VASAVI COLLEGE OF ENGINEERING
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DEPARTMENT OF : ECE

NAME OF THE LABORATORY : CN

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1. VLAN Configuration

Aim:-

to :

* Verify the default VLAN configurations
* Configure VLANs
* Assign VLANs to ports

Tools Used:- PC loaded with Cisco packet Tracer

Procedure:-

→ View the default VLAN configuration using

show vlan brief command

→ Verify connectivity between PCs on the same network.

→ Create and name vlans on S1

  Vlan 10: Faculty / Staff
  Vlan 20 : Students
  Vlan 30: Guest (default)
  Vlan 99 : Management & Native
  Vlan 150: VOICE

→ Similarly, assign the same vlans to the same ports on S3

→ Assign vlans to active ports on S2. Configure the interfaces as access ports and assign vlans as follows:

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Vlan 10: Fast Ethernet 0/11
vlan 20: Fast Ethernet 0/18
vlan 30: Fast Ethernet 0/6

→ similarly, assign the same vlans to the same ports on S3

→ Assign the VOICE vlan to Fast Ethernet 0/11 on S3.
As shown in the topology, the S3 Fast Ethernet 0/1
interface connects to a cisco IP phone and PC4.
The IP phone contains an integrated switch.
One port on the phone is labeled Switch and
connects to F0/4. Another port on the phone is
labelled PC and connects to PC4. The IP phone
also has an internal port that connects to the IP
phone functions.

➡ The S3 F0/11 interface must be configured to
support user traffic to PC4 using vlan10 and voice
traffic to the IP phone using vlan 150. The interface
must also enable QOS and trust the class of
service (COS) values assigned by the IP phone. IP voice
traffic requires a minimum amount of throughput
to support acceptable voice communication quality.
This command helps the switch port to provide this
minimum amount of throughput.

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Source code :
Switch-1 configuration:

S1>enable
S1# config t
S1(config)# vlan 10
S1(config-vlan)# name Faculty/staff
S1(config-vlan)# exit
S1(config-vlan)# vlan 20
S1(config-vlan)# name Students
S1(config-vlan)# exit
S1(config)# vlan 30
S1(config-vlan)# name Guest(Default)
S1(config-vlan)# exit
S1(config)# vlan 99
S1(config-vlan)# name Management & Native
S1(config-vlan)# exit
S1(config)# vlan 150
S1(config-vlan)# name VOICE
S1(config-vlan)# exit

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Switch2 configuration:

S2 >enable

S2 # config t

S2 (config) # vlan 10

S2 (config-vlan) # name Faculty/Staff

S2 (config-vlan) # exit

S2 (config) # vlan 20

S2 (config-vlan) # name Students

S2 (config-vlan) # exit

S2 (config) # vlan 30

S2 (config-vlan) # name Guest (Default)

S2 (config-vlan) # exit

S2 (config) # vlan 99

S2 (config-vlan) # name Management & native

S2 (config-vlan) # exit

S2 (config) # vlan 150

S2 (config-vlan) # name VOICE

S2 (config-vlan) # exit

S2 (config) # interface f0/1

S2 (config-if) # switchport mode access

S2 (config-if) # switchport access vlan 10

S2 (config-if) # exit

S2 (config) # interface f0/18

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S2(config-if)# switchport mode access
S2(Config-if)# switchport access vlan20
S2 (config-if)# exit
S2 (config)# interface f0/6
S2 (config-if)# switchport mode access
S2 (config-if)# switchport access vlan 30
S2 (config-if)# exit

Switch 3 Configuration:-

S3> enable
S3# config t
S3(config)# vlan 10
S3 (config-vlan)# name Faculty/staff
S3(config-vlan)# exit
S3(config)# vlan 20
S3 (config-vlan)# name Students
S3 (config)# vlan 30
S3 (config-vlan)# name Guest (Default)
S3 (config-vlan)# exit
S3 (config)# vlan 99
S3 (config-vlan)# name management & Native
S3 (config-vlan)# exit
S3 (config)# vlan 150

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S3 (config-vlan)# name voice
S3 (config-vlan)# exit
S3 (config)# interface fo/11
S3 (config-if)# switchport mode access
S3 (config-if)# switchport access vlan10
S3 (config)# exit
S3 (config)# interface fo/18
S3 (config-if)# switchport mode access
S3 (config-if)# switchport access vlan20
S3 (config-if)# exit
S3 (config)# interface fo/6
S3 (config-if)# switchport mode access
S3 (config-if)# switchport access vlan30
S3 (config-if)# exit
S3 (config)# interface fo/11
S3 (config-if)# mls qos trust cos
S3 (config-if)# switchport voice vlan 150
S3 (config-if)# exit

Result :- vlan was configured using cisco packet tracer