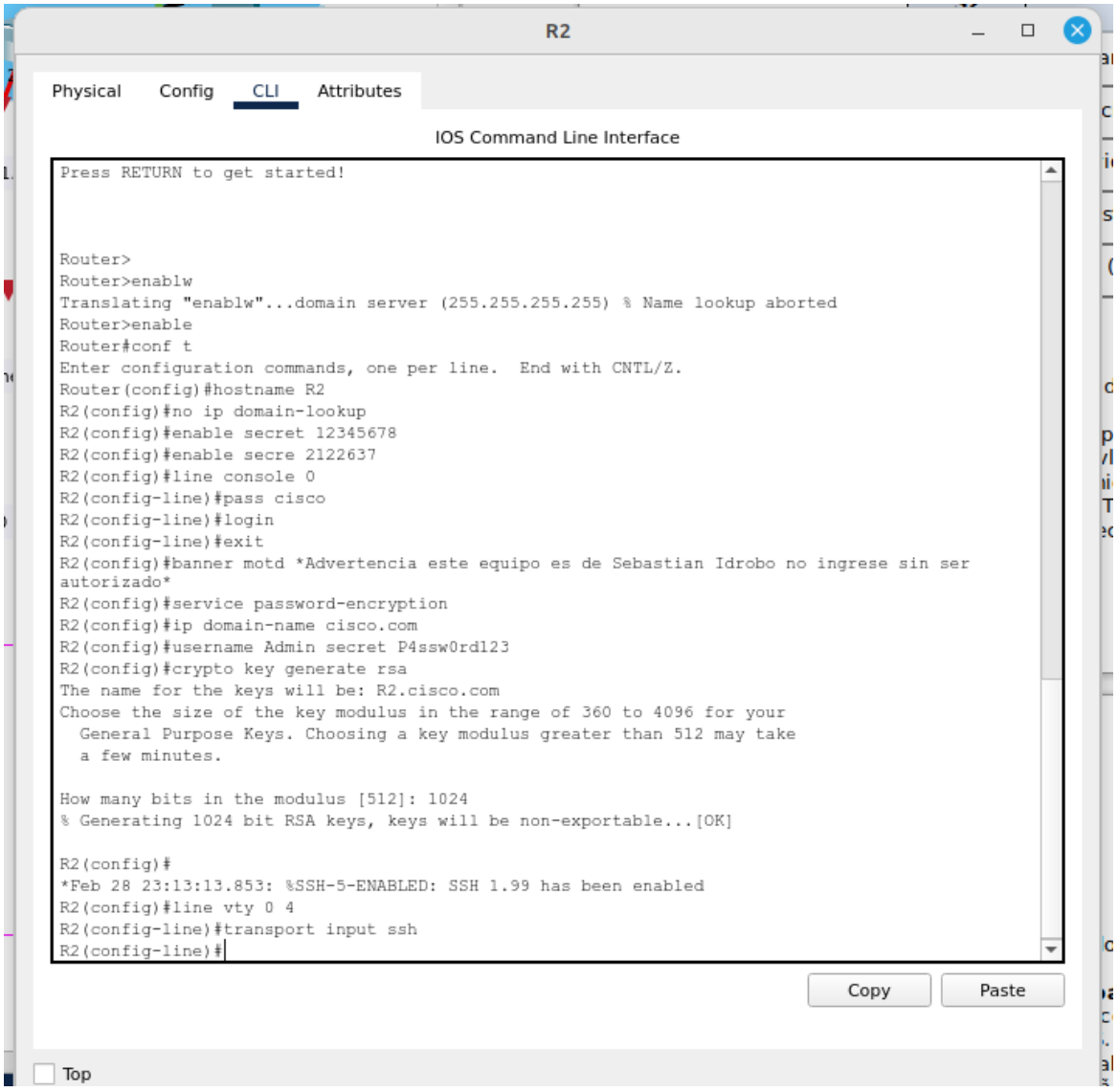
- Se asignan las pools para las VLANS

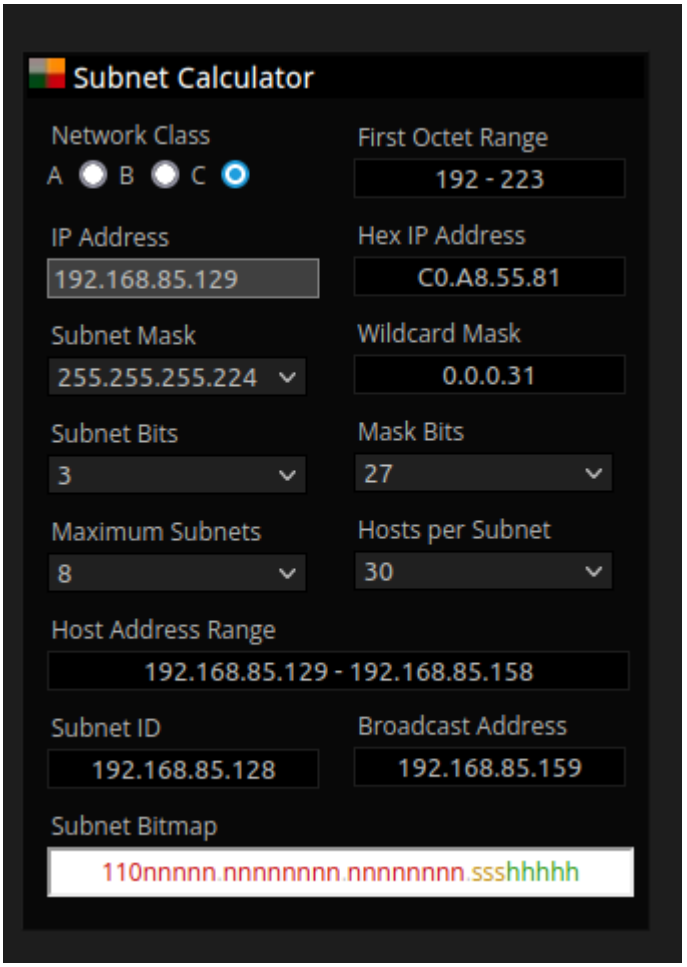
```
R2(config)# ip dhcp pool DHCP-VLAN11
R2(dhcp-config)# net 192.168.85.32 255.255.255.224
R2(dhcp-config)# default-router 192.168.85.33
R2(dhcp-config)# dns-server 192.168.85.98
R2(dhcp-config)#
R2(dhcp-config)# ip dhcp pool DHCP-VLAN12
R2(dhcp-config)# net 192.168.85.64 255.255.255.224
R2(dhcp-config)# default-router 192.168.85.65
R2(dhcp-config)# dns-server 192.168.85.98
```

