Laboratorio 21 y 22 Cursos Ciberseguridad

Sesión #21 y 22

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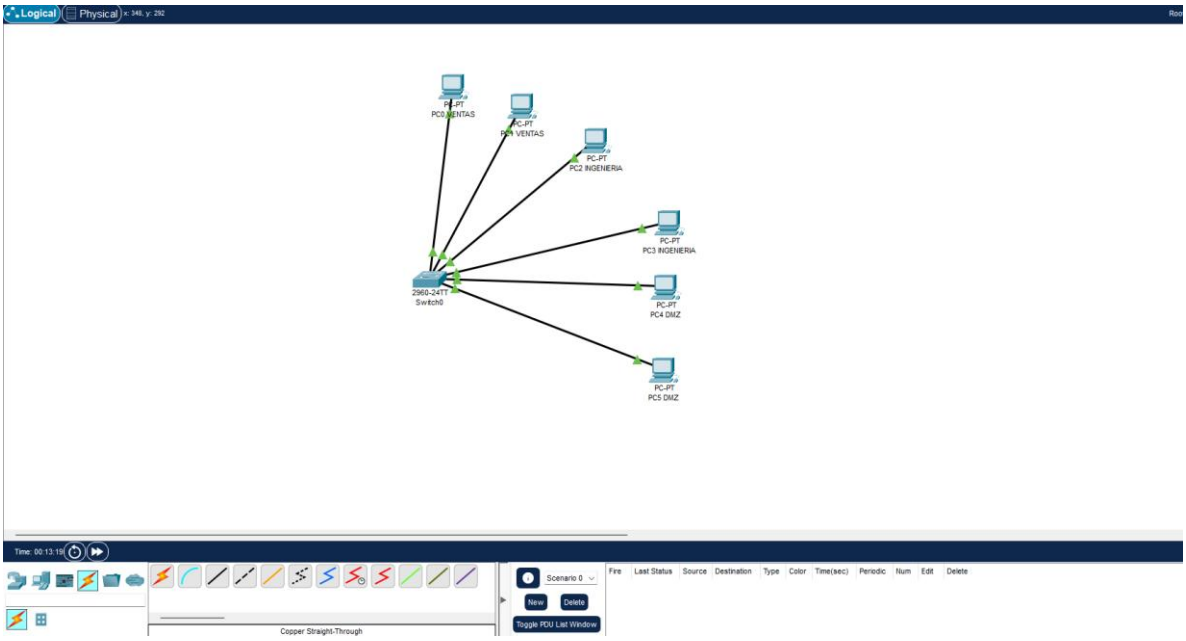
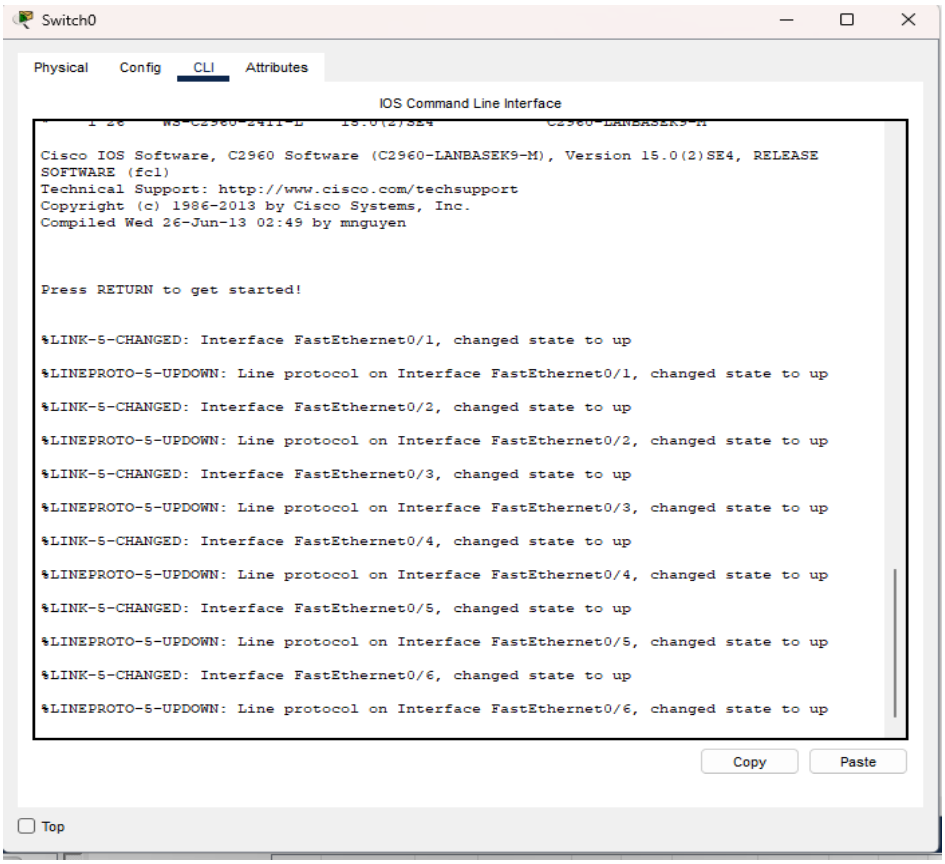
Primero abrimos cisco packet tracer y colocamos 1 switch 2960 y 6 PCs



