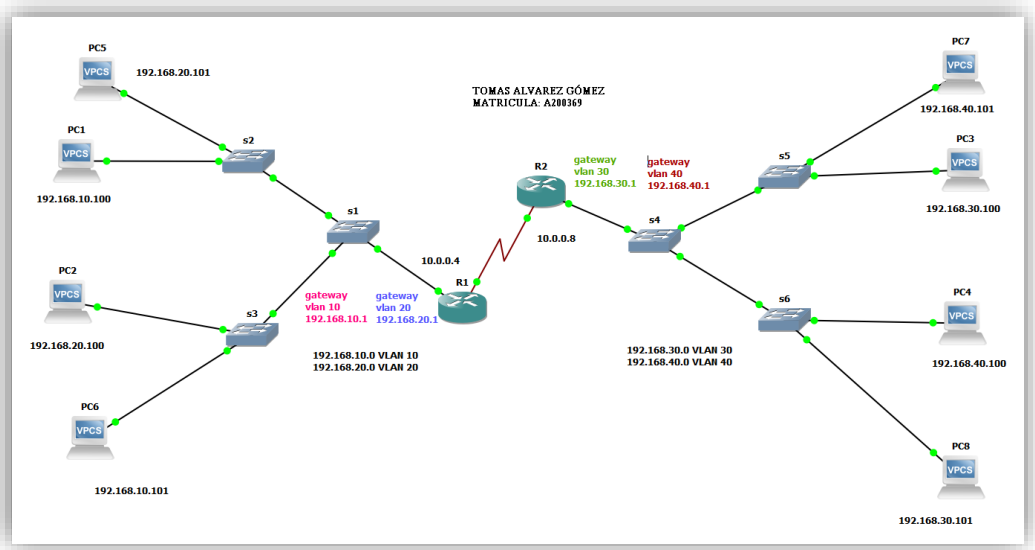
TOMÁS ÁLVAREZ GÓMEZ
A200369

Act. 3.1 Configura un VTP con vlans en Gns3

Agregue unas cuantas pc, para que la explicación de la practica fuera más clara



Configuración del lado izquierdo de la topología

Se configura el VTP en modo cliente para los switches s2, s3

S2

```
Switch>ENA
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname s2
s2(config)#vtp mode client
Setting device to VTP Client mode for VLANS.
s2(config)#vtp domain tomas-01
Changing VTP domain name from NULL to tomas-01
s2(config)#vtp
*Sep 20 04:36:16.651: %SW_VLAN-6-VTP_DOMAIN_NAME_CHG: VTP domain name
changed to tomas-01.
% Incomplete command.
s2(config)#vtp password tomas
Setting device VTP password to tomas
s2(config)#
```

S3

```
Switch>ena
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname s3
s3(config)#vtp mode client
Setting device to VTP Client mode for VLANS.
```

```
s3(config)#vtp domain tomas-01
Changing VTP domain name from NULL to tomas-01
s3(config)#
*Sep 20 04:38:16.197: %SW_VLAN-6-VTP_DOMAIN_NAME_CHG: VTP domain name
changed to tomas-01.
s3(config)#vtp password tomas
Setting device VTP password to tomas
s3(config)#exit
```

configuramos el switch s2 con VTP modo server

s2

```
Switch>ena
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname s1
s1(config)#vtp mode server
Device mode already VTP Server for VLANS.
s1(config)#vtp domain tomas-01
Changing VTP domain name from NULL to tomas-01
s1(config)#
*Sep 20 04:39:21.835: %SW_VLAN-6-VTP_DOMAIN_NAME_CHG: VTP domain name
changed to tomas-01.
s1(config)#vtp password tomas
Setting device VTP password to tomas
```

Truncamos las interfaces de los switches

S1

```
s1#ena
s1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s1(config)#inter g0/1
s1(config-if)#switchport trunk encapsulation dot1q
s1(config-if)#switchport mode trunk
s1(config-if)#switchport trunk native vlan 99
s1(config-if)#end
s1#
```

```
s1#ena
s1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s1(config)#inter g0/0
s1(config-if)#switchport trunk encapsulation dot1q
s1(config-if)#switchport mode trunk
s1(config-if)#switchport trunk native vlan 99
```

```
s1(config-if)#end

s1>ena
s1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s1(config)#inter g0/2
s1(config-if)#switchport trunk encapsulation dot1q
s1(config-if)#switchport mode trunk
s1(config-if)#switchport trunk native vlan 99
s1(config-if)#exit
s1(config)#end
s1#
```

