

WEEK 9

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

OBSERVATION:

9

Aim :- To Construct VLANs & make PC's communicate among VLAN

Topology

The diagram shows a central switch connected to four PCs (PC0, PC1, PC2, PC3) and a router. The router has two interfaces: 192.168.1.1 and 192.168.20.1.

Procedure :-

- Create a topology as shown & choose 1841 switch & 2960-24T router
- Set up IP address of router & 4 PCs, we use class C addresses
- In switch, go to config tab & select VLAN Database & in any VLAN no like 2 & name as VLAN
- Give interface fast ethernet 0/1 & name it
- Next select the switch under II interface which has interface 0/3 & 0/4. click on each of them & set VLAN no to 2.
- Go to router → config tab & select VLAN DB, & enter VLAN no 2
- Go to router CLI & perform following command,

```
Config &
interface fa 0
R address 192.168.1.1 255.255.255.0
No shut
exit
config
interface fa 0/1
arp address 192.168.20.1 255.255.255.0
```

No shut
out

Any message from PC to another VLAN R

Output

PC's Any 192.168.20.3

Any 192.168.20.3 with 32 bytes of data:

Request timeout

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

Any stats for 192.168.20.3

Packets sent=5, Received=3, lost=1

RTT, min=0ms Max=5ms Avg=1ms

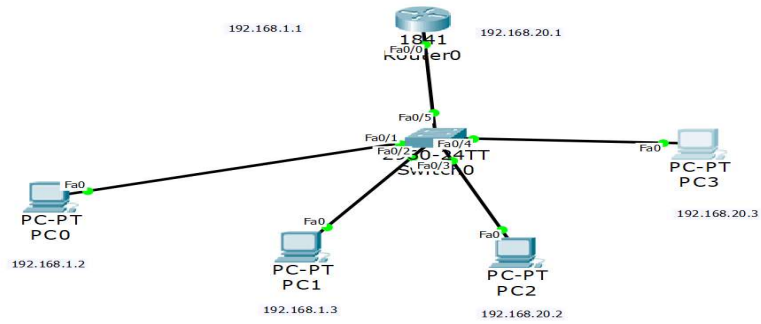
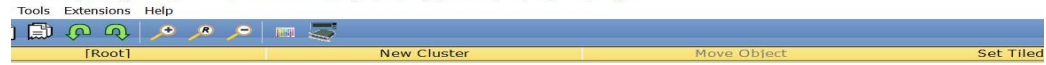
Observations

- we can have one device on one VLAN & another device connected to the same switch. They will only hear the broadcast traffic from within VLANs as if they were entitled to 2 switches.
- VLANs doesn't use IP addresses subnets / class C type
- Just VLAN really gives a flexible tool to logically subdivide this network that has potential to enhance security & performance

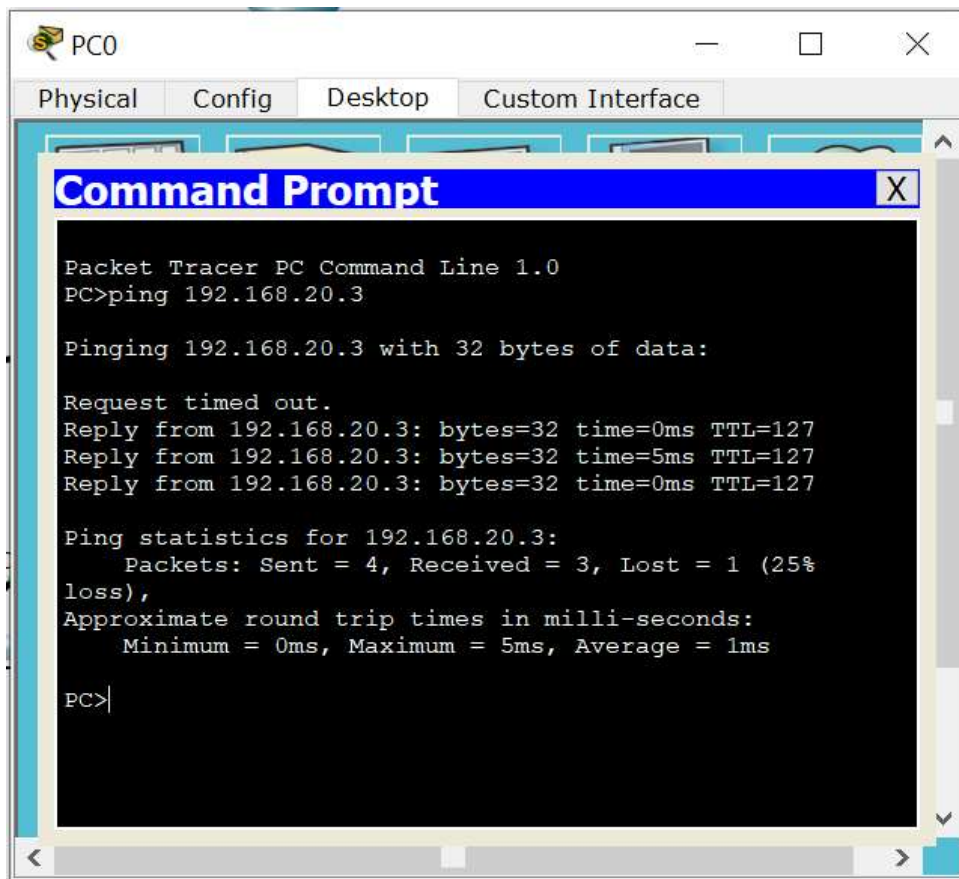
NP
01/01/2023

TOPOLOGY:

ident - C:\Users\ysrmo\OneDrive - Base PU College\Desktop\4thsem\CN\CN_LAB\vlan.pkt



OUTPUT:



PC0

Physical Config Desktop Custom Interface

Command Prompt

```
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>
```