Ahora nos vamos al switch, CLI



Usamos las siguientes VLAN para realizar el ejercicio

Ventas

VLAN 192.168.10.1

Ingeniería

VLAN 192.168.20.1

DMZ

VLAN 192.168.30.1

Primero entramos al switch

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

Switch#show vlan

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gig0/1, Gig0/2
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active

VLAN Type  SAID       MTU   Parent RingNo BridgeNo Stp  BrdgMode Trans1 Trans2
---- ----- ---------- ----- ------ ------ -------- ---- -------- ------ ------
1    enet  100001     1500  -      -      -        -    -        0      0
1002 fddi  101002     1500  -      -      -        -    -        0      0
1003 tr    101003     1500  -      -      -        -    -        0      0
1004 fdnet 101004     1500  -      -      -        ieee -        0      0
1005 trnet 101005     1500  -      -      -        ibm  -        0      0
 --More--
```

Ahora creamos las VLAN ventas, ingenierías y DMZ

```
Switch#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name ventas
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name ingenierias
Switch(config-vlan)#name ing
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name ingenieria
Switch(config-vlan)#name ingenierias
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name DMZ
Switch(config-vlan)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan brief

VLAN Name                             Status    Ports
---- -------------------------------- --------- -------------------------------
1    default                          active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                Gig0/1, Gig0/2
10   ventas                           active
20   ingenierias                      active
30   DMZ                              active
1002 fddi-default                     active
1003 token-ring-default               active
1004 fddinet-default                  active
1005 trnet-default                    active
Switch#
```

Ahora nos salimos con exit y volvemos a entrar para asignar puertos a cada VLAN

interface range f0/1 - f0/2

switchport mode access

switchport access vlan 10

exit

interface range f0/3 - f0/4

switchport mode access

switchport access vlan 20

exit

interface range f0/5 - f0/6

switchport mode access

switchport access vlan 30

exit

VLAN 10

```
Switch>enable
Switch#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface r
% Incomplete command.
Switch(config)#interface range f0/1 - f0/2
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
Switch(config-if-range)#exit
```

VLAN 20

```
Switch(config)#interface range f0/3 - f0/4
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
Switch(config-if-range)#exit
Switch(config)#
```

VLAN 30