S2

```
s2#ena
s2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s2(config)#inter g0/1
s2(config-if)#switchport
*Sep 20 04:45:37.393: %CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch
discovered on GigabitEthernet0/1 (1), with s1 GigabitEthernet0/1 (99).
s2(config-if)#switchport trunk encapsulation dot1q
s2(config-if)#switchport mode trunk
s2(config-if)#switchport trunk native vlan 99
s2(config-if)#end


s2#ena
s2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s2(config)#inter g0/0
s2(config-if)#switchport trunk encapsulation dot1q
s2(config-if)#switchport mode trunk
s2(config-if)#switchport trunk native vlan 99
s2(config-if)#end
s2#
```

S3

```
s3>ena
s3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s3(config)#inter g0/1
s3(config-if)#switchport trunk encapsulation dot1q
s3(config-if)#switchport mode trunk
s3(config-if)#switchport trunk native vlan 99
s3(config-if)#end
```

```
s3#ena
s3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s3(config)#inter g0/0
s3(config-if)#switchport trunk encapsulation dot1q
s3(config-if)#switchport mode trunk
s3(config-if)#switchport trunk native vlan 99
s3(config-if)#end
s3#
```

Creamos las vlans en el switch s1 que VTP SERVER

S1

```
s1#ena
s1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s1(config)#vlan 10
s1(config-vlan)#name vlan10
s1(config-vlan)#exit
s1(config)#vlan 20
s1(config-vlan)#name vlan20
s1(config-vlan)#exit
s1(config)#end
```

Creamos las subredes en el router r1 ingresándole su defaul Gateway

R1

```
R1#ena
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#inter fa1/0
R1(config-if)#no ip add
R1(config-if)#no sh
R1(config-if)#
R1(config)#inter fa1/0
R1(config-if)#inter fa1/0.10
R1(config-subif)#encapsulation dot1q 10
R1(config-subif)#ip address 192.168.10.1 255.255.255.0
R1(config-subif)#exit
R1(config)#inter fa1/0
R1(config-if)#inter fa1/0.20
R1(config-subif)#encapsulation dot1q 20
R1(config-subif)#ip address 192.168.20.1 255.255.255.0
R1(config-subif)#exit
R1(config)#
```

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Asignamos las VLANS a sus puertos correspondientes

S2

Inter g0/0

```
s2>ena
s2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s2(config)#inter g0/0
s2(config-if)#switchport mode access
s2(config-if)#switchport access vlan 10
s2(config-if)#exit
s2(config)#end
s2#
```

Inter g0/2

```
s2#ena
s2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s2(config)#inter g0/2
s2(config-if)#switchport mode access
s2(config-if)#switchport access vlan 20
s2(config-if)#exit
s2(config)#end
```

S3

Inter g0/0

```
s3>ena
s3#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s3(config)#inter g0/0
s3(config-if)#switchport mode access
s3(config-if)#switchport access vlan 20
s3(config-if)#exit
s3(config)#end
```

Inter g0/2

```
s3#ena
s3#conf t
s3(config)#inter g0/2
s3(config-if)#switchport mode access
s3(config-if)#switchport access vlan 10
s3(config-if)#exit
s3(config)#end
```

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Por último, agregamos ips al pc y hacemos ping para ver la conexión

Los siguientes comandos son para agregar ip y hacer ping.

Únicamente coloque evidencias de la pc2 pero todas conectaron a la perfección.

