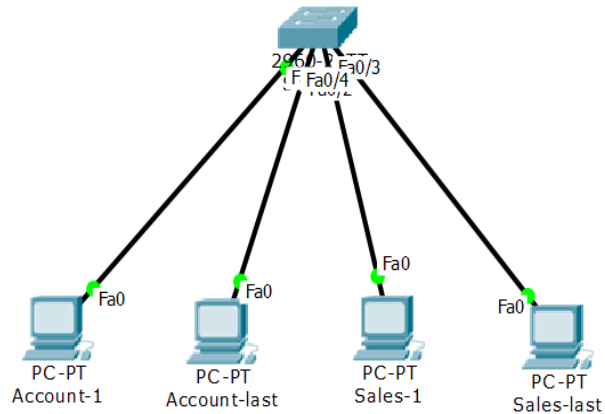


LAB MANUAL 04

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(i) VLAN Example

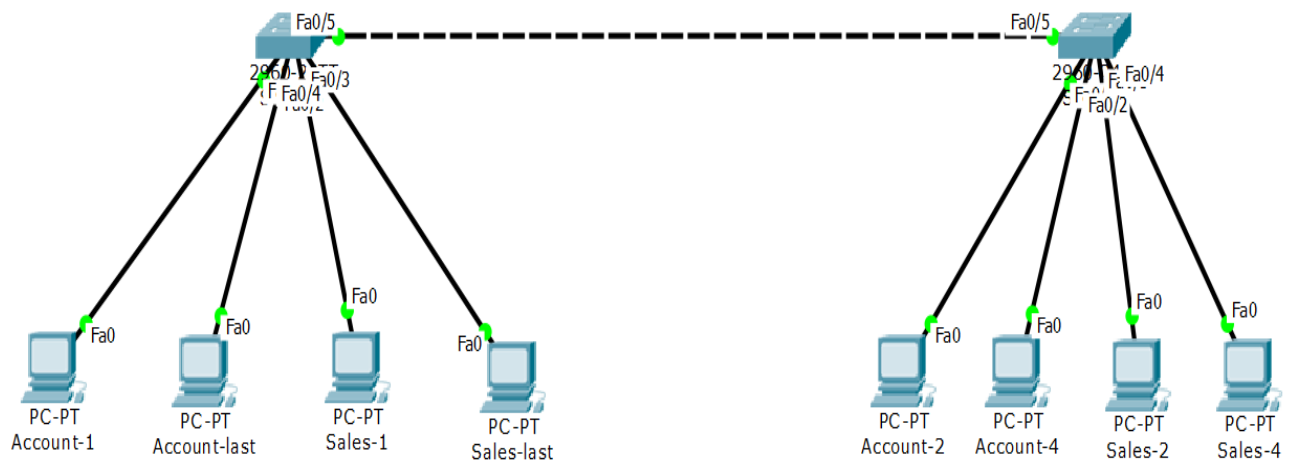


192.168.1.0/24

NET A:-192.168.1.0/26 →Accounts→VLAN 10

NET B:-192.168.1.64/27→Sales→VLAN 20

(II)



Command:

VLAN(switch):

Switch0 Switch>en

```

Switch0 Switch#conf t
Switch0 Switch(config)#vlan 10
Switch0 Switch(config-vlan)#name account
Switch0 Switch(config-vlan)#exit
Switch0 Switch(config)#int f0/1          (int range f0/1-3→for range)
Switch0 Switch(config-if)#switchport mode access
Switch0 Switch(config-if)#switchport access vlan 10
Switch0 Switch(config-if)#int f0/2          // int range f0/2-5→for range
Switch0 Switch(config-if)#switchport mode access
Switch0 Switch(config-if)#switchport access vlan 10
Switch0 Switch(config-if)#int f0/2          // int range f0/2-10→ select port range from 2 to 10
Switch0 Switch(config-if)#switchport mode access
Switch0 Switch(config-if)#switchport access vlan 10
Switch0 Switch(config-if)#exit
Switch0 Switch(config)#vlan 20
Switch0 Switch(config-vlan)#name sales
Switch0 Switch(config-vlan)#exit
Switch0 Switch(config)#int f0/3
Switch0 Switch(config-if)#switchport mode access
Switch0 Switch(config-if)#switchport access vlan 20
Switch0 Switch(config-if)#int f0/4
Switch0 Switch(config-if)#switchport mode access
Switch0 Switch(config-if)#switchport access vlan 20