```
Switch(config)#interface range f0/5 - f0/6
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 30
Switch(config-if-range)#exit
Switch(config)#
```

Comprobamos los cambios con show vlan brief

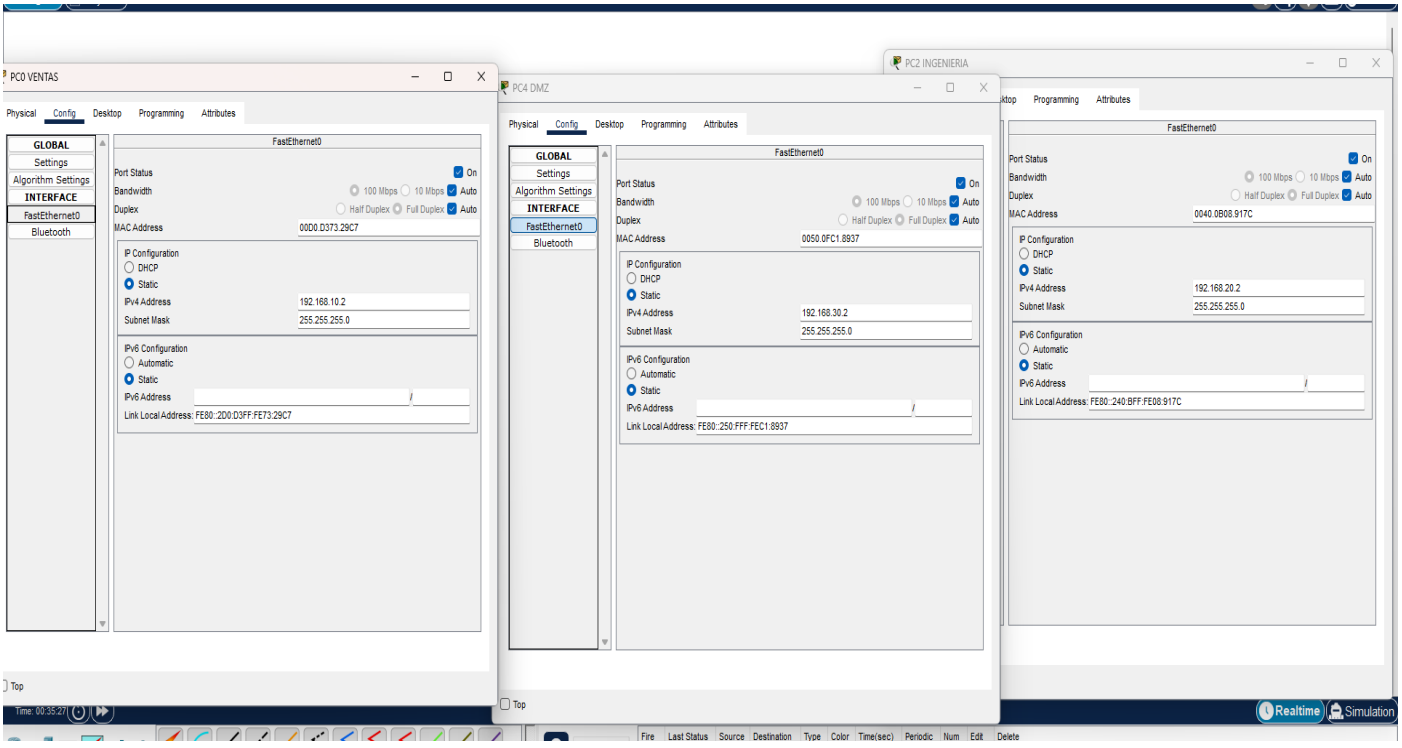
```
Switch#show vlan brief

