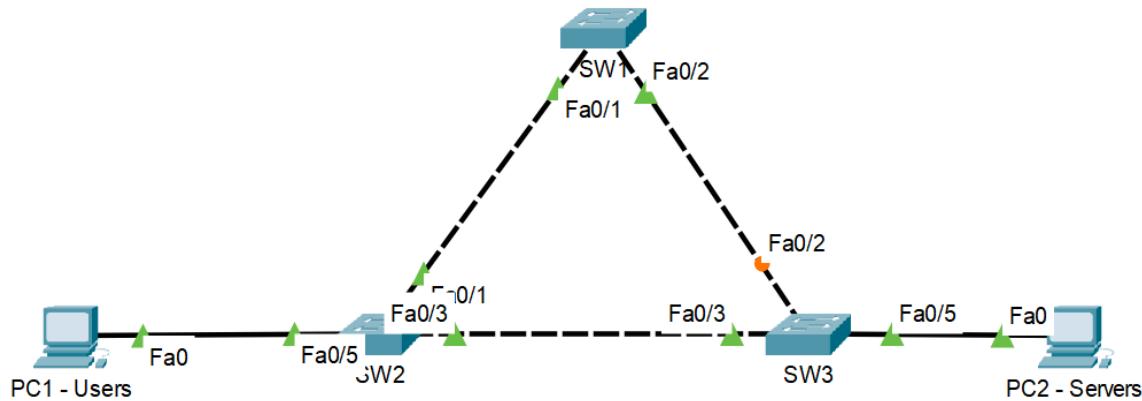


VLAN CREATION & TRUNKING

Purpose

The purpose of this lab is to go through the fundamentals of VLAN creation, assigning access and trunk ports, as well as verifying VLAN propagation

Topology



Requirements

1. Create VLANs
 - VLAN 10 - Users
 - VLAN 20 - Servers
 - VLAN 30 - Management
2. Configure trunk links
3. Configure access ports
4. Configure native VLAN
5. Verification
 - VLANs present on all switches
 - Trunks up and passing allowed VLANs
 - Access interfaces assigned correctly
 - Native VLAN matches across all trunks

Tasks

SW1:

```
enable  
config terminal
```

```
hostname SW1
vlan 10
name Users
vlan 20
name Servers
vlan 30
name Management
exit
interface range fa0/1-2
switchport mode trunk
switchport trunk allowed vlan 10,20,30
switchport trunk native vlan 30
end
```

SW2

```
enable
config t
hostname SW2
vlan 10
name Users
vlan 20
name Servers
vlan 30
name Management
exit
interface range fa0/1,fa0/3
switchport mode trunk
switchport trunk allowed vlan 10,20,30
switchport trunk native vlan 30
exit
interface fa0/5
switchport mode access
switchport access vlan 10
end
```

SW3

```
enable
config t
hostname SW3
vlan 10
name Users
vlan 20
name Servers
vlan 30
name Management
```

```

exit
interface range fa0/2-3
switchport mode trunk
switchport trunk allowed vlan 10,20,30
switchport trunk native vlan 30
exit
interface fa0/5
switchport mode access
switchport access vlan 20
end

```

Verification

```

SW1>show vlan brief

VLAN Name          Status    Ports
---- --
1     default      active   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    Users         active
20    Servers        active
30    Management    active
1002  fddi-default active
1003  token-ring-default active
1004  fddinet-default active
1005  trnet-default active
SW1>

```

Figure 1: "show vlan brief" output on SW1, SW2 & SW3

```

SW1>show interfaces trunk

Port      Mode      Encapsulation  Status      Native vlan
Fa0/1    on       802.1q        trunking    30
Fa0/2    on       802.1q        trunking    30

Port      Vlans allowed on trunk
Fa0/1    10,20,30
Fa0/2    10,20,30

Port      Vlans allowed and active in management domain
Fa0/1    10,20,30
Fa0/2    10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/1    10,20,30
Fa0/2    10,20,30

```

Figure 2: "show interfaces trunk" output on SW1

```

SW2>show interfaces trunk
Port      Mode       Encapsulation  Status      Native vlan
Fa0/1    on        802.1q        trunking    30
Fa0/3    on        802.1q        trunking    30

Port      Vlans allowed on trunk
Fa0/1    10,20,30
Fa0/3    10,20,30

Port      Vlans allowed and active in management domain
Fa0/1    10,20,30
Fa0/3    10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/1    10,20,30
Fa0/3    10,20,30

```

Figure 3: “show interfaces trunk” output on SW2

```

SW3>show interfaces trunk
Port      Mode       Encapsulation  Status      Native vlan
Fa0/2    on        802.1q        trunking    30
Fa0/3    on        802.1q        trunking    30

Port      Vlans allowed on trunk
Fa0/2    10,20,30
Fa0/3    10,20,30

Port      Vlans allowed and active in management domain
Fa0/2    10,20,30
Fa0/3    10,20,30

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/2    none
Fa0/3    10,20,30

```

Figure 4: “show interfaces trunk” output on SW3

Conclusion

In this lab, we went through the configuration steps necessary to configure 3 different vlans 3 switches. We also configured the respective trunk and access ports, and changed the native VLAN of the trunk ports to VLAN 30. We also verified our configurations using the respective *show* commands.