```

Trunk:

```

Switch0 Switch(config-if)#int f0/5
Switch0 Switch(config-if)#switchport mode trunk

```

Switch0 Switch(config-if)#switchport trunk allowed vlan all

Switch0 Switch(config-if)#exit

Switch1 Switch>en

Switch1 Switch#conf t

Switch1 Switch(config)#vlan 10

Switch1 Switch(config-vlan)#name account

Switch1 Switch(config-vlan)#exit

Switch1 Switch(config)#int f0/1

Switch1 Switch(config-if)#switchport mode access

Switch1 Switch(config-if)#switchport access vlan 10

Switch1 Switch(config-if)#int f0/2

Switch1 Switch(config-if)#switchport mode access

Switch1 Switch(config-if)#switchport access vlan 10

Switch1 Switch(config-if)#exit

Switch1 Switch(config)#vlan 20

Switch1 Switch(config-vlan)#name sales

Switch1 Switch(config-vlan)#exit

Switch1 Switch(config)#int f0/3

Switch1 Switch(config-if)#switchport mode access

Switch1 Switch(config-if)#switchport access vlan 20

Switch1 Switch(config-if)#int f0/4

Switch1 Switch(config-if)#switchport mode access

Switch1 Switch(config-if)#switchport access vlan 20

(III) Performance Test:

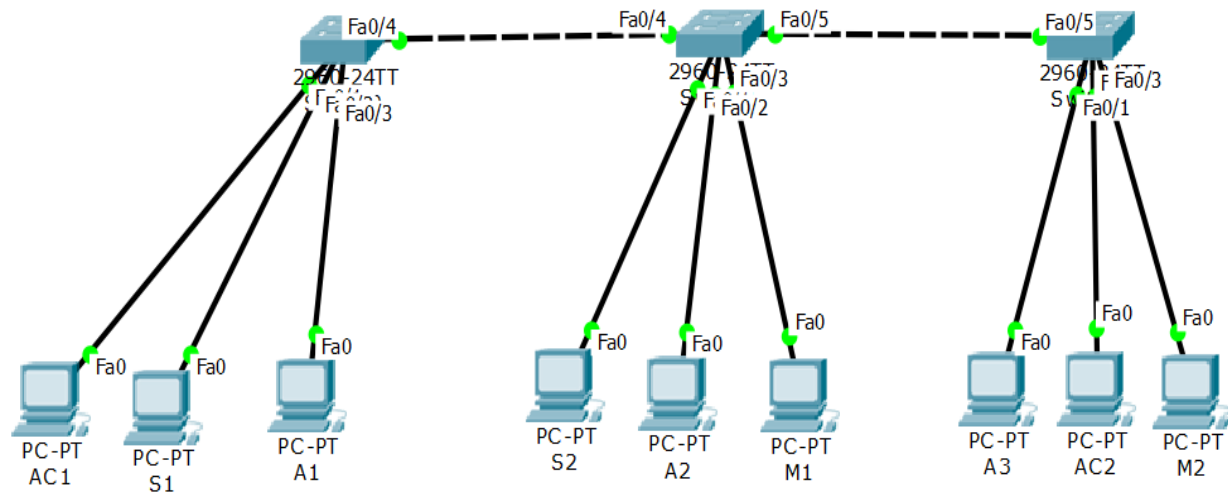
172.16.0.0/16

Account→3000→VLAN 10

Sales→2500→VLAN 20

Marketing→500→VLAN 30

Admin→60→VLAN 40



HOST	Net IP	1 st IP	Last IP	Broadcast	SM
3000	172.16.0.0/16	172.16.0.1	172.16.15.254	172.16.15.255	255.255.240.0
2500	172.16.16.0/20	172.16.16.1	172.16.31.255	172.16.31.255	255.255.240.0
500	172.16.32.0/24	172.16.32.1	172.16.33.255	172.16.33.255	255.255.255.0
60	172.16.34.0/26	172.16.34.1	172.16.34.63	172.16.34.63	255.255.255.192