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa0/7, Fa0/8, Fa0/9, Fa0/10
                                                 Fa0/11, Fa0/12, Fa0/13, Fa0/14
                                                 Fa0/15, Fa0/16, Fa0/17, Fa0/18
                                                 Fa0/19, Fa0/20, Fa0/21, Fa0/22
                                                 Fa0/23, Fa0/24, Gig0/1, Gig0/2
10   ventas                            active    Fa0/1, Fa0/2
20   ingenierias                       active    Fa0/3, Fa0/4
30   DMZ                               active    Fa0/5, Fa0/6
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
Switch#
```

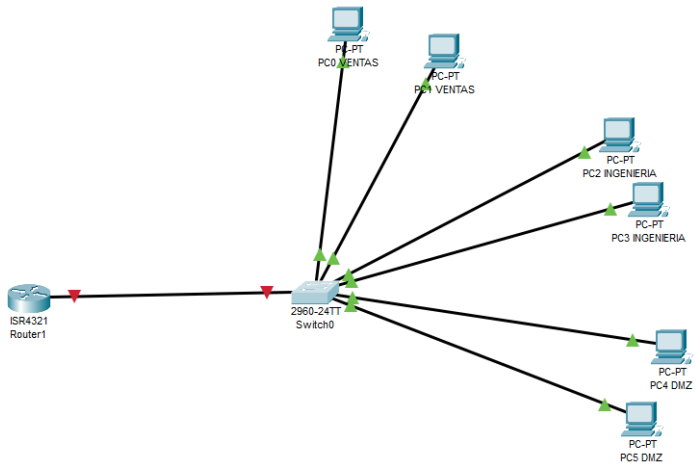
Ahora en los PCs configuramos las IPv4, donde en los PCs ventas la ip es 192.168.10.2 y 192.168.10.3

En las de ingeniería 192.168.20.2 y 192.168.20.3

En las de DMZ 192.168.30.2 Y 192.168.30.3



Ahora colocamos un router 4321 y lo conectamos al switch



Y nos vamos a CLI del switch para configurar el router

```
Switch>enable
Switch#co
Switch#con
Switch#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#interface f0/24
Switch(config-if)#sw
Switch(config-if)#switchport mode trunk
Switch(config-if)#sw
Switch(config-if)#switchport trunk allowed vlan 10,20,30
Switch(config-if)#exit
Switch(config)#
```

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Top

Después nos vamos al CLI del Router para configurar el router y la vlan

Primero de la vlan 10

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface g
Router(config)#interface gigabitEthernet0/0/0.10
Router(config-subif)#en
Router(config-subif)#encapsulation do
Router(config-subif)#encapsulation dot1q 10
Router(config-subif)#ad
Router(config-subif)#address 192.168.10.1 255.255.255.0
                         ^
% Invalid input detected at '^' marker.

Router(config-subif)#ip address 192.168.10.1 255.255.255.0
Router(config-subif)#exit
```

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Top

Luego la 20

```
Router(config)#interface gigabitEthernet0/0/0.20
Router(config-subif)#ip address 192.168.20.1 255.255.255.0

% Configuring IP routing on a LAN subinterface is only allowed if that
subinterface is already configured as part of an IEEE 802.10, IEEE 802.1Q,
or ISL vLAN.

Router(config-subif)#encapsulation dot1q 20
Router(config-subif)#ip address 192.168.20.1 255.255.255.0
Router(config-subif)#exit
Router(config)#
```

Y por ultimo la 30

```
Router(config-subif)#exit
Router(config)#interface gigabitEthernet0/0/0.30
Router(config-subif)#encapsulation dot1q 30
Router(config-subif)#ip address 192.168.30.1 255.255.255.0
Router(config-subif)#exit
Router(config)#
```

Top

```
Router(config)#interface gi
Router(config)#interface gigabitEthernet0/0/0
Router(config-if)#no shutdown

Router(config-if)#
%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

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0.10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0.10, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0.20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0.20, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0.30, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0.30, changed state to up
```