💡 **SEBASTIAN ES MI PASTOR Y NADA ME FALTARA... 🙏**

▼ Pantallazos desorganizados

EJERCICIO FINAL - REDES

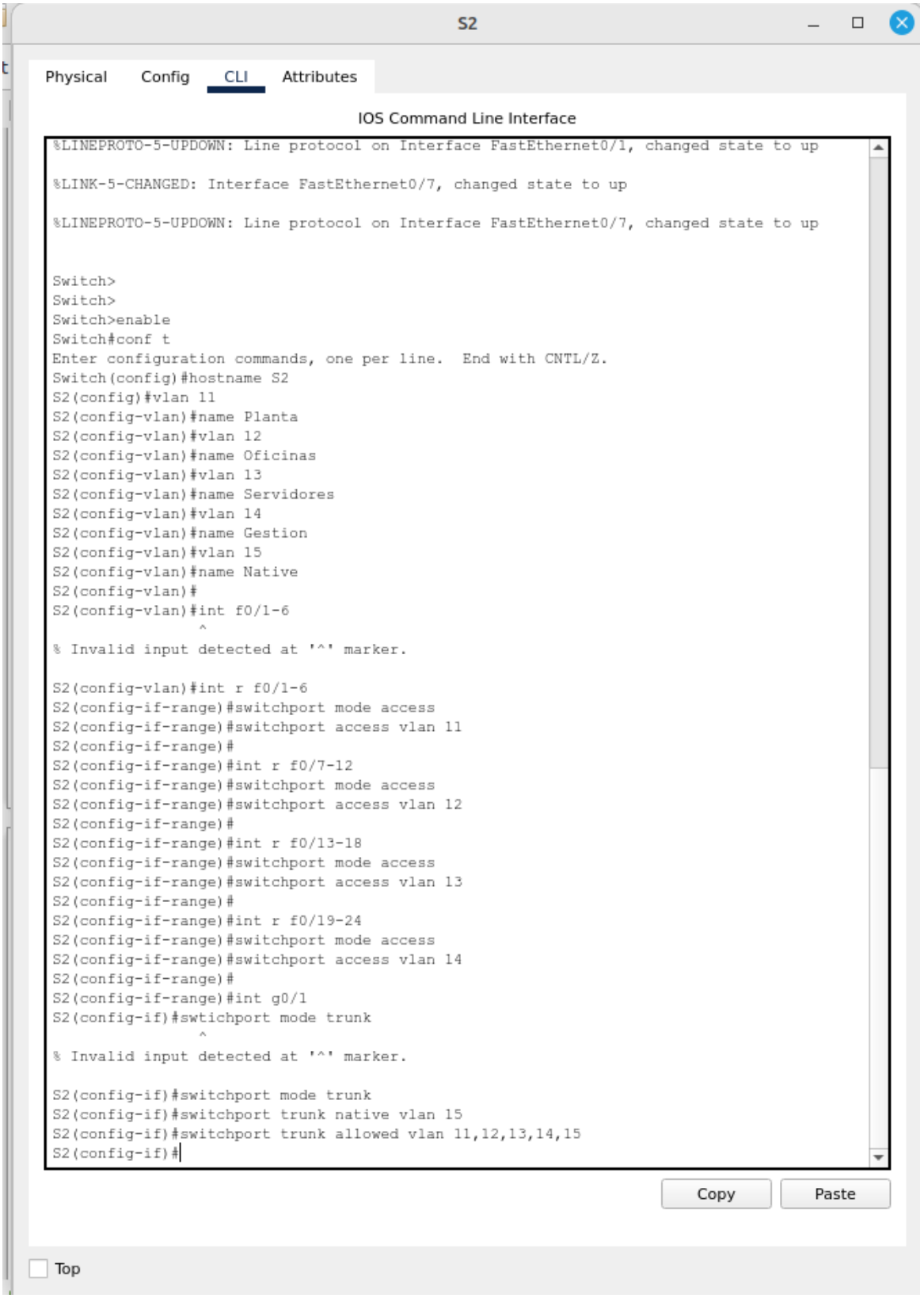

R2
Physical
Config
CLI
Attributes
IOS Command Line Interface
Press RETURN to get started!
Router>
Router>enablw
Translating "enablw"...domain server (255.255.255.255) % Name lookup aborted
Router>enable
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R2
R2(config)#no ip domain-lookup
R2(config)#enable secret 12345678
R2(config)#enable secre 2122637
R2(config)#line console 0
R2(config-line)#pass cisco
R2(config-line)#login
R2(config-line)#exit
R2(config)#banner motd *Advertencia este equipo es de Sebastian Idrobo no ingrese sin ser autorizado*
R2(config)#service password-encryption
R2(config)#ip domain-name cisco.com
R2(config)#username Admin secret P4ssw0rd123
R2(config)#crypto key generate rsa
The name for the keys will be: R2.cisco.com
Choose the size of the key modulus in the range of 360 to 4096 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.
How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]
R2(config)#
*Feb 28 23:13:13.853: %SSH-5-ENABLED: SSH 1.99 has been enabled
R2(config)#line vty 0 4
R2(config-line)#transport input ssh
R2(config-line)#
Copy
Paste
Top



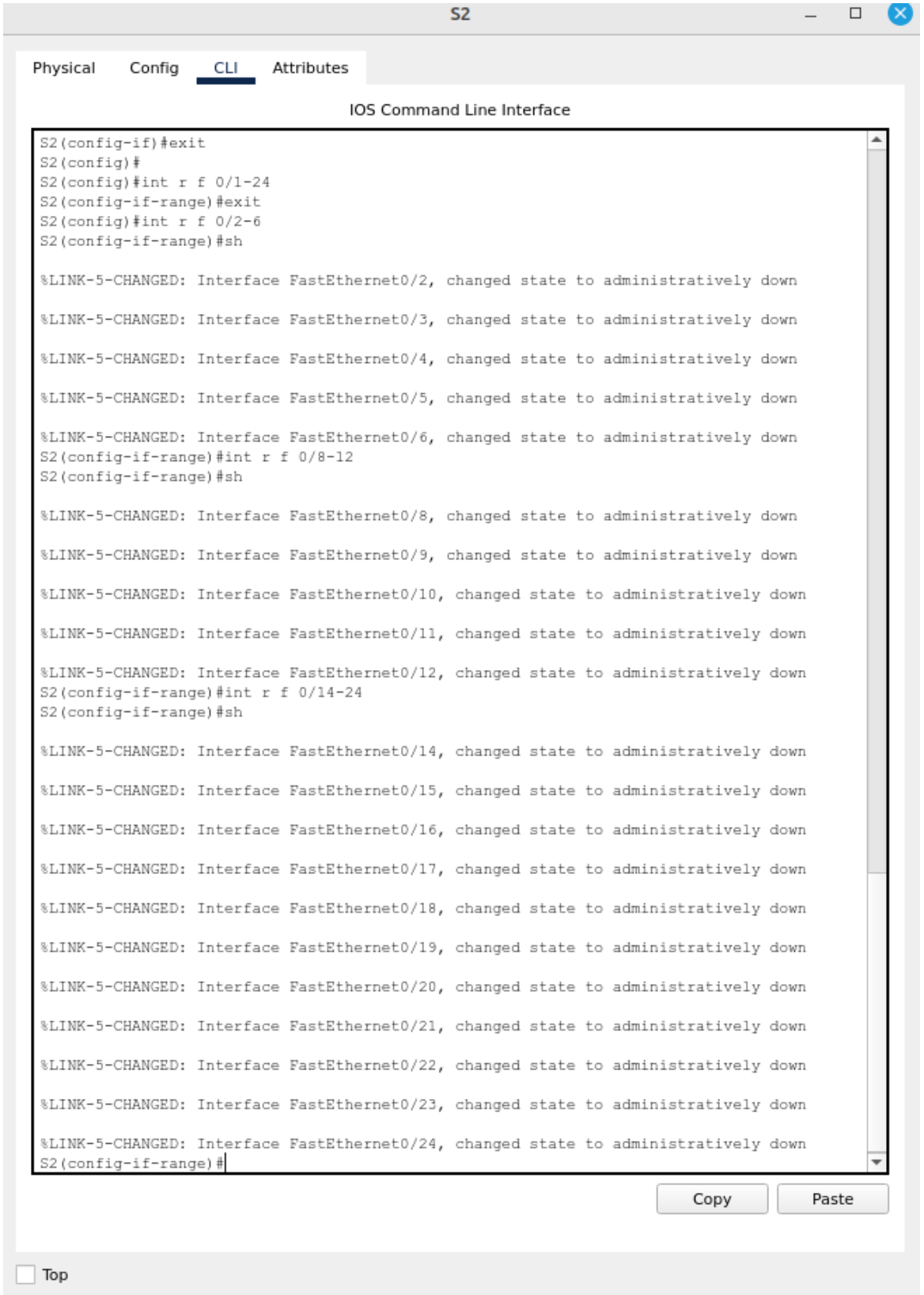

```
R2(config)#banner motd *Advertencia este equipo es de Sebastian Idrobo no ingrese sin ser
autorizado*
R2(config)#service password-encryption
R2(config)#ip domain-name cisco.com
R2(config)#username Admin secret P4ssw0rd123
R2(config)#crypto key generate rsa
The name for the keys will be: R2.cisco.com
Choose the size of the key modulus in the range of 360 to 4096 for your
  General Purpose Keys. Choosing a key modulus greater than 512 may take
  a few minutes.

How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

R2(config)#
*Feb 28 23:13:13.853: %SSH-5-ENABLED: SSH 1.99 has been enabled
R2(config)#line vty 0 4
R2(config-line)#transport input ssh
R2(config-line)#exit
R2(config)#access-list 1 permit 192.168.85.128 0.0.0.31
R2(config)#
R2(config)#line vty 0 4
R2(config-line)#access-class 1 in
R2(config-line)#login local
R2(config-line)#
```

Copy Paste

Haciendo el cuarto punto: Configuración de opciones de seguridad puertos switch S2



Deshabilitando los demas puertos que no se estan usando


S2
Physical
Config
CLI
Attributes
IOS Command Line Interface
S2(config-if)#exit
S2(config)#
S2(config)#int r f 0/1-24
S2(config-if-range)#exit
S2(config)#int r f 0/2-6
S2(config-if-range)#sh
%LINK-5-CHANGED: Interface FastEthernet0/2, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/3, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/6, changed state to administratively down
S2(config-if-range)#int r f 0/8-12
S2(config-if-range)#sh
%LINK-5-CHANGED: Interface FastEthernet0/8, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/9, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/10, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/11, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/12, changed state to administratively down
S2(config-if-range)#int r f 0/14-24
S2(config-if-range)#sh
%LINK-5-CHANGED: Interface FastEthernet0/14, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/15, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/16, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/17, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/18, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/19, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/20, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/21, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/22, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/23, changed state to administratively down
%LINK-5-CHANGED: Interface FastEthernet0/24, changed state to administratively down
S2(config-if-range)#
Copy
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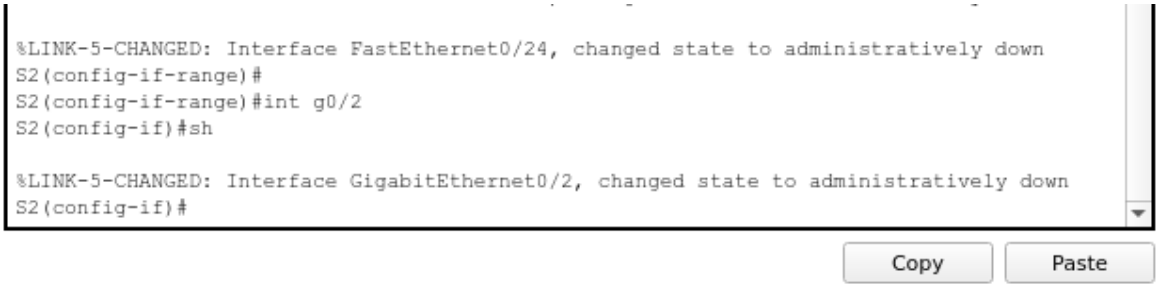
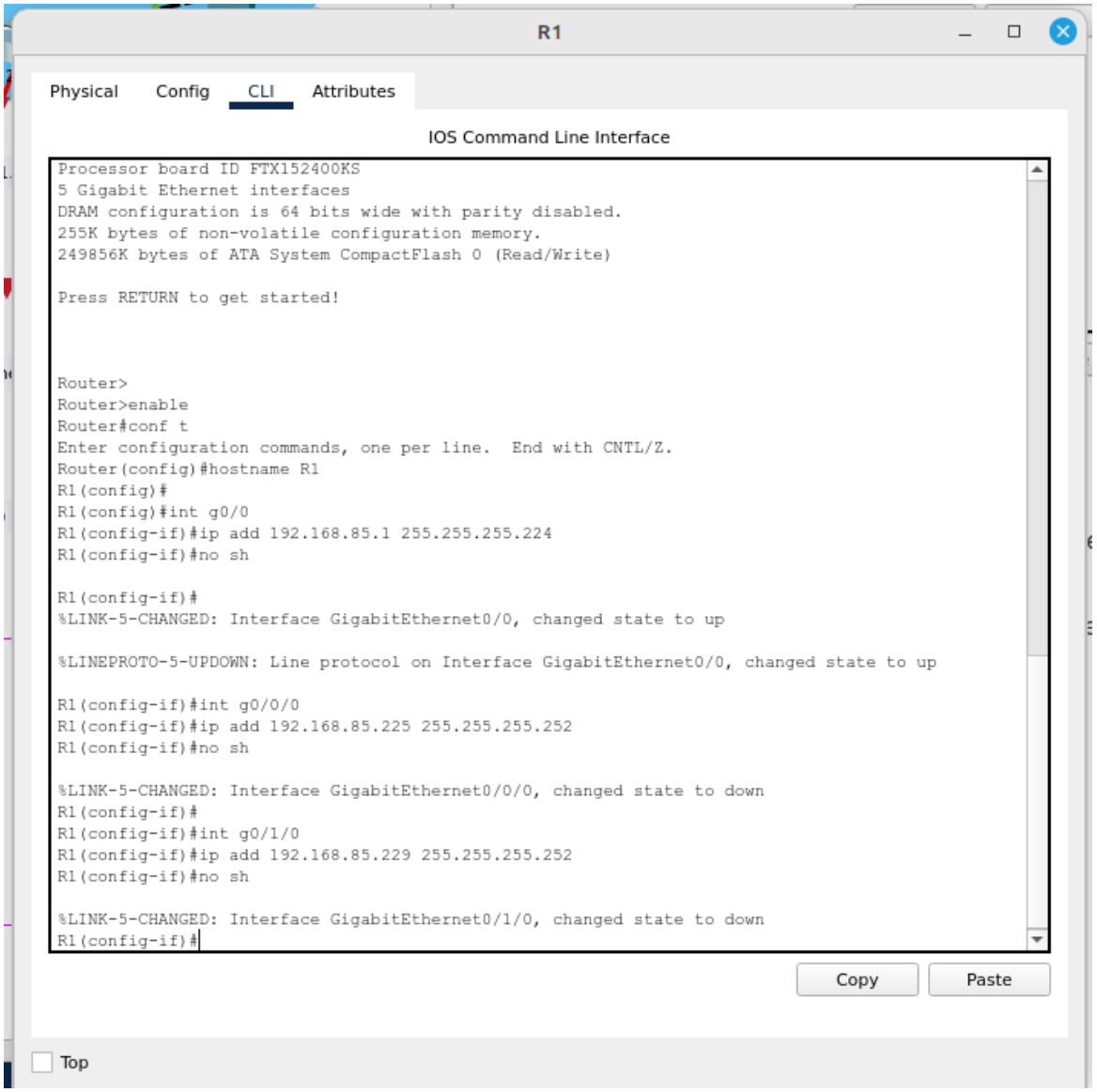
Top



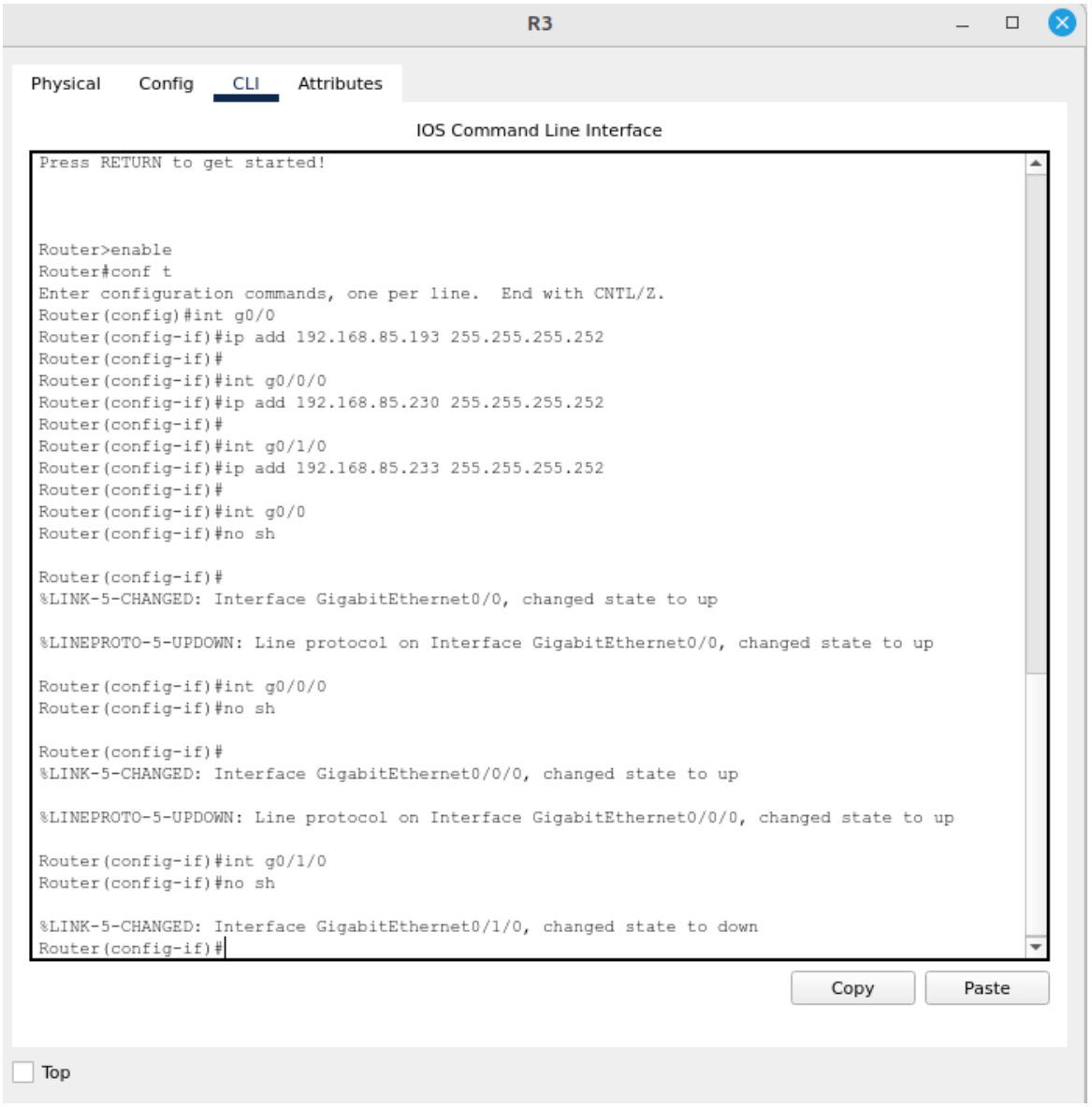
Configurando las opciones de seguridad en S2

- **DARLE ENTER A switchport port-security O SINO NO SE ACTIVA**
- `Switchport port-security 2` para que solo dos macs sean permitidas
- `Switchport port-security mac-address sticky` para agregar las macs que se encuentran ya conectadas a la configuración
- `Switchport port-security violation restrict` para que envie un mensaje al log pero no deshabilite
  - shutdown: para que lo apague
  - protect: Denegar sin notificar

Configurando puertos R1



En el PC0 le añadimos la ip 192.168.85.2 255.255.255.224 192.168.85.1. Esto para probar ping solamente

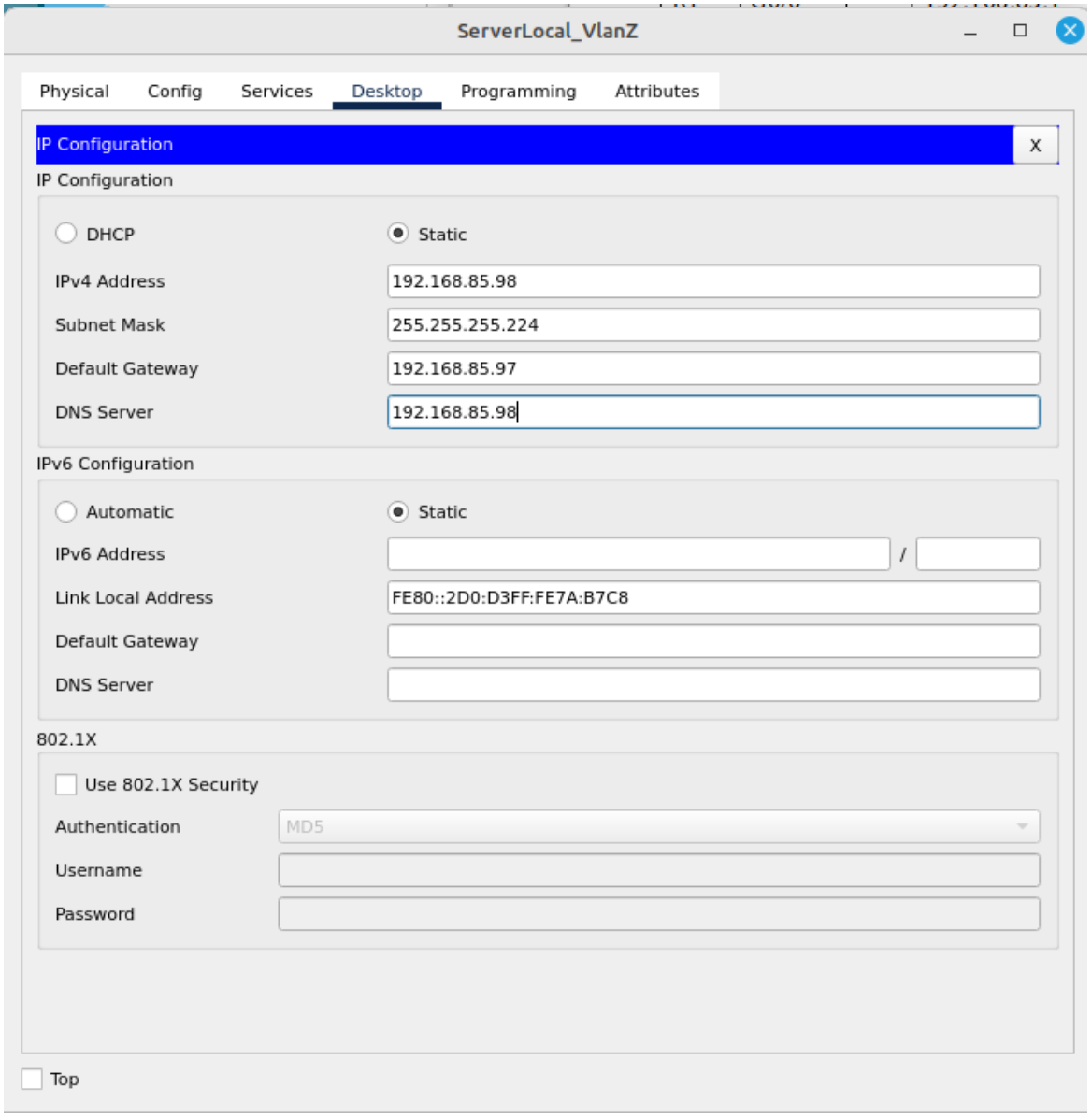


Y ahora configurando R2

Es de esta manera que se configuran las vlans.

Configrando las wans en R2:

Configurando el servidor de manera manual:



Configurando el direccionamiento de los switches:

```
S1>
S1>enable
S1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
S1(config)#int vlan 1
S1(config-if)#ip add 192.168.85.30 255.255.255.224
S1(config-if)#no sh

S1(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S1(config-if)#exit
S1(config)#ip default-gateway 192.168.85.1
S1(config)#
```

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```
Switch>
Switch>enable
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname S3
S3(config)#ubt vlan 1
           ^
% Invalid input detected at '^' marker.

S3(config)#int vlan 1
S3(config-if)#ip add 192.168.85.222 255.255.255.224
S3(config-if)#no sh

S3(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

S3(config-if)#ip def
              ^
% Invalid input detected at '^' marker.

S3(config-if)#ip default-gateway 192.168.85.193
S3(config)#
```

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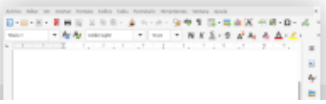
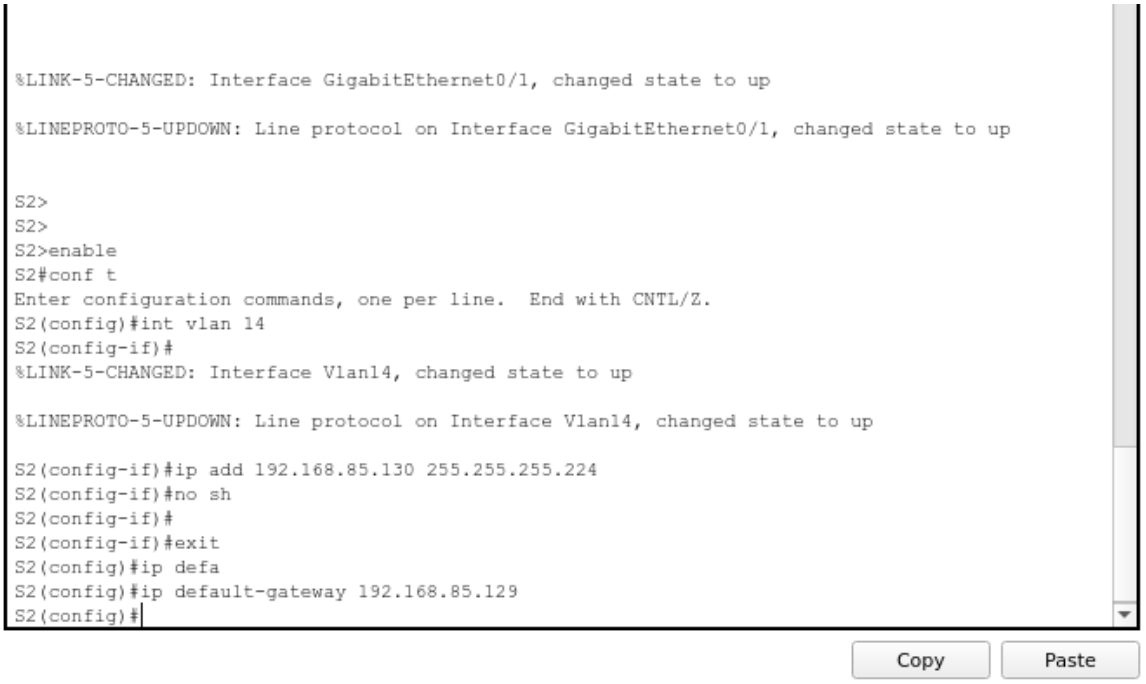
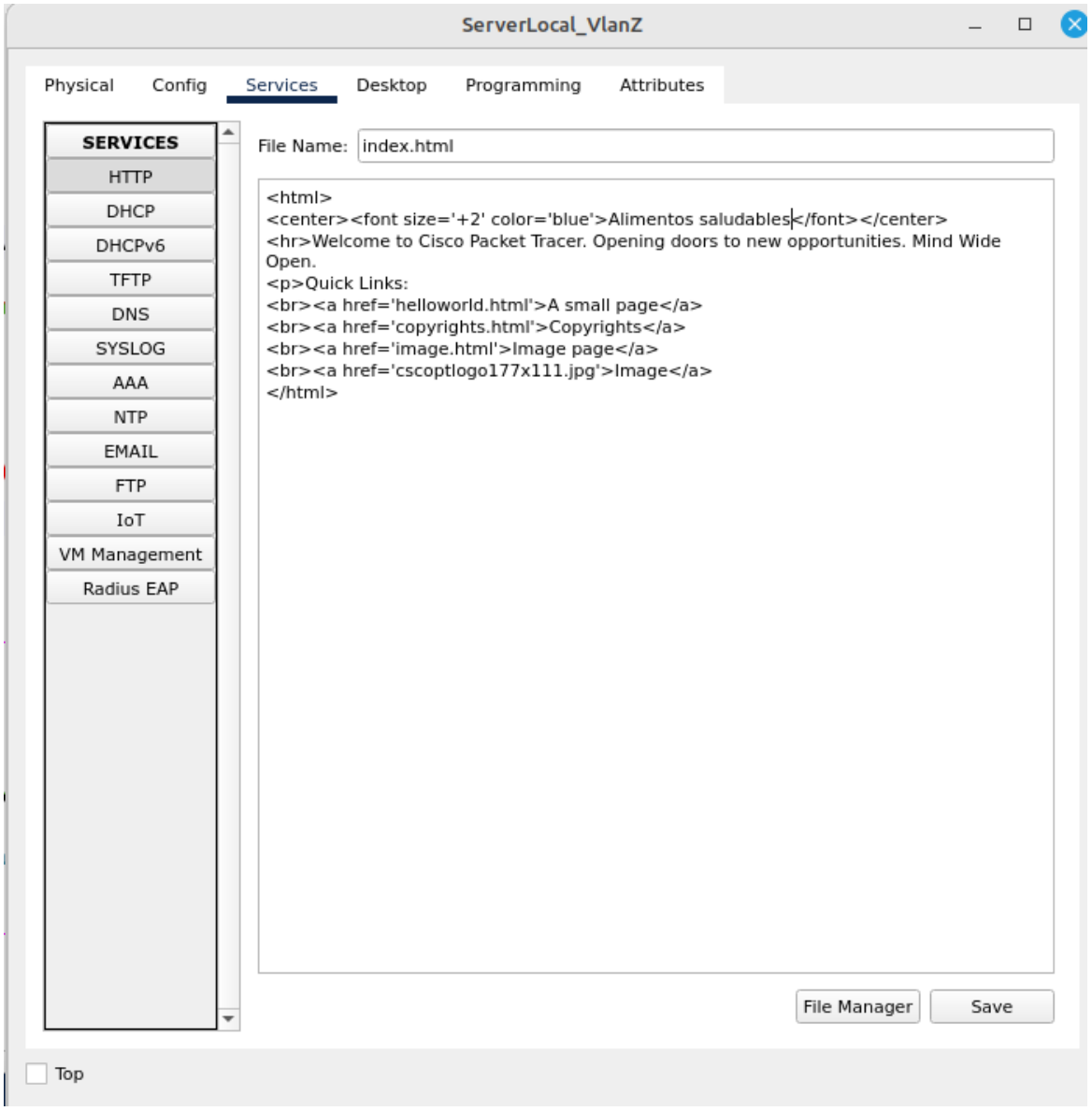




Configurando las páginas


ServerLocal_VlanZ
Physical
Config
Services
Desktop
Programming
Attributes
SERVICES
HTTP
DHCP
DHCPv6
TFTP
DNS
SYSLOG
AAA
NTP
EMAIL
FTP
IoT
VM Management
Radius EAP
File Name:
index.html
<html>
Alimentos saludables
<hr>Welcome to Cisco Packet Tracer. Opening doors to new opportunities. Mind Wide Open.
<p>Quick Links:

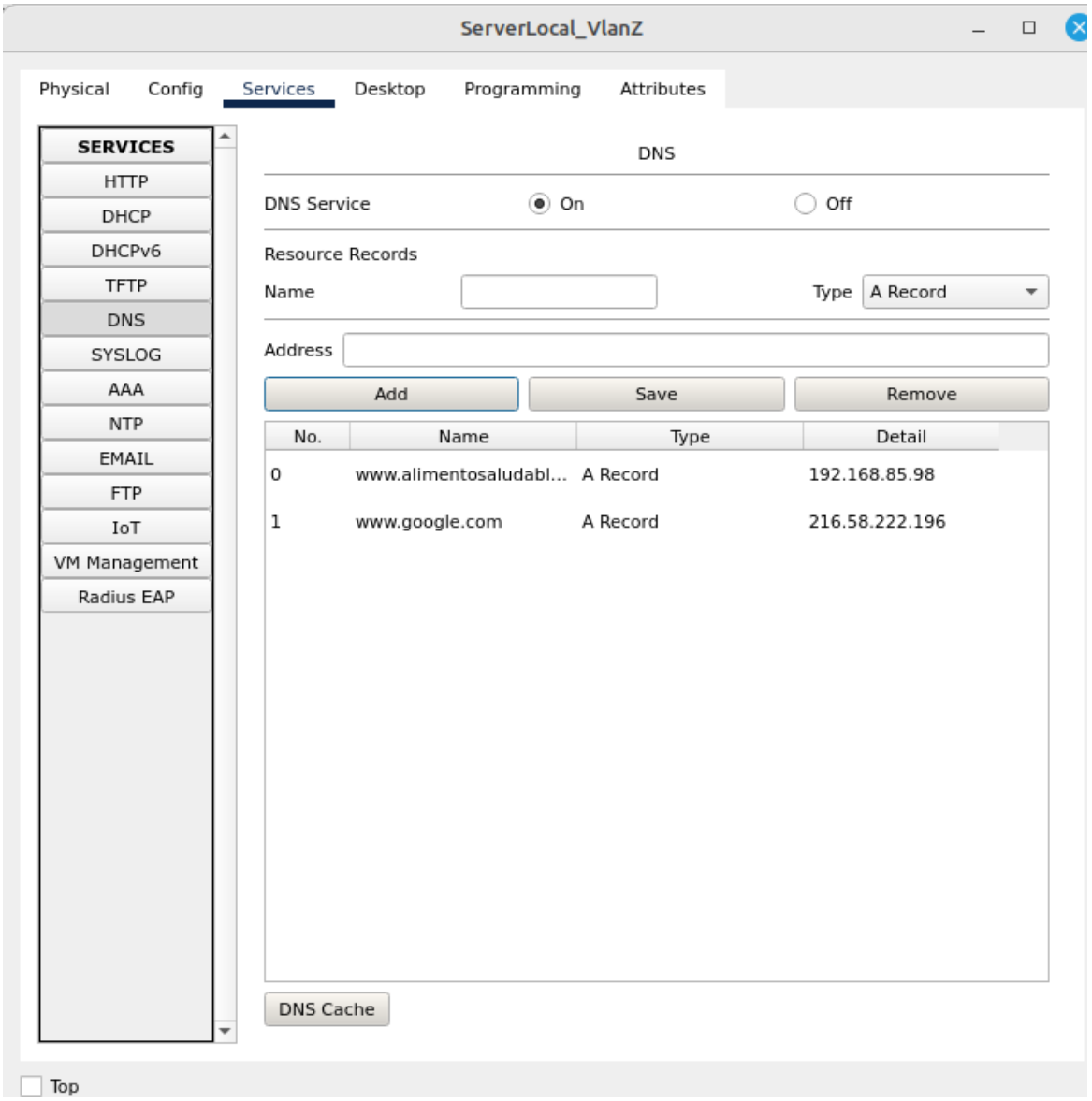
A small page

Copyrights

Image page

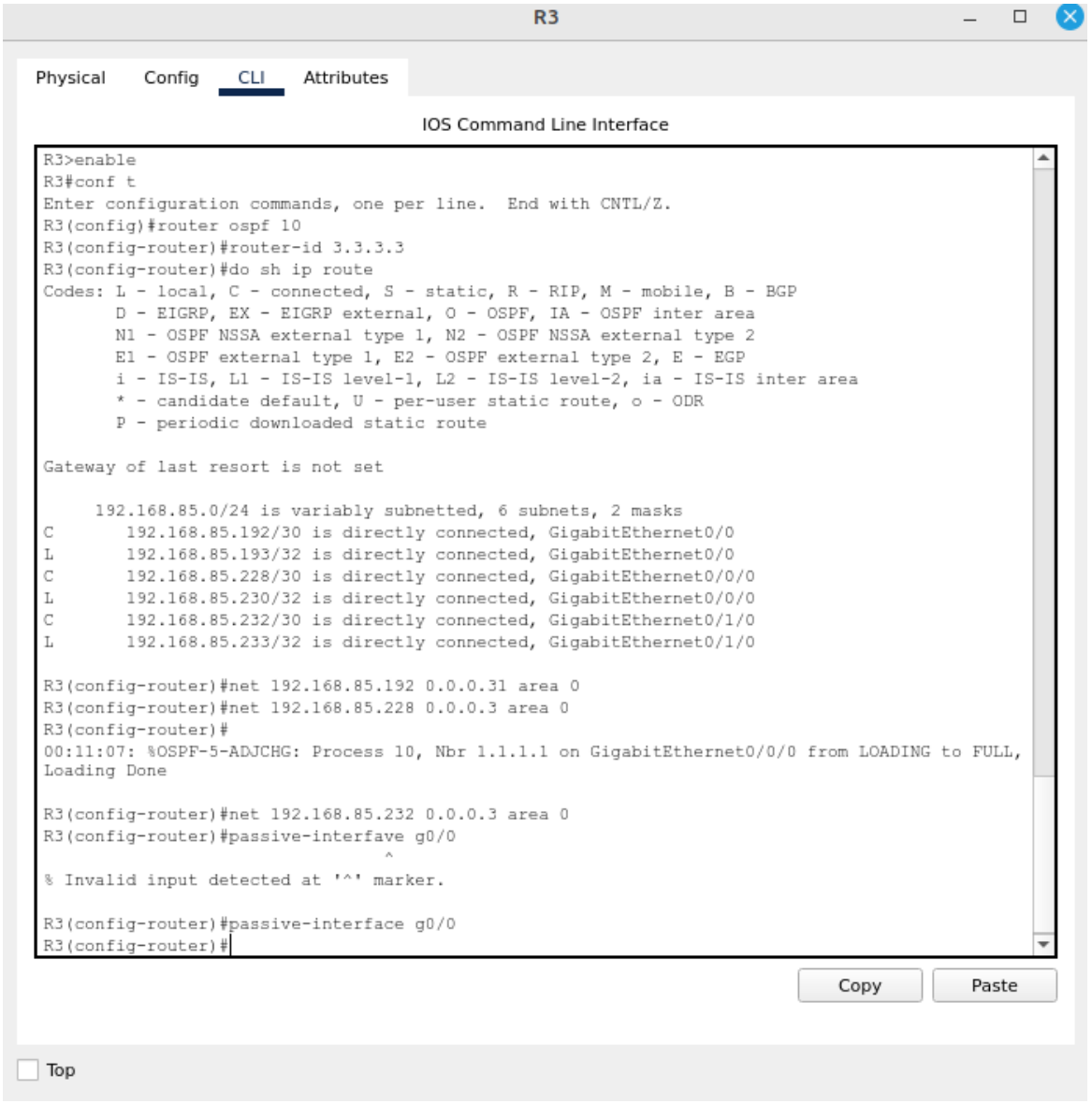
Image
</html>
File Manager
Save
Top

HTTP > <edit>



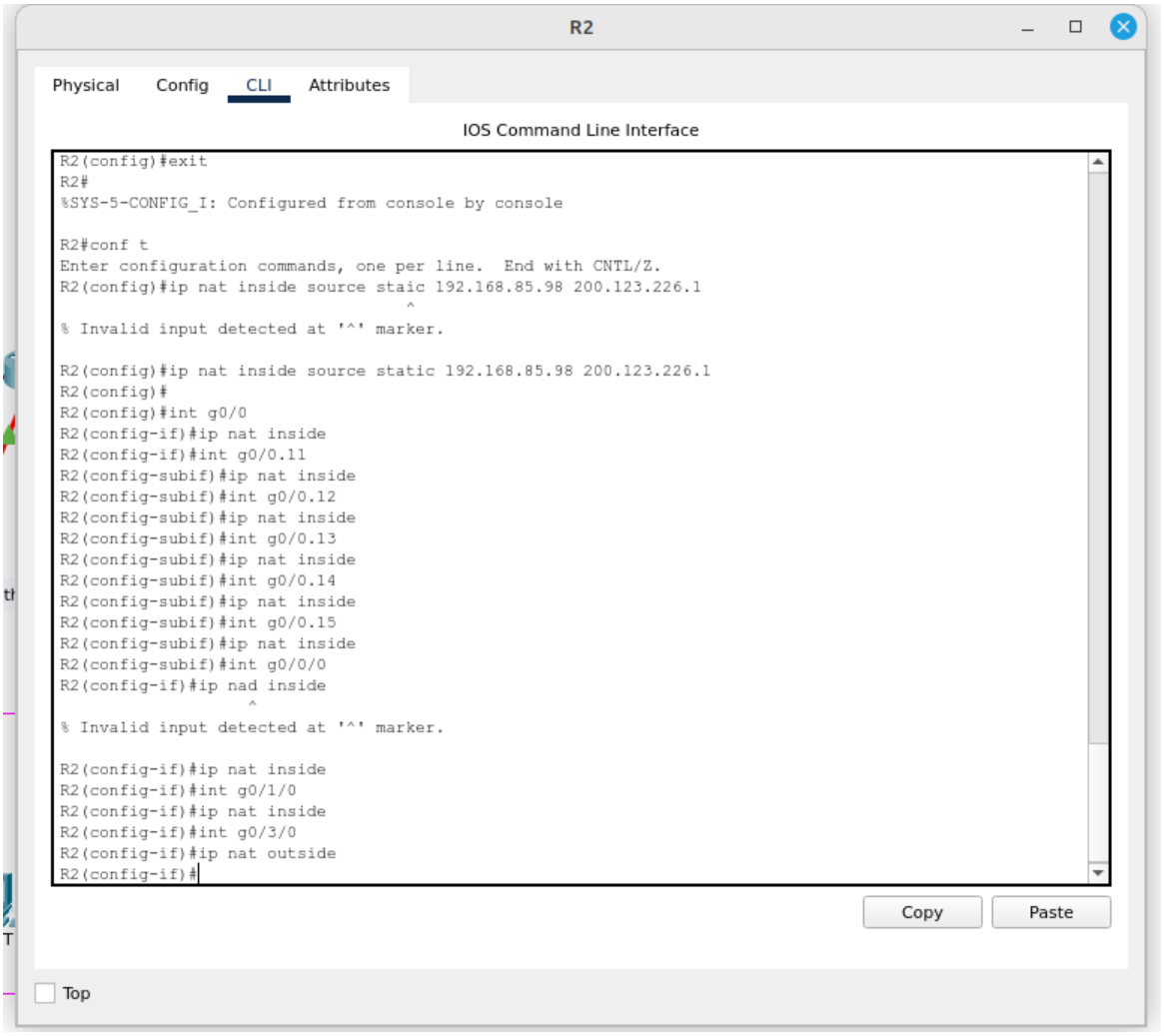
Configurando OSPF


Physical
Config
CLI
Attributes
IOS Command Line Interface
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up
R1>
R1>enable
R1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
R1(config)#router ospf 10
R1(config-router)#router-id 1.1.1.1
R1(config-router)#do sh ip route
Codes: L - local, C - connected, S - static, 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
192.168.85.0/24 is variably subnetted, 6 subnets, 3 masks
C 192.168.85.0/27 is directly connected, GigabitEthernet0/0
L 192.168.85.1/32 is directly connected, GigabitEthernet0/0
C 192.168.85.224/30 is directly connected, GigabitEthernet0/0/0
L 192.168.85.225/32 is directly connected, GigabitEthernet0/0/0