Command:

VLAN(Switch):

Switch0 Switch>en

Switch0 Switch#conf t

Switch0 Switch(config)#vlan 10

Switch0 Switch(config-vlan)#name account

Switch0 Switch(config-vlan)#exit

Switch0 Switch(config)#int f0/1

Switch0 Switch(config-if)#switchport mode access

Switch0 Switch(config-if)#switchport access vlan 10

Switch0 Switch(config-if)#vlan 20

Switch0 Switch(config-vlan)#name sales

Switch0 Switch(config-vlan)#exit

Switch0 Switch(config)#int f0/2

Switch0 Switch(config-if)#switchport mode access

Switch0 Switch(config-if)#switchport access vlan 20

Switch0 Switch(config-if)#vlan 40

Switch0 Switch(config-vlan)#name admin

Switch0 Switch(config-vlan)#exit

Switch0 Switch(config)#int f0/3

Switch0 Switch(config-if)#switchport mode access

Switch0 Switch(config-if)#switchport access vlan 40

TRUNK:

Switch0 Switch(config-if)#int f0/5

Switch0 Switch(config-if)#switchport mode trunk

Switch0 Switch(config-if)#switchport trunk allowed vlan all

Switch0 Switch(config-if)#exit

Switch2 Switch>en

Switch2 Switch#conf t

Switch2 Switch(config)#vlan sales

```
Switch2 Switch(config)#vlan 20
Switch2 Switch(config-vlan)#name sales
Switch2 Switch(config-vlan)#exit
Switch2 Switch(config)#int f0/1
Switch2 Switch(config-if)#switchport mode access
Switch2 Switch(config-if)#switchport access vlan 20
Switch2 Switch(config-if)#vlan 40
Switch2 Switch(config-vlan)#name admin
Switch2 Switch(config-vlan)#exit
Switch2 Switch(config)#int f0/2
Switch2 Switch(config-if)#switchport mode access
Switch2 Switch(config-if)#switchport access vlan 40
Switch2 Switch(config-if)#vlan 30
Switch2 Switch(config-vlan)#name marketing
Switch2 Switch(config-vlan)#exit
Switch2 Switch(config)#int f0/3
Switch2 Switch(config-if)#switchport mode access
Switch2 Switch(config-if)#switchport access vlan 30
```

TRUNK:

```
Switch2 Switch(config-if)#int f0/6
Switch2 Switch(config-if)#switchport mode trunk
Switch2 Switch(config-if)#switchport trunk allowed vlan all
Switch2 Switch(config-if)#exit
```

```
Switch1 Switch>en
```

```
Switch1 Switch#conf t
```

```
Switch1 Switch(config)#vlan 20
Switch1 Switch(config-vlan)#name sales
Switch1 Switch(config-vlan)#exit
Switch1 Switch(config)#int f0/1
Switch1 Switch(config-if)#switchport mode access
Switch1 Switch(config-if)#switchport access vlan 20
Switch1 Switch(config-if)#vlan 10
Switch1 Switch(config-vlan)#name account
Switch1 Switch(config-vlan)#exit
Switch1 Switch(config)#int f0/2
Switch1 Switch(config-if)#switchport mode access
Switch1 Switch(config-if)#switchport access vlan 10
Switch1 Switch(config-if)#vlan 30
Switch1 Switch(config-vlan)#name marketing
Switch1 Switch(config-vlan)#exit
Switch1 Switch(config)#int f0/3
Switch1 Switch(config-if)#switchport mode access
Switch1 Switch(config-if)#switchport access vlan 30
Switch1 Switch(config-if)#exit
```