Top

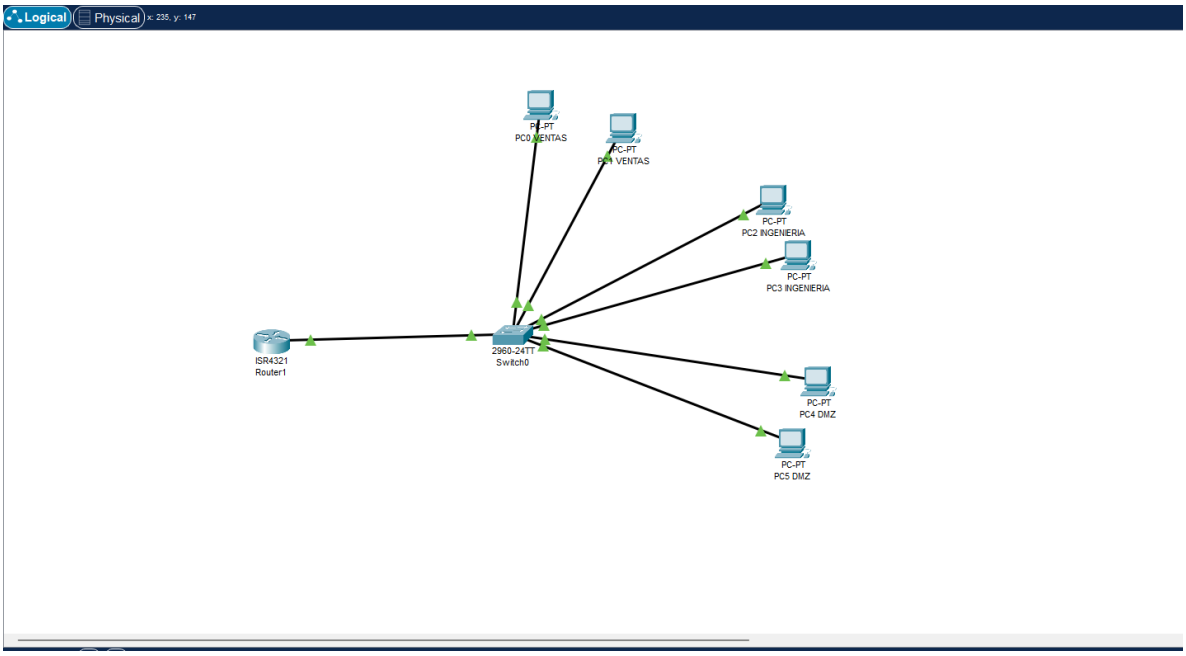
```
Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0.10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0.10, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0.20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0.20, changed state to up

%LINK-5-CHANGED: Interface GigabitEthernet0/0/0.30, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/0.30, changed state to up

Router(config-if)#exit
Router(config)#and
               ^
% Invalid input detected at '^' marker.

Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
```

Top

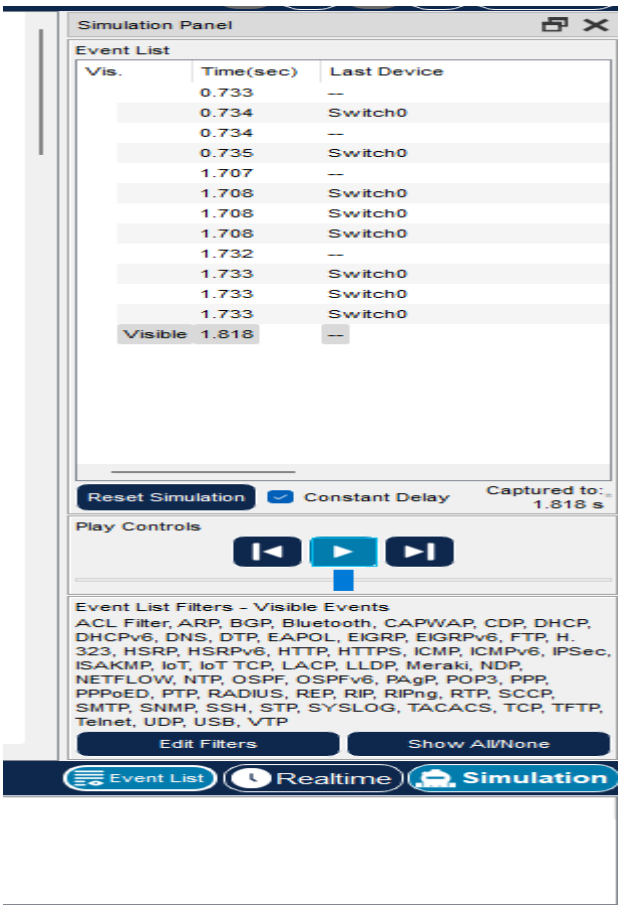
```
Router(config-if)#exit
Router(config)#and
               ^
% Invalid input detected at '^' marker.

Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#write memory
Building configuration...
[OK]
Router#
```

