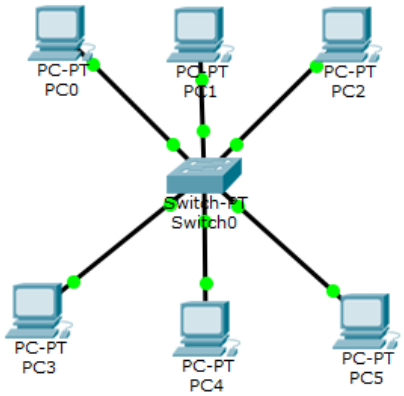
Pablo Rodríguez

Práctica VLAN 1

Para la siguiente práctica se realizará la siguiente arquitectura:



Y se configurará de la siguiente forma:

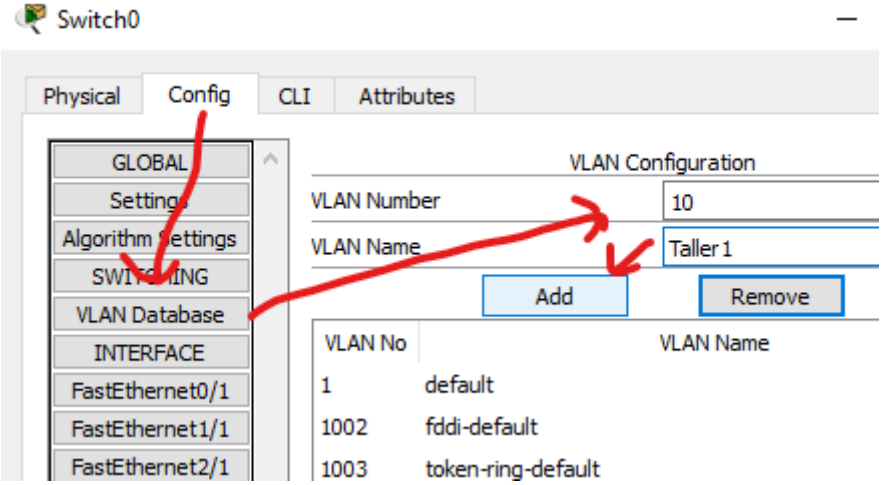
Equipo	IP	Puerto
0	192.168.1.10/24	Fa 0/1
1	192.168.1.11/24	Fa 1/1
2	192.168.1.12/24	Fa 2/1
3	192.168.1.13/24	Fa 3/1
4	192.168.1.14/24	Fa 4/1
5	192.168.1.15/24	Fa 5/1

Creación de las VLAN

Se van a generar dos VLAN

Las VLAN se llamarán Taller1 y Taller2, con el número 10 y 20 respectivamente.

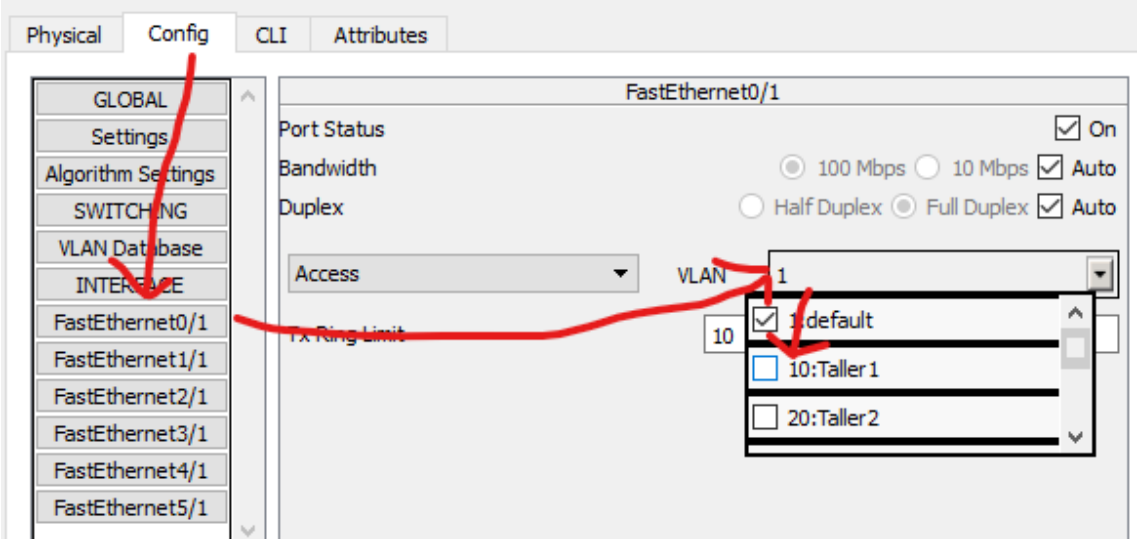
Para ello, en el apartado de VLAN Database en la configuración del Switch, podemos añadir las VLAN introduciendo el número y nombre.



