Experiment 11:

To construct a VLAN and make the PC's communicate among a VLAN

VLAN

Aim: To construct a VLAN and make PC communicate among LAN.

Topology:

by 1
looping

Procedure:

→ Create a topology as shown above choose 1841 router and 2960-24TT switch,

→ set the ip address of the router and 4 PC's respectively we use class C type address also set gateways.

→ In switch, go to config tab and select VLAN database, Give any VLAN no. like 2 and name as VLAN.

→ Select the interface fastethernet 4/1 and make it trunk.

→ Next select the switches under 2nd interface which has interface 0/3 & 0/4 click on each of them and set VLAN number 2.

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

→ Go to router → CLI and type the following commands:

> config t
> interface fa%0
> ip address 192.168.1.1 255.255.255.0
> No shut
> exit
> config t
> interface fa 0/0.1
> encapsulation dot1q 20
> ip address 192.168.20.1 255.255.255.0
> no shut

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
  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:

VLAN is a custom network which is created from one or more local area networks. It enables a group of devices available in multiple networks to be combined into one logical network. The result becomes a Virtual LAN that is administered exactly like a physical VLAN. It is a virtual extension of LAN.

10/10

17/8/23

Topology and output screenshots: