WEEK 9

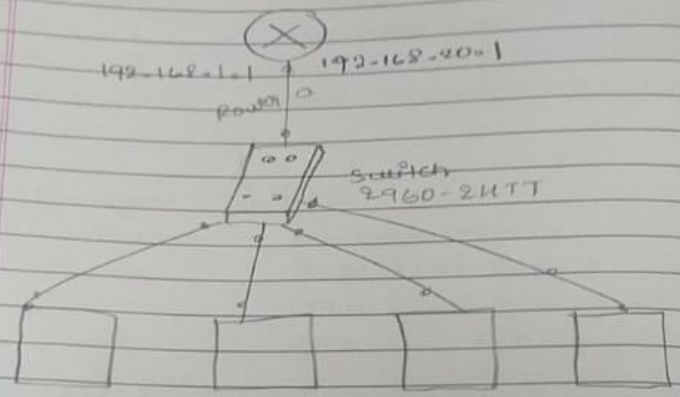
To construct a VLAN and make a pc communicate among VLAN.

OBSERVATION:

DATE: PAGE:

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

Topology.



PC-PT	PC-PT	PC-PT	PC-PT
PC0	PC1	PC2	PC3
192.168.1.2	192.168.1.3	192.168.20.2	192.168.20.3

Procedure:

Create a topology as shown above chose 1841 router and 2960-24TT switch here Set ip address of the routers and 4 PC's respectively we use class C type address also set gateway

on switch, go to config tab and select VLAN Database

give any VLAN no like 2 and name as VLAN
- select the interface fastethor 4/1 and make it trunk
- next select the switches under end 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
- go to router → CLI and type following commands

step 1 : config T
step 2 : interface fa0/0
step 3 : ip address 192.168.10.1 255.255.255.0
step 4 : no shut
step 5 : exit
step 6 : config T
step 7 : interface fa 0/0.1
step 8 : encapsulation dot1q 2
step 9 : IP address 192.168.20.1 255.255.255.0
step 10 : no shut
step 11 : exit

Ping message from PC to another VLAN pc

Ping output
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

DATE: PAGE:

Reply from 192.168.20.3: bytes=32 time=0ms
Reply from 192.168.20.3: bytes=32 time=5ms
Reply from 192.168.20.3: bytes=32 time=0ms
ping statistics for 192.168.20.3

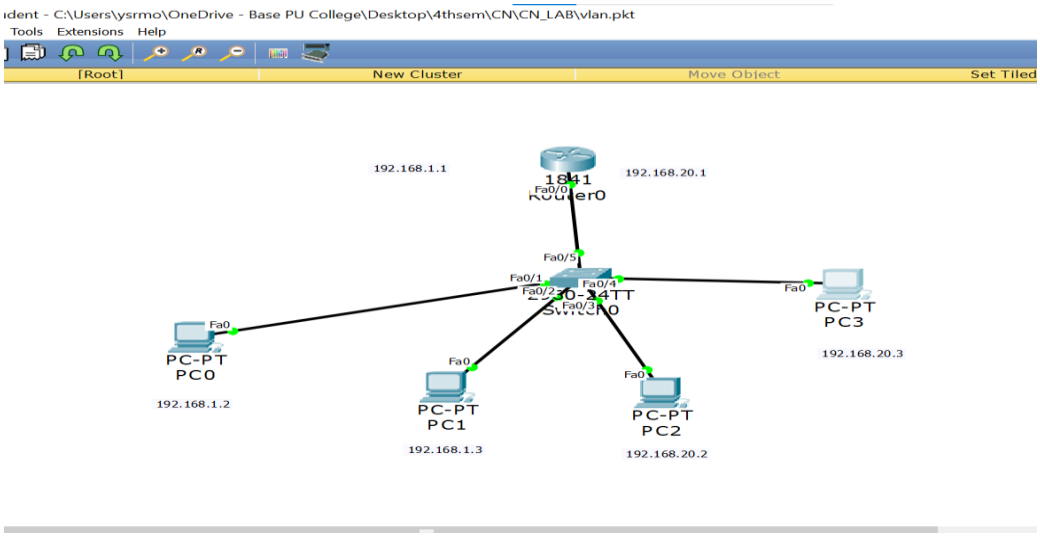
Packets: sent = 4, Recived = 3 lost = 1 (25% loss)
Approx round trip times in ms
Minimum = 0ms maximum = 5ms Average = 1ms

