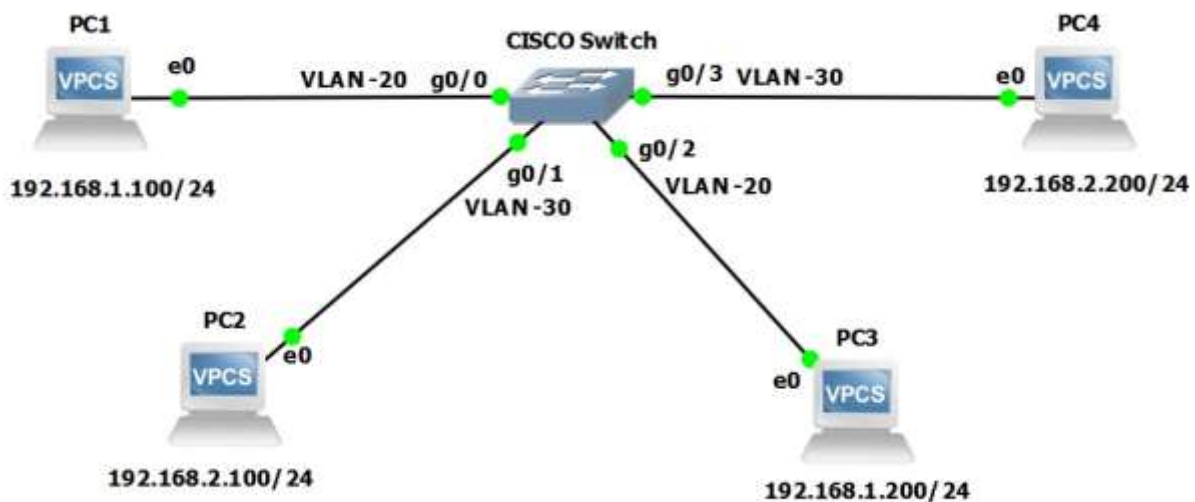




## Lab 1 – Implementing VLANs



### Task 1

Create VLAN 20 and VLAN 30 and assign name Admin and Engineer to each VLAN. Configure ports g0/0 – g 0/3 as access-ports and assign VLAN 20 to ports g0/0 and g0/2. Assign VLAN 30 to ports g0/1 and g0/3

```
Jodoi-Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Jodoi-Switch(config)#vlan 20
Jodoi-Switch(config-vlan)#name Admin
Jodoi-Switch(config-vlan)#exit
Jodoi-Switch(config)#vlan 30
Jodoi-Switch(config-vlan)#name Engineer
```

```
Jodoi-Switch#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Gi0/0, Gi0/1, Gi0/2, Gi0/3 Gi1/0, Gi1/1, Gi1/2, Gi1/3
20 Admin	active	
30 Engineer	active	

```
Jodoi-Switch(config)#interface g0/0
Jodoi-Switch(config-if)#switchport mode access
Jodoi-Switch(config-if)#switchport access vlan 20
Jodoi-Switch(config-if)#exit
```

```
Jodoi-Switch(config)#interface g0/2
Jodoi-Switch(config-if)#switchport mode access
Jodoi-Switch(config-if)#switchport access vlan 20
Jodoi-Switch(config-if)#exit
```

```
Jodoi-Switch(config)#interface range g0/1,g0/3
Jodoi-Switch(config-if-range)#switchport mode access
Jodoi-Switch(config-if-range)#switchport access vlan 30
Jodoi-Switch(config-if-range)#end
```

```
Jodoi-Switch#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Gi1/0, Gi1/1, Gi1/2, Gi1/3
20 Admin	active	Gi0/0, Gi0/2
30 Engineer	active	Gi0/1, Gi0/3

```
PC1 : 192.168.1.100 255.255.255.0 , PC2 : 192.168.2.100 255.255.255.0 ,
PC3 : 192.168.1.200 255.255.255.0 , PC4 : 192.168.2.200 255.255.255.0
```

```
PC1> ping 192.168.1.200
```

```
84 bytes from 192.168.1.200 icmp_seq=1 ttl=64 time=70.598 ms
```

```
84 bytes from 192.168.1.200 icmp_seq=2 ttl=64 time=9.954 ms
```

```
84 bytes from 192.168.1.200 icmp_seq=3 ttl=64 time=12.004 ms
```