Equivalente en línea de comandos:

```
Switch>enable
Switch#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name Taller1
Switch(config-vlan)#exit
```

Para añadir puertos a una VLAN, se entra en el apartado correspondiente al puerto que deseamos añadir a la VLAN en la configuración del Switch, desplegamos el apartado VLAN y seleccionamos la VLAN a la que deseamos que pertenezca.



Equivalente en línea de comandos:

```
Switch(config)#interface FastEthernet4/1
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
```

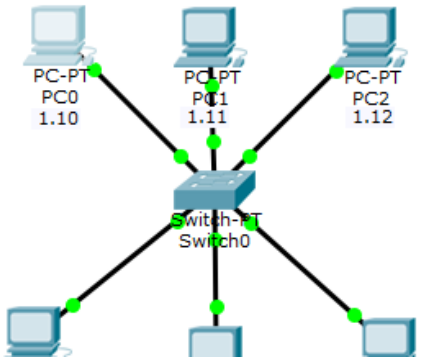
Configuración final:

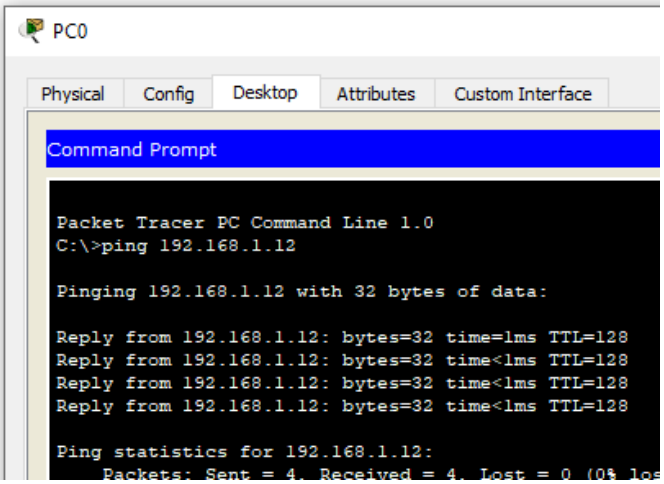
Puertos Fa 0/1 a 2/1 tendrán VLAN 10

Puertos Fa 3/1 a 5/1 tendrán VLAN 20

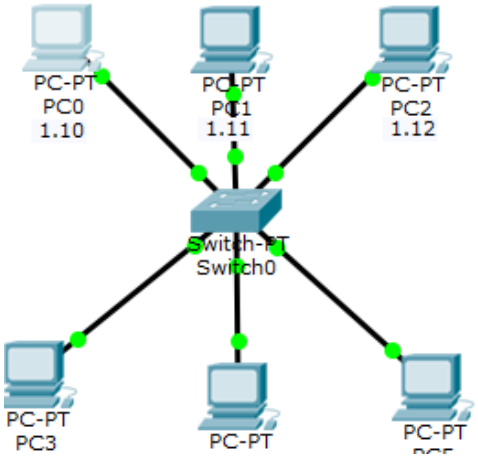
Comprobación de Conexión

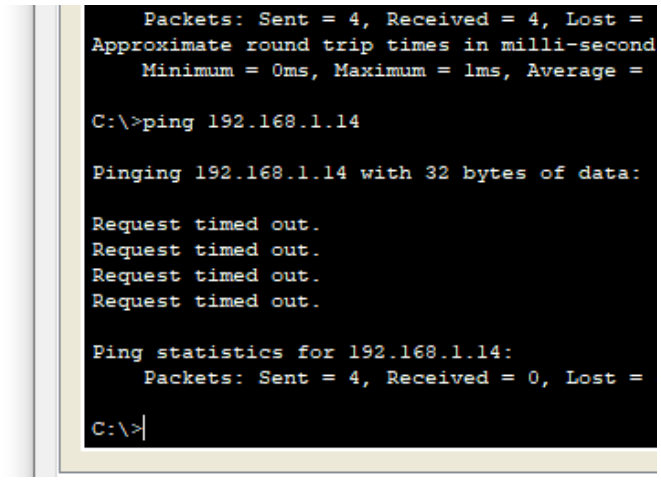
Ping de equipo 0 a equipo 2



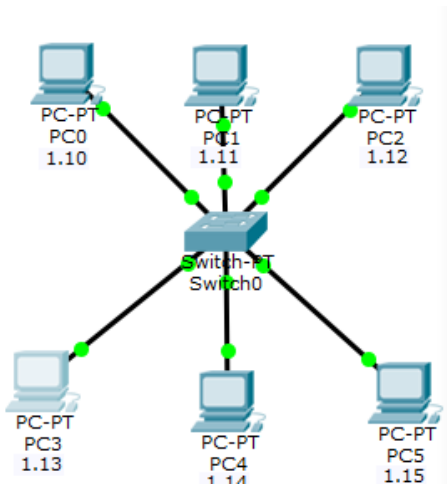


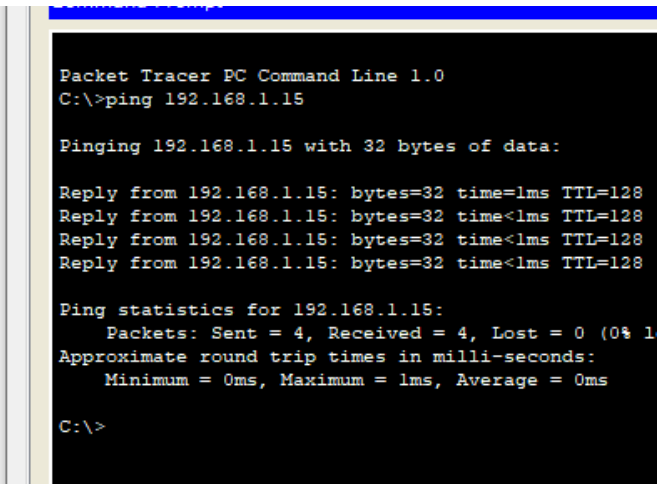
Ping de equipo 0 a 4





Ping de equipo 3 a 5





Mensaje de difusión en la VLAN 10

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.255

Pinging 192.168.1.255 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=2ms TTL=128
Reply from 192.168.1.12: bytes=32 time=2ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.12: bytes=32 time=1ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.12: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time=1ms TTL=128
Reply from 192.168.1.12: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.255:
    Packets: Sent = 4, Received = 8, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

Mensaje de difusión en la VLAN 20

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.255

Pinging 192.168.1.255 with 32 bytes of data:

Reply from 192.168.1.14: bytes=32 time=1ms TTL=128
Reply from 192.168.1.15: bytes=32 time=2ms TTL=128
Reply from 192.168.1.14: bytes=32 time<1ms TTL=128
Reply from 192.168.1.15: bytes=32 time<1ms TTL=128
Reply from 192.168.1.14: bytes=32 time<1ms TTL=128
Reply from 192.168.1.15: bytes=32 time<1ms TTL=128
Reply from 192.168.1.14: bytes=32 time<1ms TTL=128
Reply from 192.168.1.15: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.255:
    Packets: Sent = 4, Received = 8, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

Conclusiones

No existe comunicación entre redes VLAN

Solo es posible comunicación entre equipos de una misma VLAN

Las VLAN son útiles para la segmentación de la red, similarmente a realizar subredes.