

Experiment No : 08
Experiment Name : Configuration of VLAN.

Objective :

In this experiment, we are going to configure VLAN using 'CISCO Packet Tracer'. Here, communication is possible only between PCs under the same VLAN.

Here, we use a sample network diagram it contains 3 switches and 7 PCs. We will configure switch using command line interface.

Design Procedure:

1. Let us implement the network like below and configure the PCs with corresponding IP address. Here we do not need default gateway address for any PC.

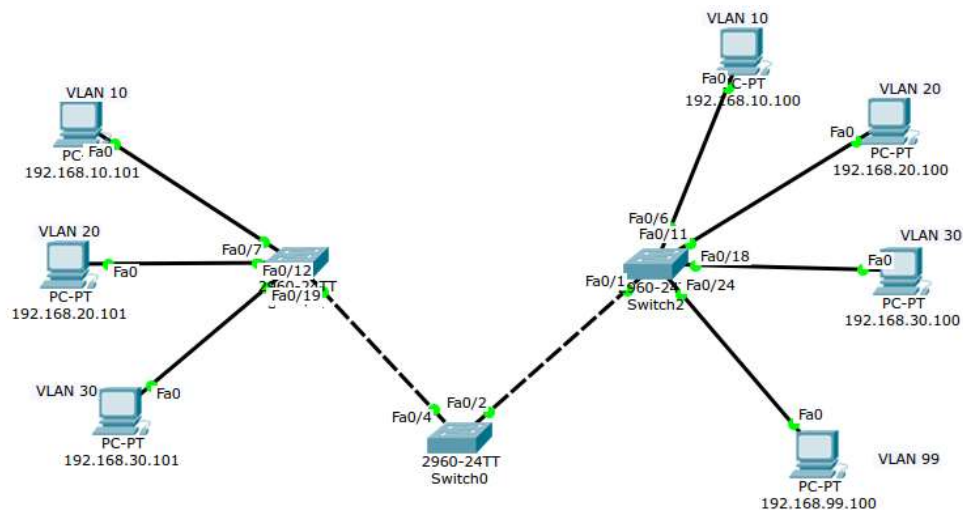
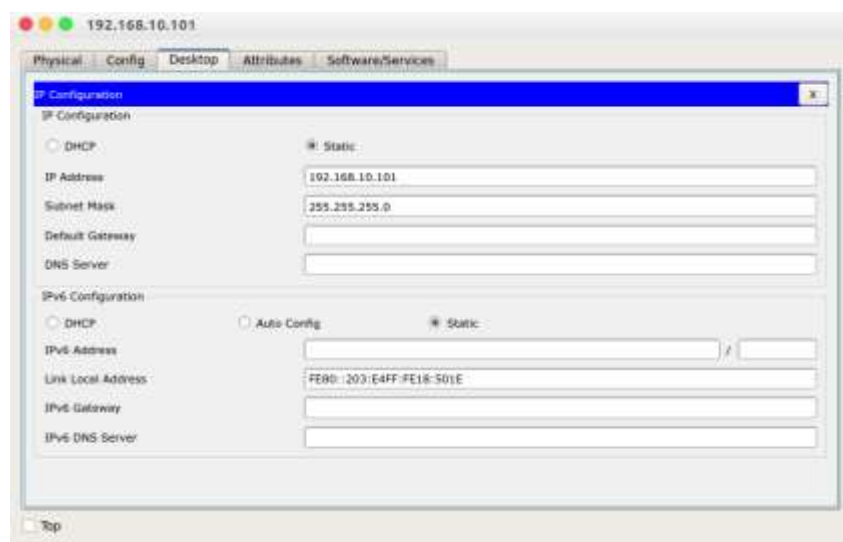
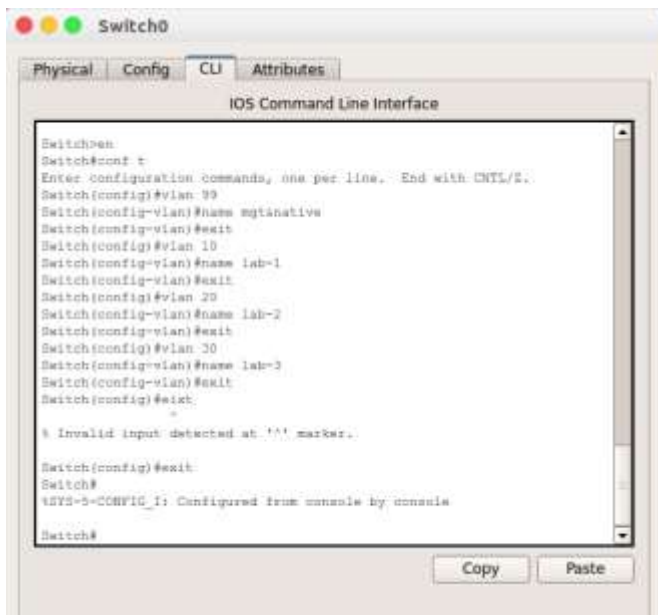