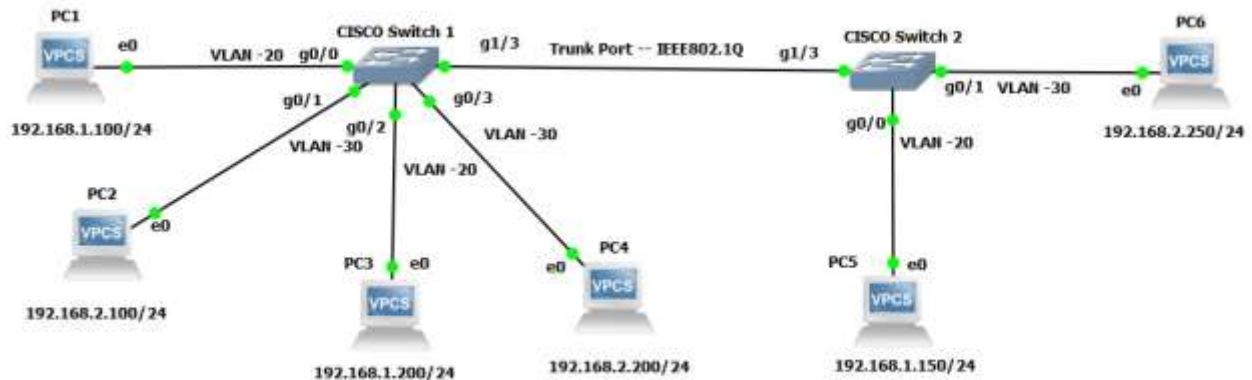
```
PC2> ping 192.168.2.200
```

```
84 bytes from 192.168.2.200 icmp_seq=1 ttl=64 time=22.565 ms
```

```
84 bytes from 192.168.2.200 icmp_seq=2 ttl=64 time=21.522 ms
```

```
84 bytes from 192.168.2.200 icmp_seq=3 ttl=64 time=42.985 ms
```

## Lab 2 – Configure Trunking



### Task 1

Switch 1 :

Create VLAN 20 and VLAN 30 and assign name Admin and Engineer to each VLAN. Configure ports g0/0 – g 0/3 as access-ports and assign VLAN 20 to ports g0/0 and g0/2. Assign VLAN 30 to ports g0/1 and g0/3

Switch 2 :

Create VLAN 20 and VLAN 30 and assign name Admin and Engineer to each VLAN. Configure ports g0/0 – g 0/1 as access-ports and assign VLAN 20 to ports g0/0 . Assign VLAN 30 to ports g0/1

Configure IEEE802.1Q trunk between Switch 1 (g1/3) and Switch 2 (g1/3)

```
Jdoei-Switch1(config)#vlan 20
Jdoei-Switch1(config-vlan)#name Admin
Jdoei-Switch1(config-vlan)#exit
```

```
Jdoei-Switch1(config)#vlan 30
Jdoei-Switch1(config-vlan)#name Engineer
```

```
Jdoei-Switch1(config)#interface range g0/0-3
Jdoei-Switch1(config-if-range)#switchport mode access
```

```
Jdoei-Switch1(config)#interface range g0/0,g0/2
Jdoei-Switch1(config-if-range)#switchport access vlan 20
Jdoei-Switch1(config-if-range)#exit
```

```
Jdoei-Switch1(config)#interface range g0/1,g0/3
Jdoei-Switch1(config-if-range)#switchport access vlan 30
```

Jodoi-Switch1#show vlan brief

VLAN Name	Status	Ports
1 default	active	Gi1/0, Gi1/1, Gi1/2
20 Admin	active	Gi0/0, Gi0/2
30 Engineer	active	Gi0/1, Gi0/3

```
Jodoi-Switch2(config)#vlan 20
Jodoi-Switch2(config-vlan)#name Admin
Jodoi-Switch2(config-vlan)#exit
```

```
Jodoi-Switch2(config)#vlan 30
Jodoi-Switch2(config-vlan)#name Engineer
```

```
Jodoi-Switch2(config)#interface g0/0
Jodoi-Switch2(config-if)#switchport mode access
Jodoi-Switch2(config-if)#switchport access vlan 20
Jodoi-Switch2(config-if)#exit
Jodoi-Switch2(config)#interface g0/1
Jodoi-Switch2(config-if)#switchport mode access
Jodoi-Switch2(config-if)#switchport access vlan 30
```

Jodoi-Switch2#show vlan

VLAN Name	Status	Ports
1 default	active	Gi0/2, Gi0/3, Gi1/0, Gi1/1 ,Gi1/2
20 Admin	active	Gi0/0
30 Engineer	active	Gi0/1

