

Computer Network Lab

Configure Vlan (For 3 pc in 1 switch , using vlan 10 & 20)

Enable

Configure terminal

Hostname Classroom

Vlan 10

Name Students

Exit

Vlan 20

Name Teachers

Exit

Interface fastethernet 0/1

Switchport mode access

Switchport access vlan 10

Exit

Interface fastethernet 0/3

Switchport access vlan 10

Exit

Interface fastethernet 0/2

Switchport mode access

Switchport access vlan 20

Exit

Do write memory

Exit

This command will apply just switch0 . Then if we pass the packet we can see that same vlan can share packet but different vlan can't share packet . Then we will copy whole interface and paste that. And here switch name will be switch1.. And off course provide new Ip address in three pc/laptop

Now needed to configure trunk

For Configure trunk:

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In switch0:

```
Interface Fastethernet 0/5  
Switchport mode trunk  
Switchport trunk allowed vlan 10,20  
Exit
```

In switch1:

```
Enable  
Configure terminal  
Interface Fastethernet 0/5  
Switchport mode trunk  
Switchport trunk allowed vlan 10,20  
Exit
```

Configure Router

Here we will use two switch . switch1 pc will one network and switch two pc will another network .

This code is just for Router

```
Enable  
Configure terminal  
Interface gigabitethernet 0/1  
Ip Address 192.168.5.1 255.255.255.0  
No Shutdown  
Exit  
Interface gigabitethernet 0/2  
Ip Address 192.168.10.1 255.255.255.0  
No Shutdown  
Exit  
Exit
```

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Static Router Configuration

Ip Route Means

ip route [Destination Network] [Subnet Mask] [Next Hop IP Address or Exit Interface]

Here [Subnet Mask] will be of Destination Network

Router-1

Enable

Configure Terminal

Interface GigabitEthernet 0/0

Ip Address 192.168.1.1 255.255.255.0

No Shutdown

Exit

Interface GigabitEthernet 0/1

Ip Address 10.0.0.1 255.255.255.252

No shutdown

Exit

Ip Route 192.168.3.0 255.255.255.0 10.0.0.2

Router-2

Enable

Configure Terminal

Interface GigabitEthernet 0/0

Ip Address 10.0.0.2 255.255.255.252

No Shutdown

Exit

Interface GigabitEthernet 0/1

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Ip Address 10.0.0.5 255.255.255.252

No Shutdown

Exit

Ip Route 192.168.3.0 255.255.255.0 10.0.0.6

Ip Route 192.168.1.0 255.255.255.0 10.0.0.1

Router-3

Enable

Configure Terminal

Interface GigabitEthernet 0/0

Ip Address 10.0.0.6 255.255.255.252

No Shutdown

Exit

Interface GigabitEthernet 0/0

Ip Address 192.168.3.1 255.255.255.0

No Shutdown

Exit

Ip Route 192.168.1.0 255.255.255.0 10.0.0.5

Inter vlan Routing

Switch-1

Enable

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Configure terminal

Vlan 10

Name Group-A

Exit

Vlan 20

Name Group-B

Exit

Vlan 30

Name Group-C

Exit

Interface fastethernet 0/1

Switchport mode access

Switchport access vlan 10

Exit

Interface fastethernet 0/2

Switchport mode access

Switchport access vlan 20

Exit

Interface fastethernet 0/3

Switchport mode access

Switchport access vlan 30

Exit

Interface fastethernet 0/5

Switchport mode trunk

Switchport trunk allowed vlan all

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Now copy that and paste 2 times . All pc/Laptop Ip address will changed but will be same network .
That'swhy Gateway address will not changed .

Switch-2 :

Enable

Configure terminal

Interface fastethernet 0/6

Switchport mode trunk

Switchport trunk allowed vlan all

Setup vlan in switch-2

Interface FastEthernet 0/11

Switchport mode access

Switchport access vlan 10

Exit

Interface FastEthernet 0/12

Switchport mode access

Switchport access vlan 20

Exit

Interface FastEthernet 0/13

Switchport mode access

Switchport access vlan 30

Exit

Router :

Enable

Configure Terminal

Interface GigabitEthernet 0/0

Ip Address 192.168.10.1 255.255.255.0

No Shutdown

Exit

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Interface GigabitEthernet 0/1

Ip Address 192.168.20.1 255.255.255.0

No Shutdown

Exit

Interface GigabitEthernet 0/2

Ip Address 192.168.30.1 255.255.255.0

No Shutdown

Exit

For seeing vlan :

Show Vlan brief

For seeing trunk port :

Show interfaces trunk

For seeing Ip:

Show ip interfaces breif

IP Remove Command :

interface FastEthernet 0/1

no ip address

Ip Route remove command:

No Ip Route 192.168.1.0 255.255.255.0 10.0.0.5