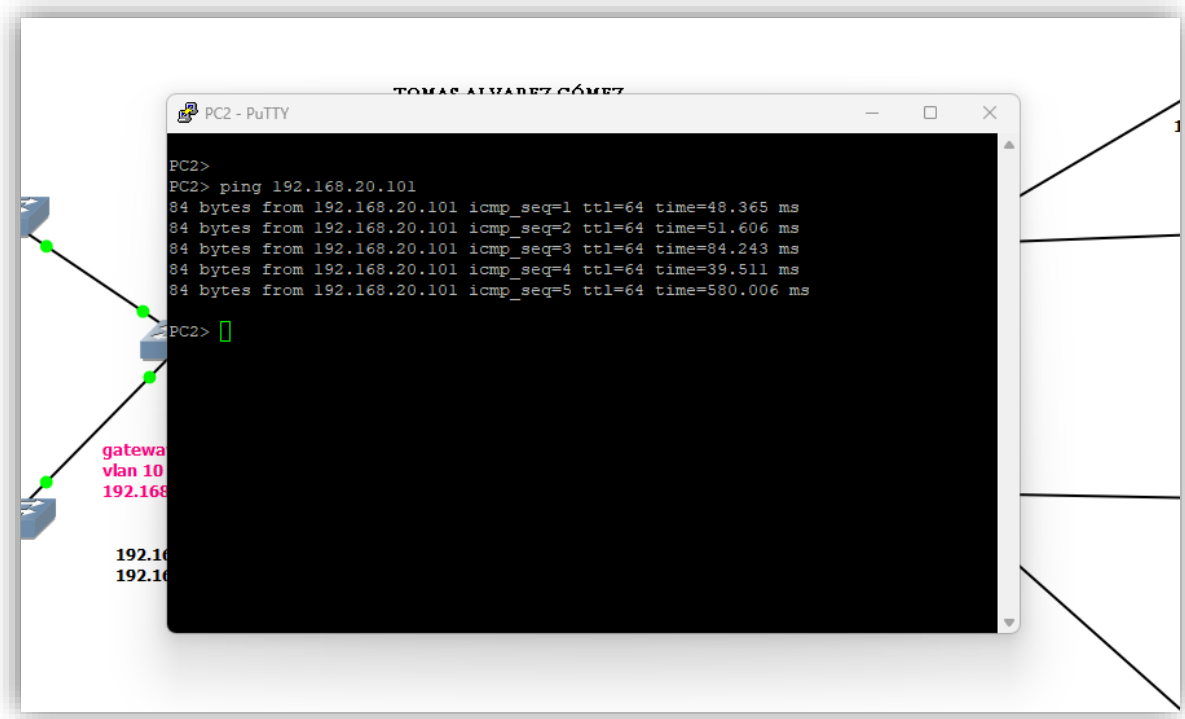
PC2> 2 Only 1 VPCs actived

PC2> ip 192.168.20.100 gateway 192.168.20.1
Checking for duplicate address...
PC1 : 192.168.20.100 255.255.255.0 gateway 192.168.20.1

PING

La ip es de otra PC que está conectada a una interfaz que pertenece a la misma VLAN

PC2> ping 192.168.20.101
84 bytes from 192.168.20.101 icmp_seq=1 ttl=64 time=32.817 ms
84 bytes from 192.168.20.101 icmp_seq=2 ttl=64 time=36.362 ms
84 bytes from 192.168.20.101 icmp_seq=3 ttl=64 time=29.783 ms
84 bytes from 192.168.20.101 icmp_seq=4 ttl=64 time=19.369 ms
84 bytes from 192.168.20.101 icmp_seq=5 ttl=64 time=39.168 ms



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Configuración del lado derecho de la topología

Configuramos los switches s5 y s6 con VTP clientes

La configuración siguiente aplica para los dos switches

```
Switch>ena
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname s5
s5(config)#vtp mode client
Setting device to VTP Client mode for VLANS.
s5(config)#vtp domain tomas-02
Changing VTP domain name from NULL to tomas-02
s5(config)#vt
*Sep 20 06:26:07.747: %SW_VLAN-6-VTP_DOMAIN_NAME_CHG: VTP domain name
changed to tomas-02.
% Ambiguous command:  "vt"
s5(config)#vtp password tomas
Setting device VTP password to tomas
s5(config)#exit
s5#
```

configuramos el switch s4 con VTP SERVER

```
Switch>ena
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#hostname s4
s4(config)#vtp mode server
Device mode already VTP Server for VLANS.
s4(config)#vtp domain tomas-02
Changing VTP domain name from NULL to tomas-02
s4(config)#
*Sep 20 06:30:13.877: %SW_VLAN-6-VTP_DOMAIN_NAME_CHG: VTP domain name
changed to tomas-02.
s4(config)#vtp password tomas
Setting device VTP password to tomas
s4(config)#exit
```

