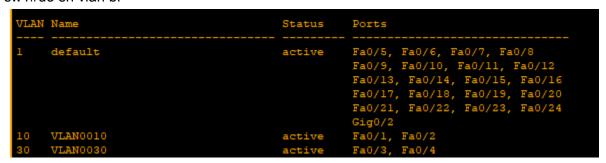


1. Configure the switch interfaces connected to the pcs as access ports in the correct vlan

sw1#int range f0/3,f0/4 sw1#switch mode access sw1#switch access vlan30 sw1#int range f0/2,f0/1 sw1#switch mode access sw1#switch access vlan 10 sw1#do sh vlan br



2. Configure the connection between sw1 and sw2 as a trunk only allowing necessary vlans configure the native vlan

sw1#int g0/1 sw1#sw mode trunk sw1#sw trunk allowed vlan 10,30 sw1#sw trunk native vlan 1001

Sw2#int g0/1

Sw2#sw mode trunk Sw2#sw trunk allowed vlan 10,30 Sw2#sw trunk native vlan 1001 Sw2#do sh int trunk

remember we don't include vlan 20 in the trunk because it's going to go directly to the router to be retranslated into the new vlan it's going to

Sw2#vlan 30

Sw2#int g0/2 Sw2#sw mode trunk Sw2#sw trunk allowed vlan 10,20,30 Sw2#sw trunk native vlan 1001

```
SW2(config) #do sh int trunk

Port Mode Encapsulation Status Native vlan

Gig0/1 on 802.lq trunking 1001

Gig0/2 on 802.lq trunking 1001

Port Vlans allowed on trunk

Gig0/1 10,30

Gig0/2 10,20,30

Port Vlans allowed and active in management domain

Gig0/1 10,30

Gig0/2 10,20,30

Port Vlans in spanning tree forwarding state and not pruned

Gig0/1 10,30

Gig0/2 10,20,30
```

Sw2#do sh vlan br

```
VLAN Name

1 default

active

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

10 VLAN0010

active

VLAN0020

30 VLAN0030

active

1002 fddi-default

1003 token-ring-default

1004 fddinet-default

1005 trnet-default

1005 trnet-default

1006 Active

1007 Active

1008 Active

1009 Active

1009 Active

1000 A
```

3. Connect sw2 and r1 using router on a stick technology

R1#int g0/0.10
R1#encap dot1q 10
R1#ip address 10.0.0.62 255.255.255.192
R1#int g0/0.20
R1#encap dot1q 20
R1#ip address 10.0.0.126 255.255.255.192
R1#int g0/0.30
R1#encap dot1q 30
R1#ip address 10.0.0.190 255.255.255.192
R1#int g0/0
R1#no shut

4. Test the connectivity by pining between pcs

₹ PC7

Physical Config Desktop Programming Attributes

Command Prompt

```
C:\>ping 10.0.0.1
Pinging 10.0.0.1 with 32 bytes of data:
Reply from 10.0.0.1: bytes=32 time<1ms TTL=128
Ping statistics for 10.0.0.1:
   Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 10.0.0.65
Pinging 10.0.0.65 with 32 bytes of data:
Request timed out.
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Reply from 10.0.0.65: bytes=32 time<1ms TTL=127
Ping statistics for 10.0.0.65:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>ping 10.0.0.129
Pinging 10.0.0.129 with 32 bytes of data:
Request timed out.
Reply from 10.0.0.129: bytes=32 time<1ms TTL=127
Reply from 10.0.0.129: bytes=32 time<1ms TTL=127
Reply from 10.0.0.129: bytes=32 time<1ms TTL=127
Ping statistics for 10.0.0.129:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\>
```