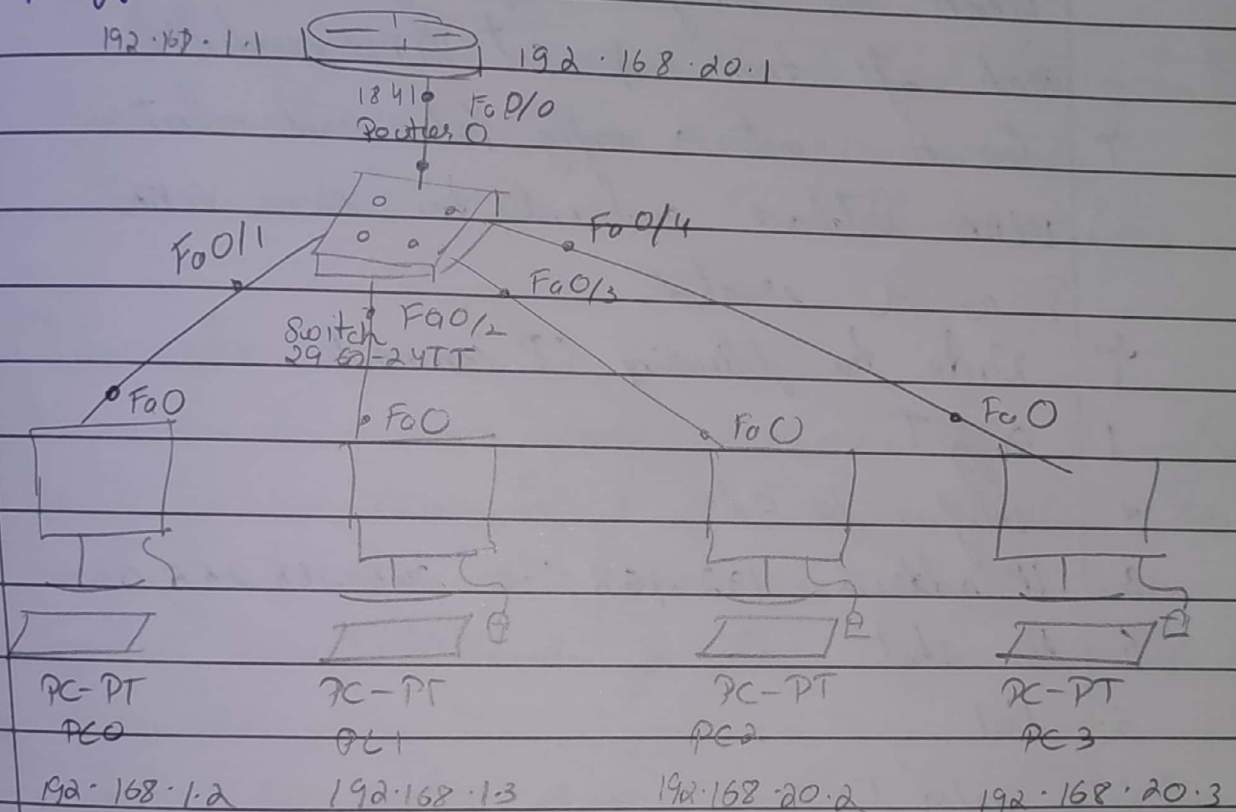


# LAB 9

Aim - To construct a VLAN and make a PC communicate among VLAN

## Topology



## PROCEDURE :

- Create a topology as shown choose 1841 router and 2960-24TT switch
- Set the IP address of the router and 4 PC's respectively, we use class C type addresses also set gateways.
- In switch, go config file and select VLAN database

Give any VLAN no like 2 and name as  
VLAN

• Select the interface fast ethernet 4/1  
and make it trunk

• Next select the switches under 2<sup>nd</sup> interface  
which has interface 0/3 & 0/4. Click on  
each of them and set VLAN number 2.

• Go to router → config tab and select  
VLAN Database and enter the name VLAN  
& no 2 created.

