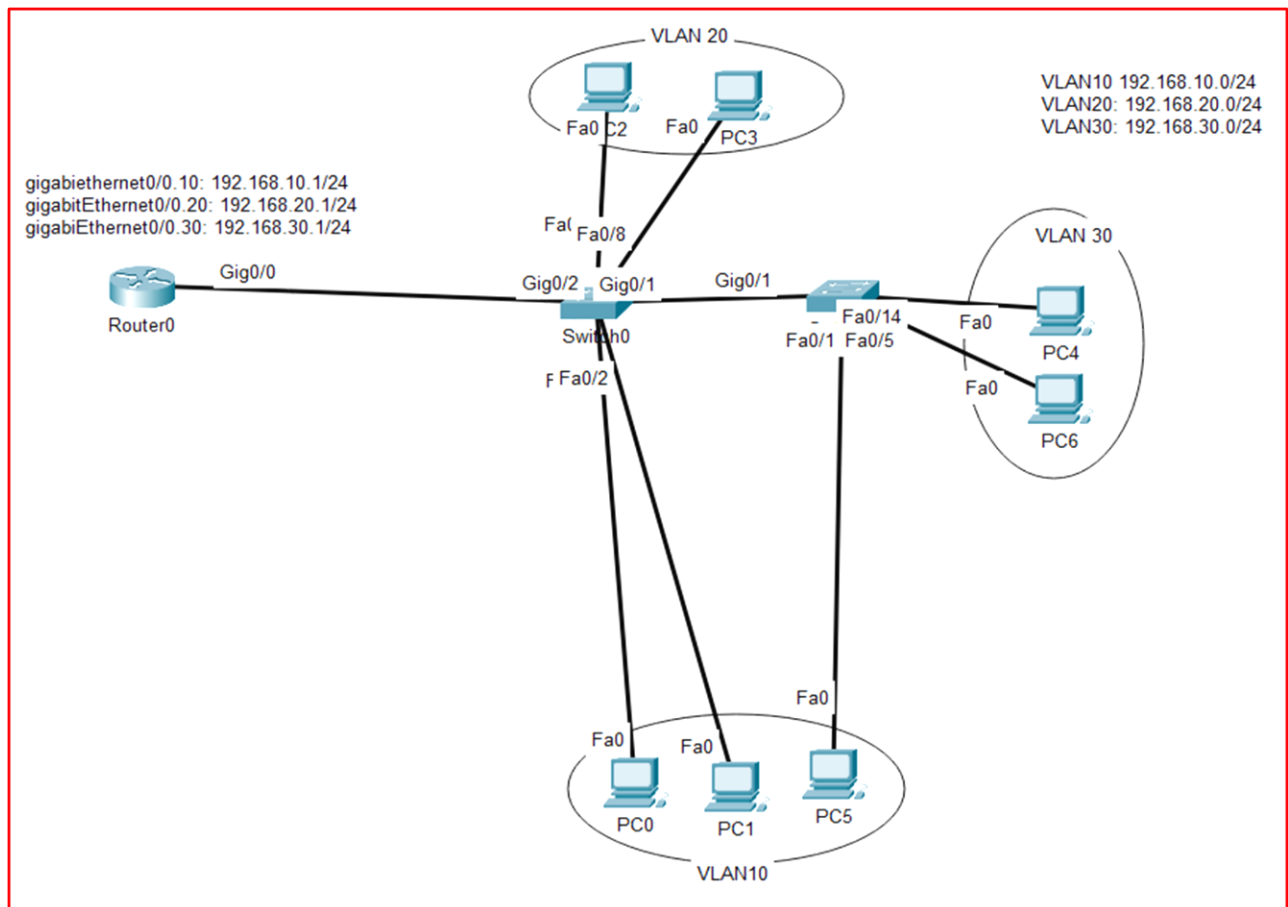


Assignment 4

OBJECTIVE

Implementing the VLAN Concepts and inter VLAN Communication.

TOPOLOGY:



CONFIGURATION DETAILS

Note: Replace the second octet of each address with last two digit numbers of student ID.

e.g. if my studentID ends in 65 then the ip address 192.168.10.1 will become 192.65.10.1

Table 1

VLAN Number	Name	Address Range	Access Ports	Trunk Ports
VLAN 10	sales	192.168.10.2 - 192.168.10.254	SW1: Fa 0/1, Fa0/2 SW2: Fa0/1	SW1: Gig0/1 Gig0/2 SW2: Gig 0/1
VLAN 20	marketing	192.168.20.2 - 192.168.20.254	Sw1: Fa0/4, Fa0/8	
VLAN 30	accounting	192.168.30.2 - 192.168.30.254	Sw2: Fa0/14, Fa0/5	

Steps:

1. Create vlan 10, 20 & 30 on each Switch. Command `vlan # name name#`
2. Assign the Access ports to defined vlan (table 1) and configure them as access port. In interface mode, write command1: `switchport mode access` ; command2: `switchport access vlan vlan#`
3. Configure the trunk ports according to Table 1. using the command: `switchport mode trunk`
4. Configure the PCs with the valid ip address according to Table 1. Use the default gateway as mentioned in Table 2
5. Run the command `no shutdown` for GigabitEthernet 0/0 interface.
6. Configure router on a stick by creating the sub interfaces. Refer to table 2 for details
7. Define the encapsulation using the command : `encapsulation dot1q vlan#`
8. Configure default gateway on the interfaces for vlans as per the given information in table 2. Command: `ip address ipaddress# subnetmask#`

Table 2

GigabitEthernet0/0.10	192.168.10.1	255.255.255.0
GigabitEthernet0/0.20	192.168.20.1	255.255.255.0
GigabitEthernet0/0.30	192.168.30.1	255.255.255.0

Connectivity test:

1. Ping from PC0 to PC 3
2. Ping from PC5 to PC4

Add the snapshot of connectivity test as results.

Add the snapshots of running configuration on both switches and router.

Add conclusion/reflection column:

*Discuss what you have learnt in this activity. What is the significance of VLAN?
Think of a use case/scenario where you can implement this learning.*

SUBMISSION CHECKLIST

- ☐ The packet Tracer File: (.pkt)
- ☐ The word document that includes
 - Objective of the Assignment in your words.
 - Snapshot of Topology
 - Running-Configuration of switches and router (readable)
 - Results (Snapshot)
 - Conclusion/Reflection
 - Use-Case/Scenario

RUBRIC: Assignment 4		Maximum Points:30
Topology		5
Snapshots Running Configuration		5
Results		5
Objective and Conclusion/Reflection		5
Use Case/Scenario		5
Presentation		5