Observation:-

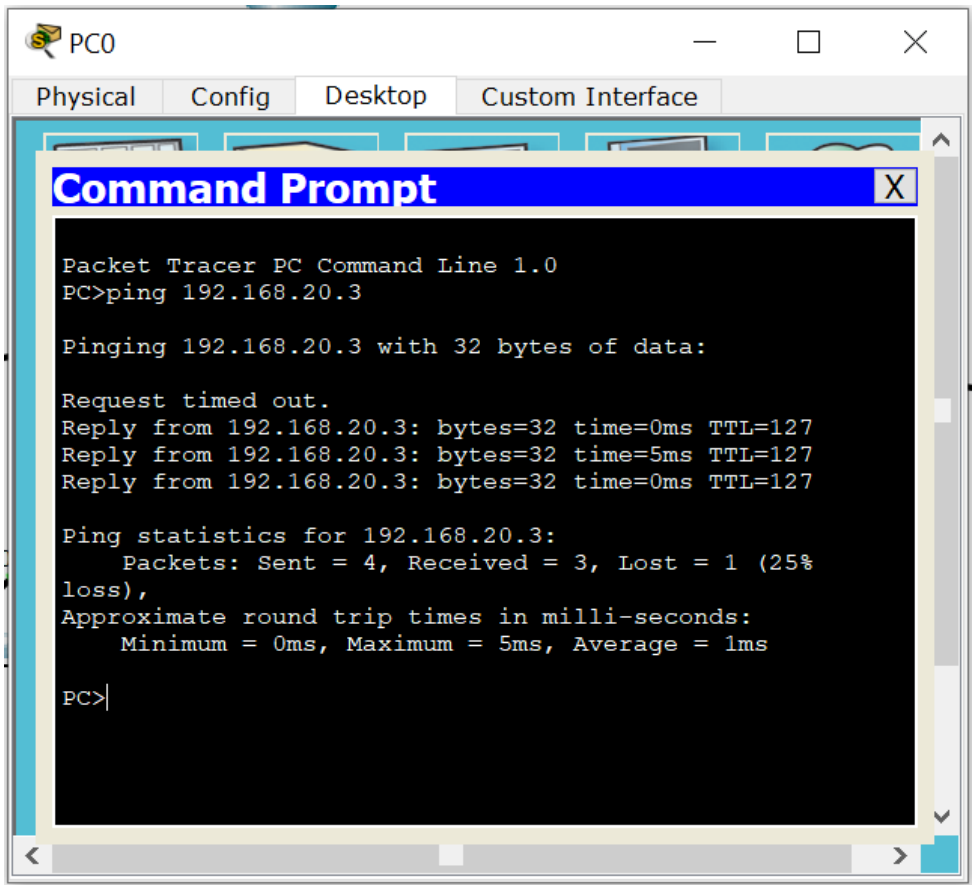
- We can have one device on one VLAN & another on another VLAN connected to the same switch. They will only hear other broadcast traffic from within their VLAN, as if they were connected to two switches
- Here VLANs doesn't use IP address instead deal with subnets / classic type address
- Inter-VLAN routing gives a flexible tool to logically subdivide their networks that has potential to enhance security & performance

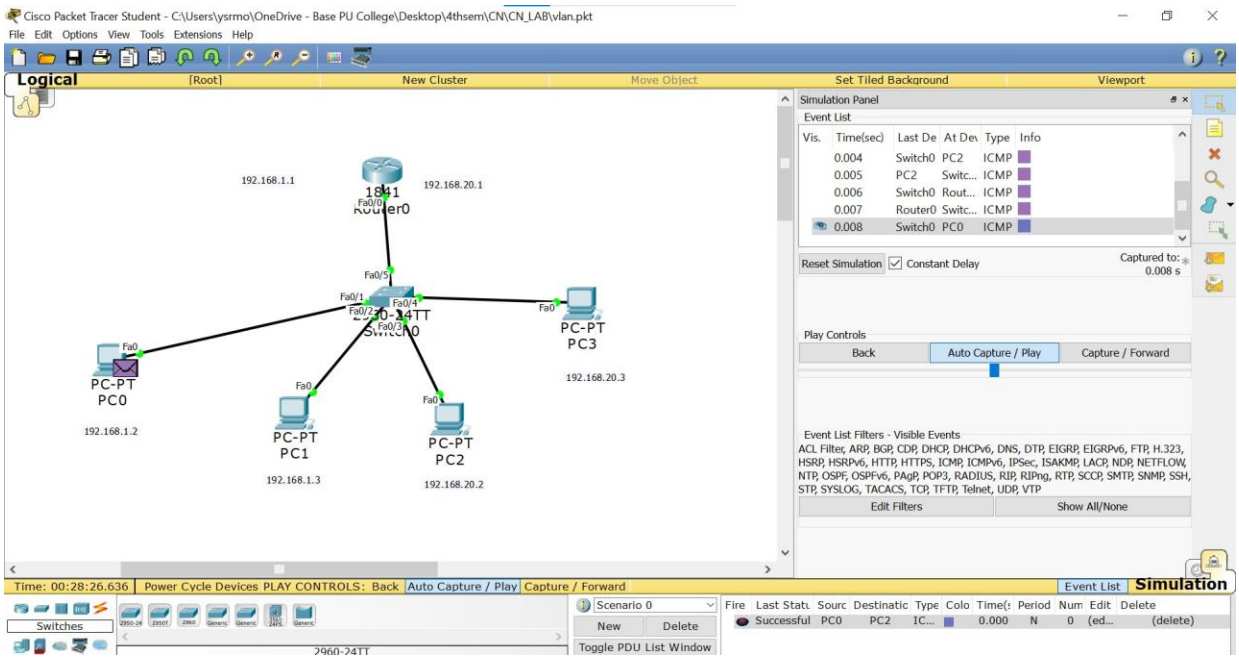
2/8/24

TOPOLOGY:


ident - C:\Users\ysrmo\OneDrive - Base PU College\Desktop\4thsem\CN\CN_LAB\vlan.pkt
Tools Extensions Help
[Root]
New Cluster
Move Object
Set Tiled
192.168.1.1
1841
Router0
Fa0/0
192.168.20.1
Fa0/5
Fa0/1
Fa0/4
Fa0/3
Fa0
PC-PT
PC0
192.168.1.2
Fa0
PC-PT
PC1
192.168.1.3
Fa0
PC-PT
PC2
192.168.20.2
Fa0
PC-PT
PC3
192.168.20.3

OUTPUT:


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
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 milli-seconds:
Minimum = 0ms, Maximum = 5ms, Average = 1ms
PC>


Logical
PC-PT PC0
PC-PT PC1
PC-PT PC2
PC-PT PC3
192.168.1.1
192.168.20.1
192.168.1.2
192.168.1.3
192.168.20.2
192.168.20.3
Simulation Panel
Event List
Play Controls
Back
Auto Capture / Play
Capture / Forward
Simulation