• Write the following CP commands

1. Config T

2. interface fa 0/0

3. IP address 192.168.1.1 255.255.255.0

4. No shut

5. Exit

6. Config T

7. interface fa 0/0.1

8. encapsulation dot1q 2

9. ip address 192.168.20.7 255.255.255.0

10. No shut

11. Exit

• Ping ~~mess~~

Packet Tracer PC command line 1.0  
PC Ping 192.168.20.3



Pinging 192.168.20.3 with 32 bytes of data  
Request timed out

Reply from 192.168.20.3 : bytes=32 time=0ms TTL=127

Reply from 192.168.20.3 : bytes=32 time=5ms TTL=127

Reply from 192.168.20.3 : bytes=32 time=0ms TTL=127

Ping statistics for 192.168.20.3

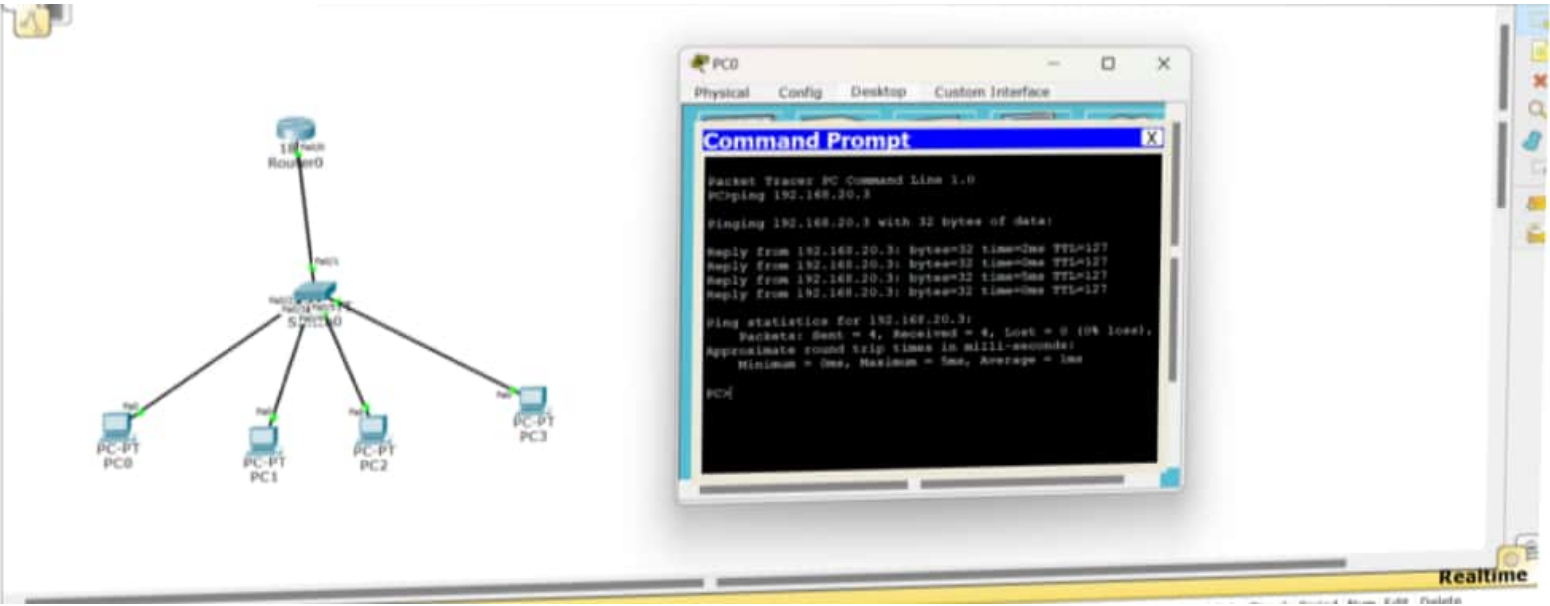
Packets: Sent=4, Received=3, Lost=1 (25% Loss)

Approximate round trip times in milliseconds

Minimum=0ms Maximum=5ms, Average=1ms

### Observation :

- We can have one device on one VLAN & another on another VLAN connected to the same switch. They will only hear other broadcast traffic from within their VLANs as if they were connected to 2 switches.
- Inter VLAN routing gives a flexible tool to logically subdivide their networks that has potential to enhance security & performance.



Logical [Root] New Cluster Run Object Set Titled Background Viewport

**Simulation Panel**

Event List

Vis.	Time(sec)	Last De	At Dis	Type	Info
	0.001	--	PC0	ICMP	
	0.002	PC0	Switch0	ICMP	
	0.002	Switch0	Rout...	ICMP	
	0.003	Switch0	Rout...	ICMP	
	0.003	Router0	Switch0	ICMP	

Reset Simulation ☒ Constant Delay Captured for: 8.003 s

Play Controls: Back **Auto Capture / Play** Capture / Forward

Event List Filters - Visible Events  
 ACL, Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NDI, NETFLOW, NTP, OSPF, OSPFv6, PAg, POP3, RADIUS, RIP, RIPng, RTT, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TFTP, Telnet, UDP, VTP

Edit Filters Show All/None

Time: 00:01:09.907 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward Event List **Simulation**