Illustration 1: Network circuit.

IP address is configured like below, here for PC-1:



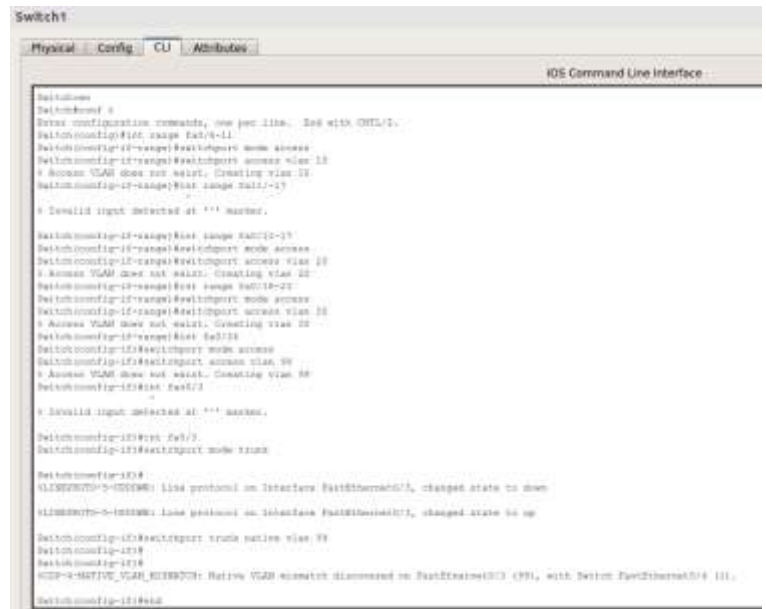
2. Configure the switch on CLI like below:
Switch-0:



The screenshot shows the 'Switch0' window with the 'CLI' tab selected. The 'IOS Command Line Interface' is active, displaying a series of configuration commands entered by the user. The commands configure three VLANs (99, 10, and 30) with names 'mgt-native', 'lab-1', and 'lab-2' respectively. The configuration ends with the 'exit' command, followed by a confirmation message: 'SYS-5-CONFIG_1: Configured from console by console'. The window has 'Copy' and 'Paste' buttons at the bottom right.

```
Switch>
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 99
Switch(config-vlan)#name mgt-native
Switch(config-vlan)#exit
Switch(config)#vlan 10
Switch(config-vlan)#name lab-1
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name lab-2
Switch(config-vlan)#exit
Switch(config)#exit
% Invalid input detected at '^' marker.

Switch(config)#exit
Switch#
SYS-5-CONFIG_1: Configured from console by console
Switch#
```



The screenshot shows the 'Switch1' window with the 'CLI' tab selected. The 'IOS Command Line Interface' is active, displaying a series of configuration commands. The commands configure three VLANs (10, 20, and 30) with names 'lab-1', 'lab-2', and 'lab-3' respectively. The configuration ends with the 'exit' command, followed by a confirmation message: 'SYS-5-CONFIG_1: Configured from console by console'. The window has 'Copy' and 'Paste' buttons at the bottom right.

```
Switch>
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name lab-1
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name lab-2
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name lab-3
Switch(config-vlan)#exit
% Invalid input detected at '^' marker.

Switch(config)#exit
Switch#
SYS-5-CONFIG_1: Configured from console by console
Switch#
```



```
Switch2
Physical Config CLI Attributes
IOS Command Line Interface

Switch>en
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int range fa0/6-10
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 10
% Access VLAN does not exist. Creating vlan 10
Switch(config-if-range)#int range fa0/11-17
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 20
% Access VLAN does not exist. Creating vlan 20
Switch(config-if-range)#int range fa0/18-23
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport access vlan 30
% Access VLAN does not exist. Creating vlan 30
Switch(config-if-range)#int fa0/24
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 99
% Access VLAN does not exist. Creating vlan 99
Switch(config-if)#int fa0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to down

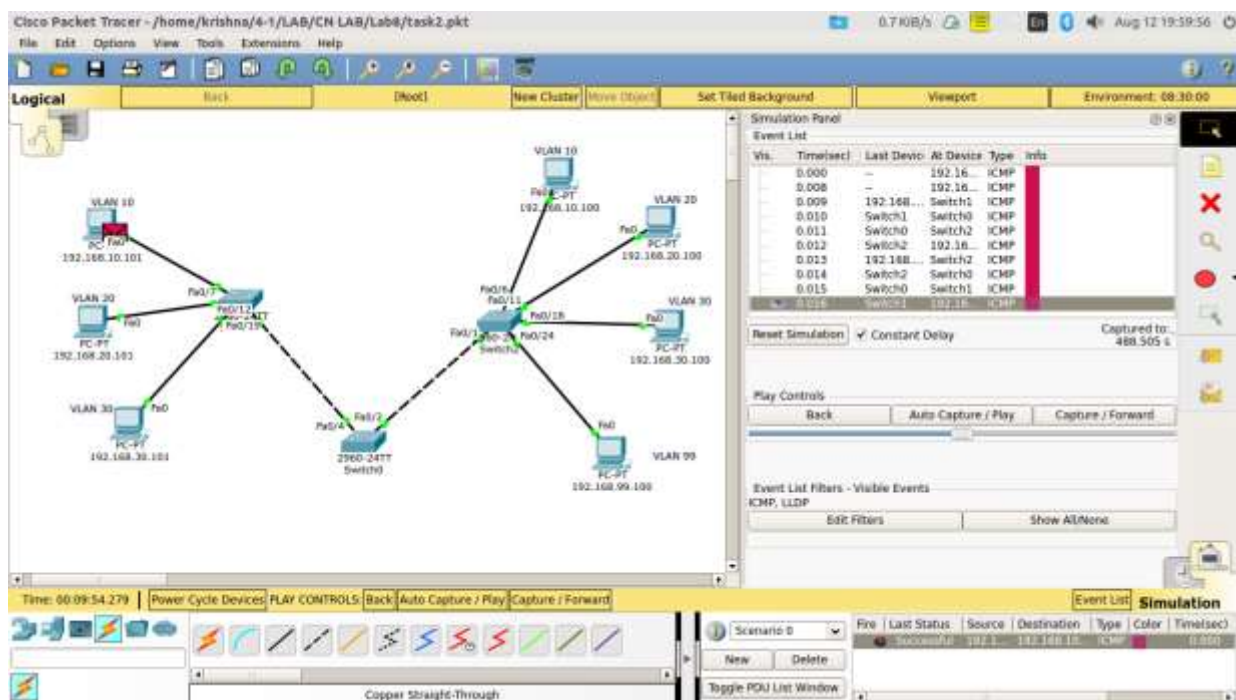
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1,
changed state to up

Switch(config-if)#switchport trunk native vlan 99
Switch(config-if)#
Switch(config-if)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console

%CDP-4-NATIVE_VLAN_MISMATCH: Native VLAN mismatch discovered on
FastEthernet0/1 (99), with Switch FastEthernet0/2 (1).
```

3. Packet
two PCs:
Two PCs under same VLAN.

transferring between



Two PCs under different VLAN:

