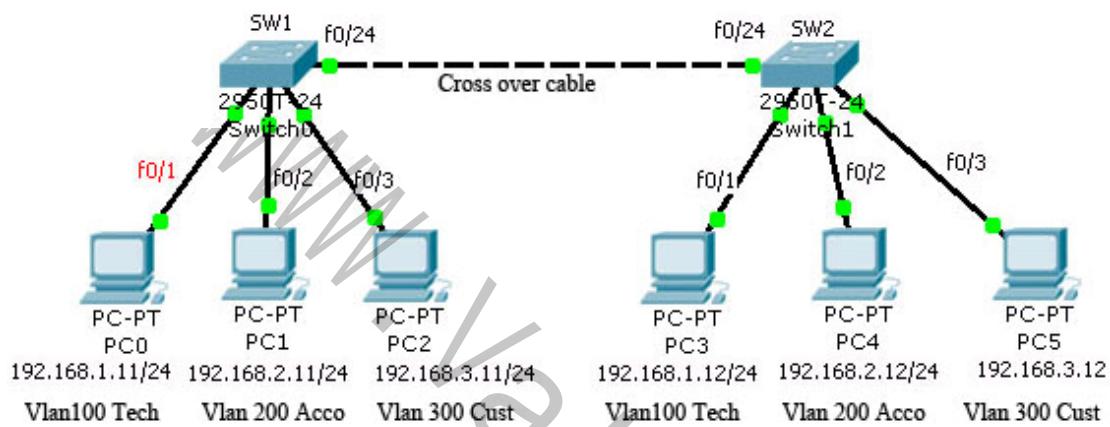


Lab Section: Router and Switch**Lab Title:** VLAN Configuration**Purpose:**

- Understand how to setup VLAN.

Preparation:

- Basic command of switch: enable, config terminal, hostname, banner, exit, end, show, no, etc.
- 3 ways to create VLAN: Privileged EXEC mode (vlan database); Global Configuration Mode (vlan vlanid); Interface Configuration Mode (config-if)

Topological**Require**

- Technical Support Team: Vlan name is Tech, Vlanid=100, Description: For Technical Support team
- Accountant Department: Vlan name is Account, Vlanid=200, Description: For Accountant department
- Customer Service Department: Vlan name is Customer, Vlanid=300, Description: For Customer Service Department

Procedure:**1. Setup hostname, banner and password:**

```

Switch>en
Switch#conf t
Switch(config)#hostname SW1
SW1(config)#banner motd $
Enter TEXT message. End with the character '$'.
Welcome to Valute IT Virtual Lab$
```

```

SW1(config)#enable password cisco
SW1(config)#enable secret cisco12345
```

```
SW1(config)#exit
```

2. Create vlan in Privileged EXEC mode

```
SW1#vlan database
SW1(vlan)#vlan 100 name Tech
SW1(vlan)#exit
SW1#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, 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 Gig1/1, Gig1/2
100 Tech	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

3. Create vlan in Global configuration mode:

```
SW1#conf t
SW1(config)#vlan 200
SW1(config-vlan)#name Account
SW1(config-vlan)#end
SW1#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, 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 Gig1/1, Gig1/2
100 Tech	active	
200 Account	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	

1005 trnet-default	active
--------------------	--------

4. Create vlan in Interface configuration mode:

```
SW1#conf t
SW1(config)#interface f0/3
SW1(config-if)#switchport mode access
SW1(config-if)#switchport access vlan 300
% Access VLAN does not exist. Creating vlan 300
SW1(config-if)#no shutdown
SW1(config-if)#end
SW1#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, 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, Gig1/1 Gig1/2
100 Tech	active	
200 Account	active	
300 VLAN0300	active	
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

5. Setup the vlan description:

```
SW1#conf t
SW1(config)#interface vlan 100
SW1(config-if)#description ?
SW1(config-if)#description For Technical Support team
SW1(config-if)#no shutdown
SW1(config-if)#exit
```

