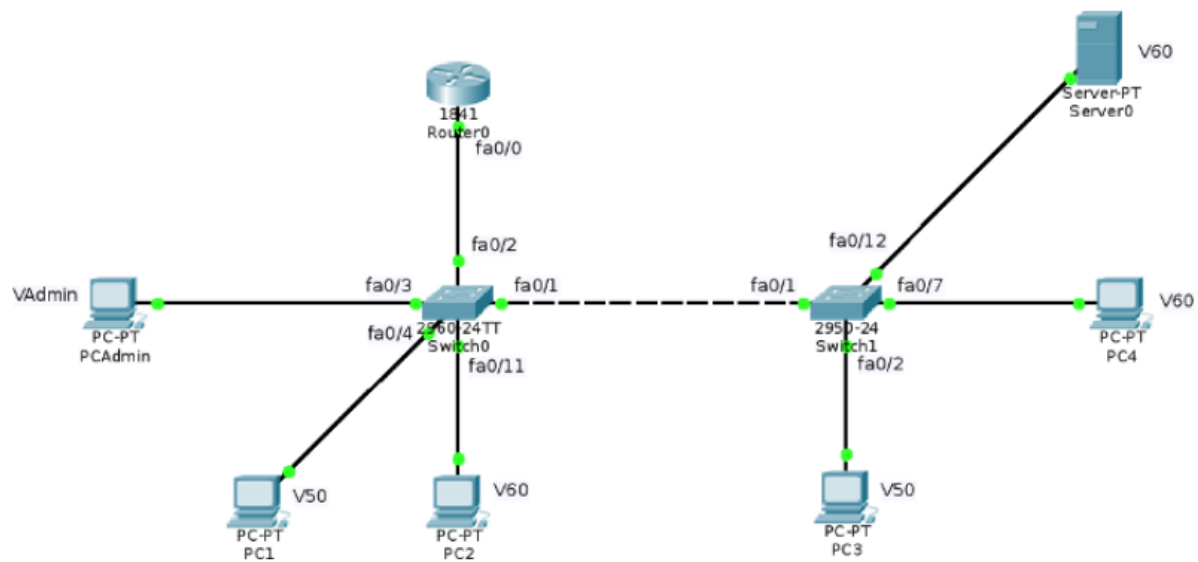


Aaron Andal

UF3 - ADMINISTRACIÓ AVANÇADA DE XARXES

Activitat 2.2. Enrutament complex d'VLAN



Amb les següents VLAN:

- VLAN 1 - Nativa
- VLAN 50 - 172.24.50.0/24
- VLAN 60 - 172.24.60.0/24
- VLAN 100 (Administració) - 172.24.100.0/24

I la següent distribució entre VLAN, switchs i ports:

VLAN	Switch0	Switch1
1	fa0/1 i fa0/2	fa0/1
50	fa0/4 - fa0/10	fa0/2 - fa0/6
60	fa0/11 - fa0/24	fa0/7 - fa0/12
100	fa0/3	none

Digueu quines són les configuracions necessàries per tal que: tots els PC i el Server0 s'han de poder fer ping entre ells.

Als **switch** s'ha de configurar les **vlan** amb **interfícies troncals**(al S0 la **fa0/1** i **fa0/2** i al S1.

la fa0/1).

Al **router** s'ha de configurar les tres interfícies virtuals.

Switch0

CONFIGURAR LES VLAN

```
Switch(config)#int range fa0/4-10
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 50
% Access VLAN does not exist. Creating vlan 50
Switch(config-if-range)#no shutdown
Switch(config-if-range)#exit
```

```
Switch(config)#int range fa0/11-24
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 60
% Access VLAN does not exist. Creating vlan 60
Switch(config-if-range)#exit
```

```
Switch(config)#int range fa0/11-24
Switch(config-if-range)#no shutdown
Switch(config-if-range)#int fa0/3
Switch(config-if)#int fa0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 100
% Access VLAN does not exist. Creating vlan 100
Switch(config-if)#no shutdown
Switch(config-if)#exit
```

```
Switch(config)#int fa0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk allowed vlan 50,60
Switch(config-if)#no shutdown
Switch(config-if)#exit
```

```
Switch(config)#int fa0/2
Switch(config-if)#switchport mode trunk
Switch(config-if)#switchport trunk allowed vlan 50,60,100
Switch(config-if)#no shutdown
Switch(config-if)#exit
```

Switch1

CONFIGURAR LES VLAN

```
Switch(config)#int range fa0/2-6
Switch(config-if-range)#switchport access vlan 50
% Access VLAN does not exist. Creating vlan 50
Switch(config-if-range)#no shutdown
Switch(config-if-range)#exit
```

```
Switch(config)#int range fa0/7-12
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 60
Switch(config-if-range)#exit
```

Router0

CONFIGURAR LES INTERFÍCIES VIRTUALS I LES VLAN

```
Router(config)#int fa0/0.50
Router(config-subif)#ip address 172.24.50.1 255.255.255.0
Router(config-subif)#encapsulation dot1Q 50
Router(config-subif)#exit
```

```
Router(config)#int fa0/0.60
Router(config-subif)#ip address 172.24.60.1 255.255.255.0
Router(config-subif)#encapsulation dot1Q 60
Router(config-subif)#exit
```

```
Router(config)#int fa0/0.100
Router(config-subif)#ip address 172.24.100.1 255.255.255.0
Router(config-subif)#encapsulation dot1Q 100
Router(config-subif)#exit
```

Comprovacions de connectivitat

PCAdmin

```
C:\>ping 172.24.60.3
```

Pinging 172.24.60.3 with 32 bytes of data:

```
Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Reply from 172.24.60.3: bytes=32 time=1ms TTL=127
Reply from 172.24.60.3: bytes=32 time=1ms TTL=127
Ping statistics for 172.24.60.3:
Packets: Sent = 3, Received = 3, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

PC1

```
C:\>ping 172.24.60.3
```

Pinging 172.24.60.3 with 32 bytes of data:

Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Reply from 172.24.60.3: bytes=32 time=15ms TTL=127
Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Ping statistics for 172.24.60.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 15ms, Average = 3ms

PC2

C:\>ping 172.24.60.3

Pinging 172.24.60.3 with 32 bytes of data:

Reply from 172.24.60.3: bytes=32 time<1ms TTL=128
Reply from 172.24.60.3: bytes=32 time<1ms TTL=128
Reply from 172.24.60.3: bytes=32 time<1ms TTL=128
Reply from 172.24.60.3: bytes=32 time<1ms TTL=128
Ping statistics for 172.24.60.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC3

C:\>ping 172.24.60.3

Pinging 172.24.60.3 with 32 bytes of data:

Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Reply from 172.24.60.3: bytes=32 time<1ms TTL=127
Ping statistics for 172.24.60.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC4

C:\>ping 172.24.60.3

Pinging 172.24.60.3 with 32 bytes of data:
Reply from 172.24.60.3: bytes=32 time=4ms TTL=128
Reply from 172.24.60.3: bytes=32 time<1ms TTL=128
Reply from 172.24.60.3: bytes=32 time=5ms TTL=128

Reply from 172.24.60.3: bytes=32 time=5ms TTL=128

Ping statistics for 172.24.60.3:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 5ms, Average = 3ms