C 192.168.85.228/30 is directly connected, GigabitEthernet0/1/0
L 192.168.85.229/32 is directly connected, GigabitEthernet0/1/0
R1(config-router)#net 192.168.85.0 0.0.0.31 area 0
R1(config-router)#net 192.168.85.224 0.0.0.3 area 0
R1(config-router)#net 192.168.85.228 0.0.0.3 area 0
R1(config-router)#passive-interface g0/0
R1(config-router)#
Copy
Paste
Top

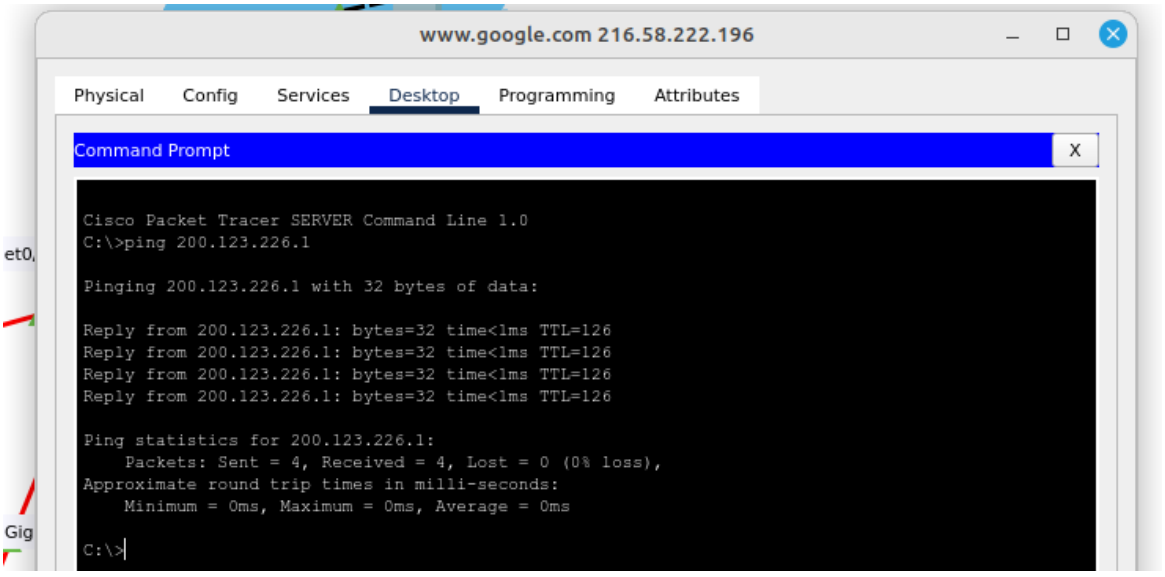


Para borrar un net: no net (Inserte resto del comando aquí)Captura de pantalla -2023-06-21 11-51-17

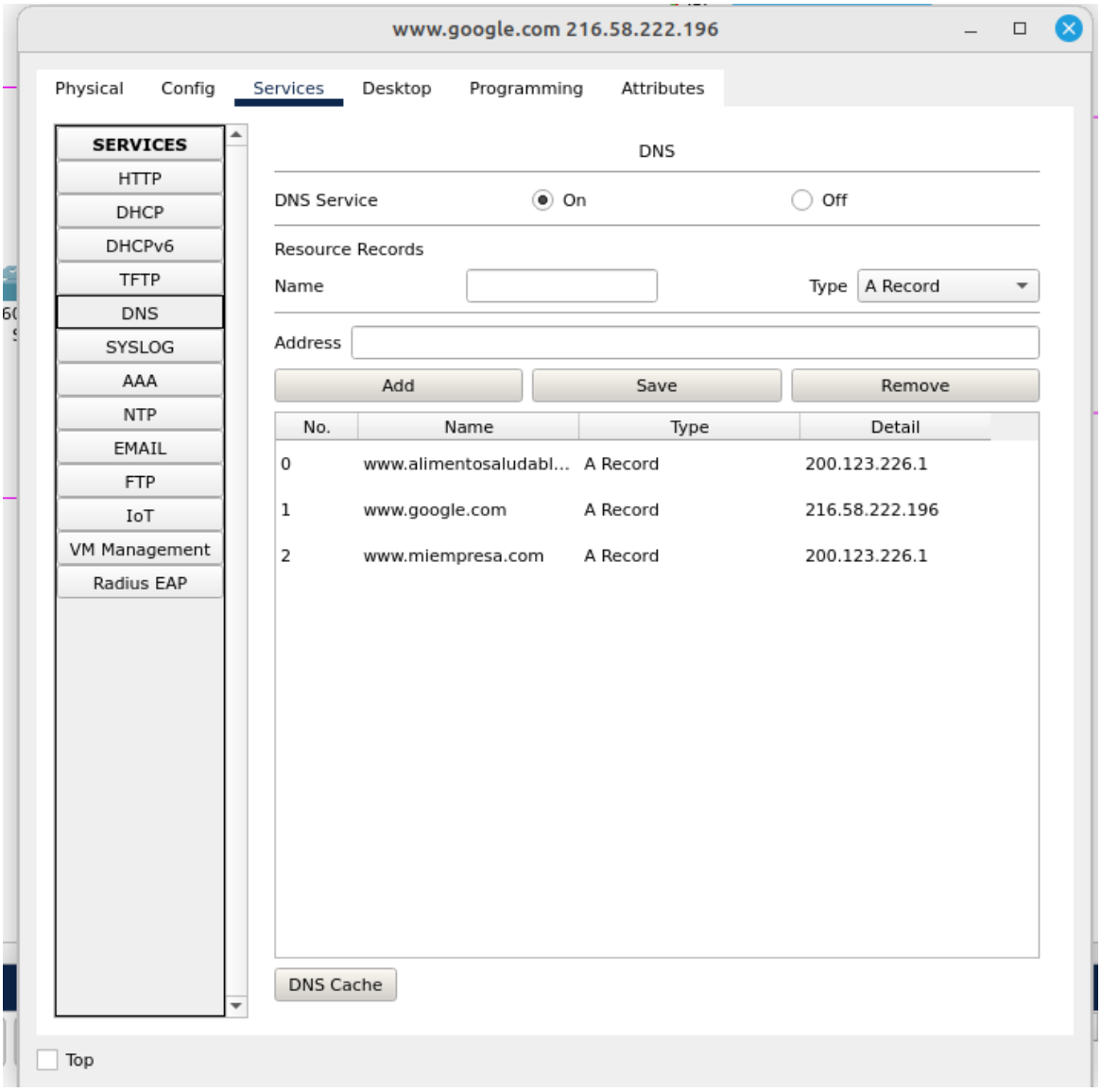
Configurando el NAT estático



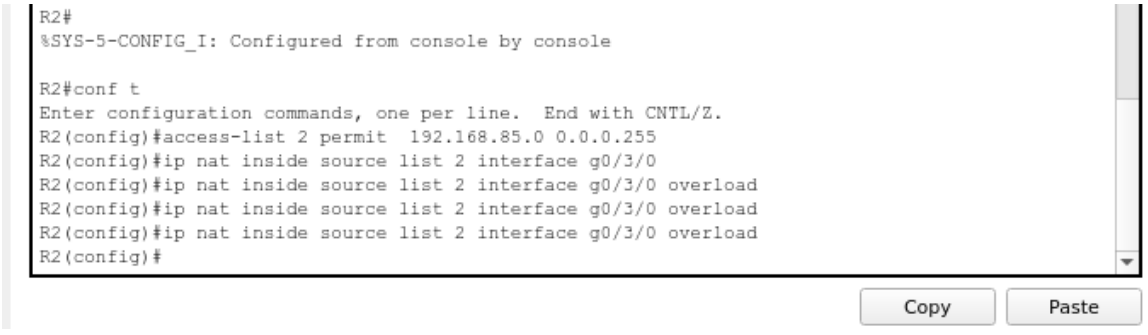
- `ip nat translations` sirve para ver las traducciones de direcciones privadas a públicas



Permintiendo entrar desde google con la url desde el web broserr con: www.alimentosaludables.com



Configurando el PAT



- La wildcard es 0.0.0.255 porque tenemos todas las redes

Configurando el DHCP