```
SW1(config)#interface vlan 200
SW1(config-if)#description For Accountant department
SW1(config-if)#no shutdown
SW1(config-if)#exit
```

```
SW1(config)#interface vlan 300
SW1(config-if)#description For Customer Service Department
```

```
SW1(config-if)#exit
```

6. Change vlan name:

```
SW1(config)#vlan 300
SW1(config-vlan)#name Customer
SW1(config-vlan)#end
SW1#show vlan
```

VLAN Name	Status	Ports
1 default	active	Fa0/1, Fa0/2, 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, Gig1/1 Gig1/2
100 Tech	active	
200 Account	active	
300 Customer	active	Fa0/3
1002 fddi-default	active	
1003 token-ring-default	active	
1004 fddinet-default	active	
1005 trnet-default	active	

7. Assign switch port to vlan:

```
SW1#conf t
SW1(config)#interface fastEthernet 0/1
SW1(config-if)#switchport mode access
SW1(config-if)#switchport access vlan 100
SW1(config-if)#no shutdown
SW1(config-if)#exit
```

```
SW1(config)#interface fastEthernet 0/2
SW1(config-if)#switchport mode access
SW1(config-if)#switchport access vlan 200
SW1(config-if)#no shutdown
SW1(config-if)#exit
```

8. Setup trunk port, this port is used to connect to other switch

```
SW1(config)#interface f0/24
SW1(config-if)#switchport mode trunk
SW1(config-if)#no shutdown
SW1(config-if)#end
```

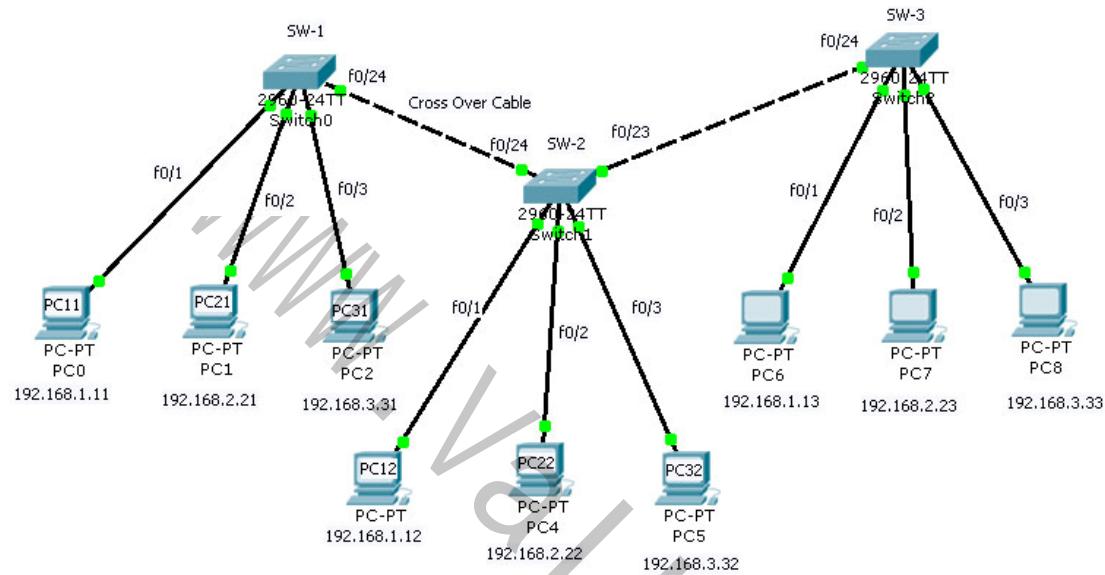
```
SW1#show running-config
```

9. Do the exactly same steps with Switch 2 (except hostname).

10. Setup the PCs' IP address (refer to the topologic graph above).

11. Use “ping” to verify the isolation.

Further:



1. For more information, please visit my blog <http://jhuang8.blogspot.com/>.
2. Video demo is located in <http://www.valit.ca/lab/>.