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Truncamos las interfaces de todos los switches

Repetimos estos mismos comandos lo que cambiaría son las interfaces

S6

```
s6(config)#inter range g0/0-1
s6(config-if-range)#switchport trunk encapsulation dot1q
s6(config-if-range)#switchport mode trunk
s6(config-if-range)#switchport trunk native vlan 99
s6(config-if-range)#end
```

Creamos las sub-redes en el router r2

```
R2#ena
R2#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R2(config)#inter fa1/0
R2(config-if)#no ip add
R2(config-if)#no sh
R2(config-if)#
*Mar  1 01:45:27.340: %LINK-3-UPDOWN: Interface FastEthernet1/0, changed state to up
*Mar  1 01:45:28.341: %LINEPROTO-5-UPDOWN: Line protocol on Interface
FastEthernet1/0, changed state to up
R2(config-if)#exit
R2(config)#inter fa1/0
R2(config-if)#inter fa1/0.30
R2(config-subif)#encapsulation dot1q 30
R2(config-subif)#ip address 192.168.30.1 255.255.255.0
R2(config-subif)#exit
R2(config)#inter fa1/0
R2(config-if)#inter fa1/0.40
R2(config-subif)#encapsulation dot1q 40
R2(config-subif)#ip address 192.168.40.1 255.255.255.0
R2(config-subif)#exit
```

Asignamos las VLANS a sus puertos correspondientes

```
s5>ena
s5#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s5(config)#inter g0/0
s5(config-if)#switchport mode access
```

```
s5(config-if)#switchport access vlan 30
s5(config-if)#exit
s5(config)#inter g0/2
s5(config-if)#switchport mode access
s5(config-if)#switchport access vlan 40
s5(config-if)#exit
s5(config)#
```

```
s6>ena
s6#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
s6(config)#inter g0/0
s6(config-if)#switchport mode access
s6(config-if)#switchport access vlan 40
s6(config-if)#exit
s6(config)#inter g0/2
s6(config-if)#switchport mode access
s6(config-if)#switchport access vlan 30
s6(config-if)#exit
s6(config)#
```

Por último agregamos una ip a cada pc y hacemos una prueba generando un ping

Agregamos una ip al pc

pc7

```
PC7> 2
Only 1 VPCs actived

PC7> ip 192.168.40.101/24 gateway 192.168.40.1
Checking for duplicate address...
PC1 : 192.168.40.101 255.255.255.0 gateway 192.168.40.1
```

Pc4

```
PC4> 2
Only 1 VPCs actived

PC4> ip 192.168.40.100/24 gateway 192.168.40.1
Checking for duplicate address...
PC1 : 192.168.40.100 255.255.255.0 gateway 192.168.40.1
```

Aquí podemos ver como la pc4 le hace ping al pc 7 ya que es su misma vlan

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PC4> ping 192.168.40.101
84 bytes from 192.168.40.101 icmp_seq=1 ttl=64 time=57.553 ms
84 bytes from 192.168.40.101 icmp_seq=2 ttl=64 time=59.100 ms
84 bytes from 192.168.40.101 icmp_seq=3 ttl=64 time=60.594 ms
84 bytes from 192.168.40.101 icmp_seq=4 ttl=64 time=60.105 ms
84 bytes from 192.168.40.101 icmp_seq=5 ttl=64 time=42.027 ms

PC4> ping 192.168.40.1
84 bytes from 192.168.40.1 icmp_seq=1 ttl=255 time=62.742 ms
84 bytes from 192.168.40.1 icmp_seq=2 ttl=255 time=31.277 ms
84 bytes from 192.168.40.1 icmp_seq=3 ttl=255 time=35.771 ms
84 bytes from 192.168.40.1 icmp_seq=4 ttl=255 time=26.951 ms
84 bytes from 192.168.40.1 icmp_seq=5 ttl=255 time=29.155 ms