```
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console
c
% Ambiguous command: "c"
R2#
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ip dhcp exclued-address 192.168.85.1 192.168.85.5
                   ^
% Invalid input detected at '^' marker.

R2(config)#ip dhcp excluded-address 192.168.85.1 192.168.85.5
R2(config)#ip dhcp excluded-address 192.168.85.193 192.168.85.197
R2(config)#ip dhcp excluded-address 192.168.85.33 192.168.85.37
R2(config)#ip dhcp exluded-address 192.168.85.65 192.168.85.69
                  ^
% Invalid input detected at '^' marker.

R2(config)#ip dhcp excluded-address 192.168.85.65 192.168.85.69
R2(config)#ip dhcp pool DHCP-LAN1
R2(dhcp-config)#net 192.168.85.0 255.255.255.224
R2(dhcp-config)#default-router 192.168.85.1
R2(dhcp-config)#dns-server 192.168.85.98
R2(dhcp-config)#
```

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```
R2(config)#exit
R2#
%SYS-5-CONFIG_I: Configured from console by console
c
% Ambiguous command: "c"
R2#
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#ip dhcp exclued-address 192.168.85.1 192.168.85.5
                   ^
% Invalid input detected at '^' marker.

R2(config)#ip dhcp excluded-address 192.168.85.1 192.168.85.5
R2(config)#ip dhcp excluded-address 192.168.85.193 192.168.85.197
R2(config)#ip dhcp excluded-address 192.168.85.33 192.168.85.37
R2(config)#ip dhcp exluded-address 192.168.85.65 192.168.85.69
                  ^
% Invalid input detected at '^' marker.

R2(config)#ip dhcp excluded-address 192.168.85.65 192.168.85.69
R2(config)#ip dhcp pool DHCP-LAN1
R2(dhcp-config)#net 192.168.85.0 255.255.255.224
R2(dhcp-config)#default-router 192.168.85.1
R2(dhcp-config)#dns-server 192.168.85.98
R2(dhcp-config)#
```

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```
R2(dhcp-config)#net 192.168.85.0 255.255.255.224
R2(dhcp-config)#default-router 192.168.85.1
R2(dhcp-config)#dns-server 192.168.85.98
R2(dhcp-config)#
R2(dhcp-config)#ip dhcp pool DHCP-LAN3
R2(dhcp-config)#net 192.168.85.192 255.255.255.224
R2(dhcp-config)#default-router 192.168.85.193
R2(dhcp-config)#dns-server 192.168.85.98
R2(dhcp-config)#
```

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```
R3>
R3>enabe
Translating "enabe"...domain server (255.255.255.255) % Name lookup aborted
R3>enable
R3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R3(config)#int g0/0
R3(config-if)#ip helper-address 192.168.85.33
R3(config-if)#
```

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Captura de pantalla -2023-06-21 12-33-38Configurando las de las VLANS

```
R2#
%SYS-5-CONFIG_I: Configured from console by console

R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#dhcp pool DHCP-VLAN11
           ^
% Invalid input detected at '^' marker.

R2(config)#ip dhcp pool DHCP-VLAN11
R2(dhcp-config)#net 192.168.85.32 255.255.255.224
R2(dhcp-config)#default-router 192.168.85.33
R2(dhcp-config)#dns-server 192.168.85.98
R2(dhcp-config)#
R2(dhcp-config)#ip dhcp pool DHCP-VLAN12
R2(dhcp-config)#net 192.168.85.64 255.255.255.224
R2(dhcp-config)#default-router 192.168.85.65
R2(dhcp-config)#dns-server 192.168.85.98
R2(dhcp-config)#
```

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