Jodoi-Switch1#show interfaces trunk

Port	Mode	Encapsulation	Status	Native vlan
Gi1/3	desirable	n-isl	trunking	1

Jodoi-Switch2#show interfaces trunk

Port	Mode	Encapsulation	Status	Native vlan
Gi1/3	desirable	n-isl	trunking	1

```
Jodoi-Switch1(config)#interface g1/3
```

```
Jodoi-Switch1(config-if)#switchport trunk encapsulation dot1q
```

```
Jodoi-Switch1(config-if)#switchport mode trunk
```

```
Jodoi-Switch2(config)#interface g1/3
```

```
Jodoi-Switch2(config-if)#switchport trunk encapsulation dot1q
```

```
Jodoi-Switch2(config-if)#switchport mode trunk
```

```
Jodoi-Switch1#show interfaces trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Gi1/3	on	802.1q	trunking	1

```
Jodoi-Switch2#show interfaces trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Gi1/3	on	802.1q	trunking	1

```
PC1 : 192.168.1.100 255.255.255.0 , PC5 : 192.168.1.150 255.255.255.0
```

```
PC1> ping 192.168.1.150
```

```
84 bytes from 192.168.1.150 icmp_seq=1 ttl=64 time=86.223 ms
```

```
84 bytes from 192.168.1.150 icmp_seq=2 ttl=64 time=11.958 ms
```

```
84 bytes from 192.168.1.150 icmp_seq=3 ttl=64 time=63.061 ms
```

```
PC2 : 192.168.2.100 255.255.255.0 , PC6 : 192.168.2.250 255.255.255.0
```

```
PC2> ping 192.168.2.250
```

```
84 bytes from 192.168.2.250 icmp_seq=1 ttl=64 time=48.545 ms
```

```
84 bytes from 192.168.2.250 icmp_seq=2 ttl=64 time=154.603 ms
```

```
84 bytes from 192.168.2.250 icmp_seq=3 ttl=64 time=142.148 ms
```

# Lab 3 – Configure VTP

( Network Diagram Based On Lab 2 )

## Task 1

Configure Switch1 as the VTP Server and the other Switch (Switch2) as VTP Client. Use Admin as the Domain name. Authenticate the relationship using Jodoi123 as the password.

```
Jodoi-Switch1(config)#vtp domain Admin
```

```
Jodoi-Switch1(config)#vtp mode server
```

```
Jodoi-Switch1(config)#vtp password Jodoi123
```

```
Jodoi-Switch2(config)#vtp domain Admin
```

```
Jodoi-Switch2(config)#vtp mode client
```

```
Jodoi-Switch2(config)#vtp password Jodoi123
```

## Task 2

Create VLANs 20,30,40, and 50 on Switch1 (VTP SERVER) and name them as Admin , Engineer, Sale, User

```
Jodoi-Switch1(config)#vlan 20
```

```
Jodoi-Switch1(config-vlan)#name Admin
```

```
Jodoi-Switch1(config-vlan)#exit
```

```
Jodoi-Switch1(config)#vlan 30
```

```
Jodoi-Switch1(config-vlan)#name Engineer
```

```
Jodoi-Switch1(config-vlan)#exit
```

```
Jodoi-Switch1(config)#vlan 40
```

```
Jodoi-Switch1(config-vlan)#name Sale
```

```
Jodoi-Switch1(config-vlan)#exit
```

```
Jodoi-Switch1(config)#vlan 50
```

```
Jodoi-Switch1(config-vlan)#name User
```

Jodoi-Switch1#show vtp status

VTP Version capable : 1 to 3  
VTP version running : 2  
VTP Domain Name : Admin  
VTP Pruning Mode : Disabled  
VTP Traps Generation : Disabled  
Device ID : 0000.abde.8100  
Configuration last modified by 0.0.0.0 at 6-12-16 03:06:03  
Local updater ID is 0.0.0.0 (no valid interface found)  
Feature VLAN:

-----

VTP Operating Mode : Server  
Maximum VLANs supported locally : 1005  
Number of existing VLANs : 12  
Configuration Revision : 2

Jodoi-Switch2#show vtp status

VTP Version capable : 1 to 3  
  
VTP version running : 2  
  
VTP Domain Name : Admin  
  
VTP Pruning Mode : Disabled  
  
VTP Traps Generation : Disabled  
  
Device ID : 0000.ab1c.9700  
  
Configuration last modified by 0.0.0.0 at 6-12-16 03:06:03  
  
Feature VLAN:

-----

VTP Operating Mode : Client  
  
Maximum VLANs supported locally : 1005  
  
Number of existing VLANs : 12  
  
Configuration Revision : 2

Jodoi-Switch2#show vlan

VLAN Name	Status	Ports
-----		
1 default	active	Gi0/2, Gi0/3, Gi1/0, Gi1/1 Gi1/2
20 Admin	active	Gi0/0
30 Engineer	active	Gi0/1
40 Sale	active	
50 User	active	

The output displays VLANs 20, 30, 40, 50 propagated from vtp server.



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