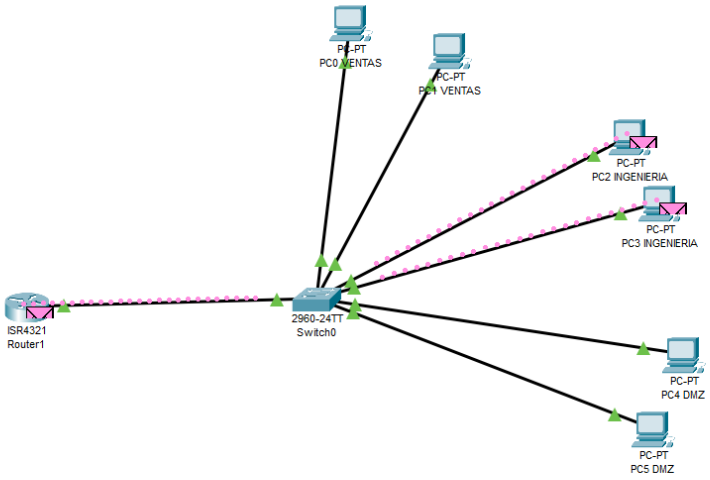
Top

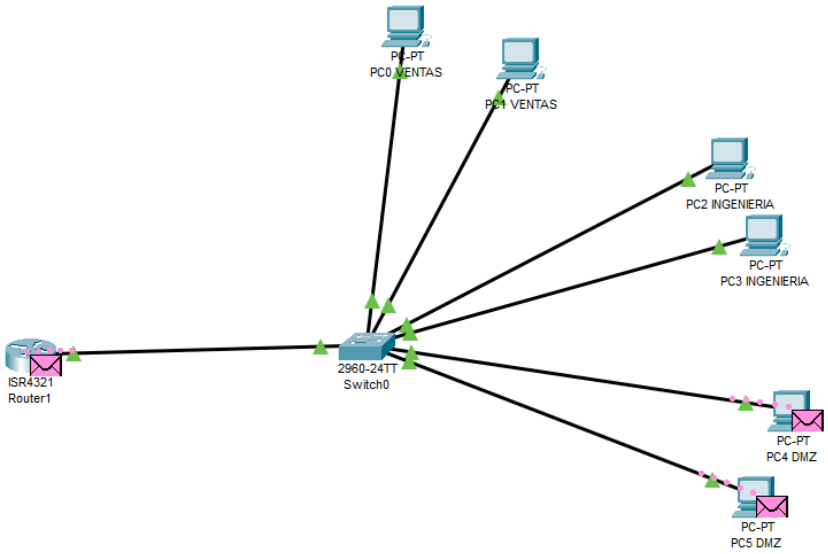
Comprobamos el cisco packet tracer



Y hacemos una pequeña prueba, primero colocamos la default Gateway a los PCs y comprobamos la prueba dándole a simulation




PC-PT
PC0 VENTAS
PC-PT
PC1 VENTAS
PC-PT
PC2 INGENIERIA
PC-PT
PC3 INGENIERIA
ISR4321
Router1
2960-24TT
Switch0
PC-PT
PC4 DMZ
PC-PT
PC5 DMZ


PC-PT
PC0 VENTAS
PC-PT
PC1 VENTAS
PC-PT
PC2 INGENIERIA
PC-PT
PC3 INGENIERIA
ISR4321
Router1
2960-24TT
Switch0
PC-PT
PC4 DMZ
PC-PT
PC5 DMZ

NTROLS: