LAPORAN PRAKTIKUM 7

Jaringan Komputer

Disusun Oleh :

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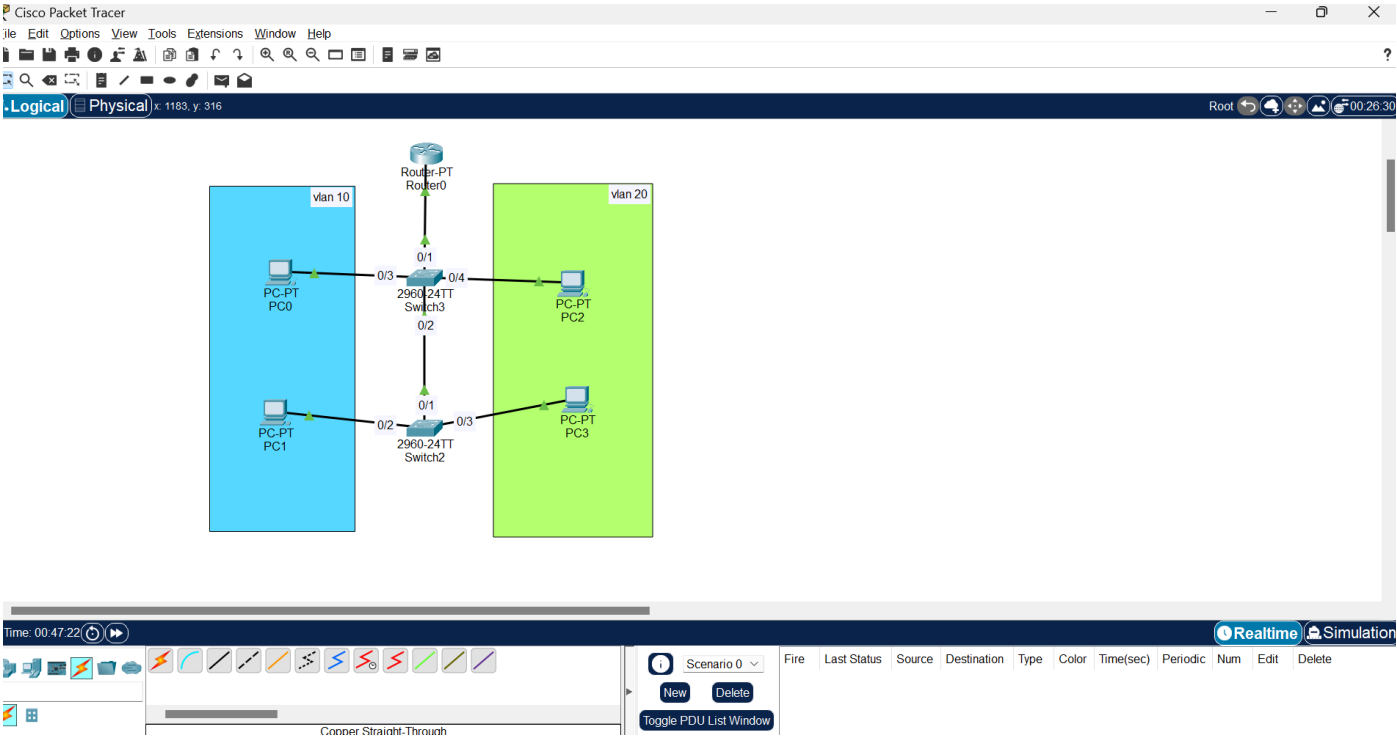
PROGRAM STUDI SISTEM INFORMASI

FAKULTAS SAINS DAN TEKNOLOGI TERAPAN

UNIVERSITAS AHMAD DAHLAN

2024

1. Buat 2 vlan, vlan 10 dan vlan 20 dihubungkan menggunakan 2 switch

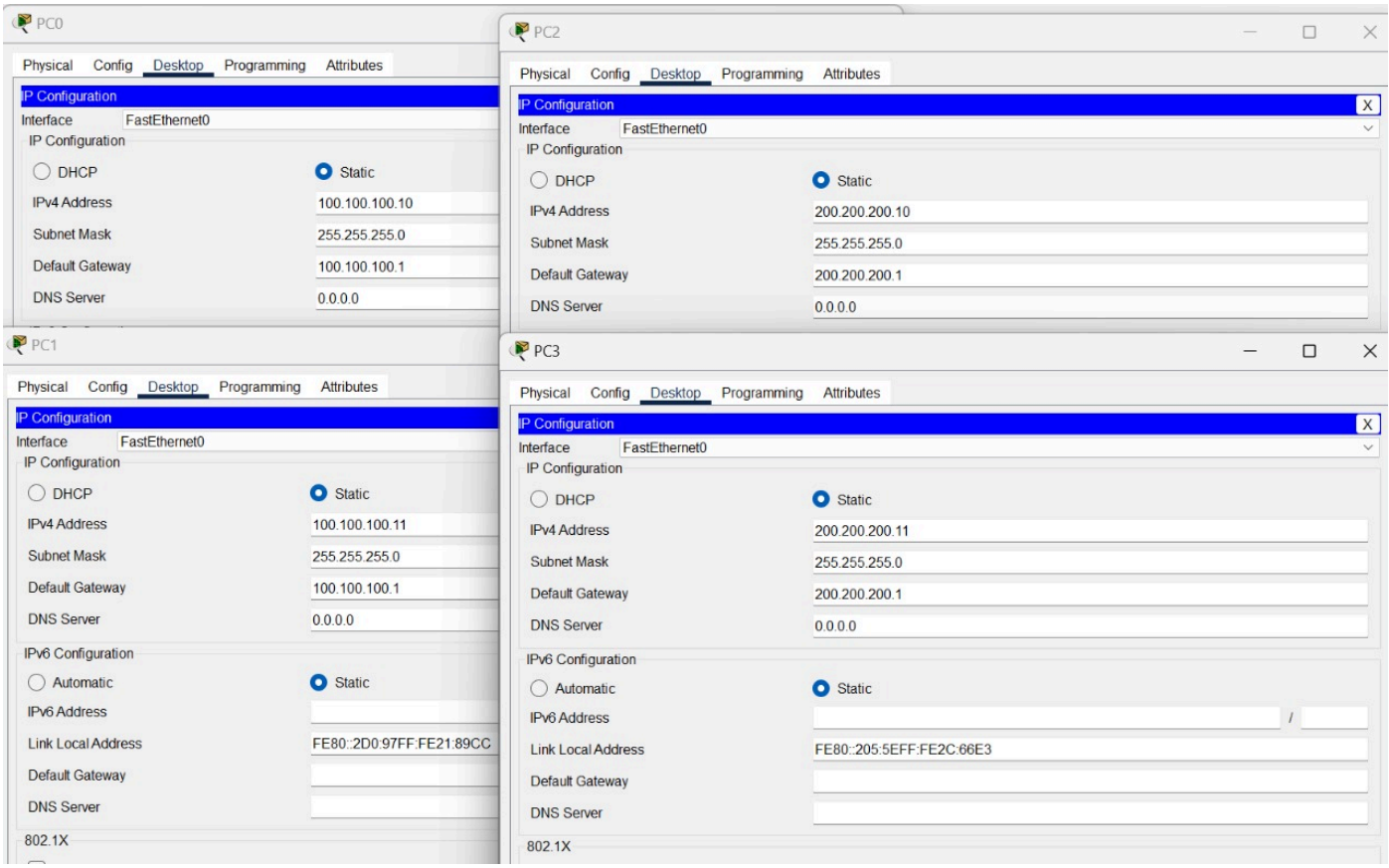


2. vlan10 : vlan20

IP Address:	100.100.100.1
Network Address:	100.100.100.0
Usable Host IP Range:	100.100.100.1 - 100.100.100.254
Broadcast Address:	100.100.100.255
Total Number of Hosts:	256
Number of Usable Hosts:	254
Subnet Mask:	255.255.255.0

IP Address:	200.200.200.1
Network Address:	200.200.200.0
Usable Host IP Range:	200.200.200.1 - 200.200.200.254
Broadcast Address:	200.200.200.255
Total Number of Hosts:	256
Number of Usable Hosts:	254
Subnet Mask:	255.255.255.0

3. Beri masing masing client pada switch menggunakan IP STATIS dengan ip dengan keterangan sebagai berikut :



4. Buat agar interface fa0/0 pada router tetap menyala

```
Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#
```

5. Buat vlan pada masing masing switch :

```
Switch>en
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#vlan 10
Switch(config-vlan)#name keuangan
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name sekretaris
Switch(config-vlan)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console

Switch#show vlan

VLAN Name                              Status    Ports
---- --------------------------------- --------- -------------------------------
1    default                           active    Fa0/1, Fa0/2, Fa0/3, Fa0/4
                                                 Fa0/5, Fa0/6, Fa0/7, Fa0/8
                                                 Fa0/9, Fa0/10, Fa0/11, Fa0/12
                                                 Fa0/13, Fa0/14, Fa0/15, Fa0/16
                                                 Fa0/17, Fa0/18, Fa0/19, Fa0/20
                                                 Fa0/21, Fa0/22, Fa0/23, Fa0/24
                                                 Gig0/1, Gig0/2
10   keuangan                          active
20   sekretaris                        active
1002 fddi-default                      active
1003 token-ring-default                active
1004 fddinet-default                   active
1005 trnet-default                     active
```

6. Assign vlan pada tiap switch :

switch atas :

```
Switch(config)#int fa0/3
Switch(config-if)#switchport access vlan 10
Switch(config-if)#switchport mode access
Switch(config-if)#exit
Switch(config)#int fa0/4
Switch(config-if)#switchport access vlan 20
Switch(config-if)#switchport mode access
Switch(config-if)#exit
Switch(config)#exit
Switch#
```

Switch bawah :

```
Switch(config)#int fa0/2
Switch(config-if)#switchport vlan 10
                             ^
% Invalid input detected at '^' marker.

Switch(config-if)#switchport access vlan 10
Switch(config-if)#switchport mode access
Switch(config-if)#exit
Switch(config)#int fa0/3
Switch(config-if)#switchport access vlan 20
Switch(config-if)#switchport mode access
Switch(config-if)#exit
Switch(config)#exit
```

7. Trunk switch bawah dengan switch atas dan switch atas dengan router :

Switch bawah :

```
Switch#
Switch#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int fa0/0
%Invalid interface type and number
Switch(config)#int fa0/1
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Switch(config-if)#exit
Switch(config)#int fa0/2
Switch(config-if)#switchport mode trunk

Switch(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up

Switch(config-if)#exit
Switch(config)#
```

Switch bawah :

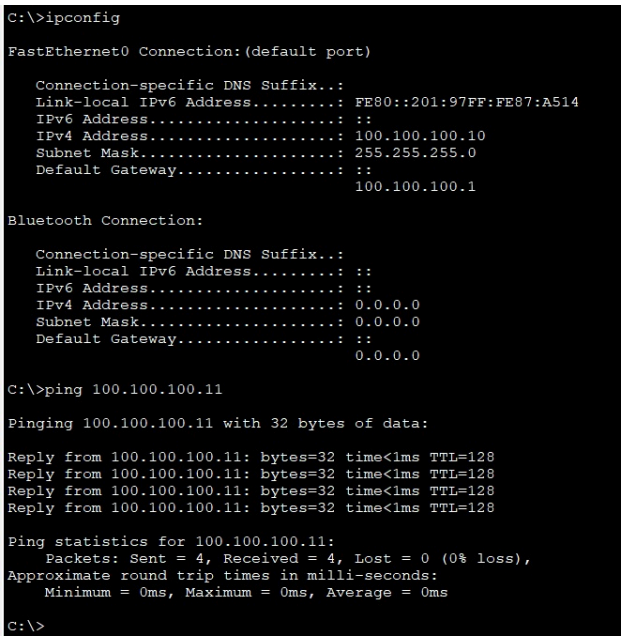
```
Switch(config)#int fa0/1
Switch(config-if)#switchport mode trunk
Switch(config-if)#exit
Switch(config)#
```

8. Berikan ip pada tiap vlan dari router :

```
Router>en
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa0/0.10
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.10, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.10, changed state to up

Router(config-subif)#encaptulatulation dot1q 10
                     ^
% Invalid input detected at '^' marker.

Router(config-subif)#encapsulatulation dot1q 10
                       ^
% Invalid input detected at '^' marker.

Router(config-subif)#encapsulation dot1q 10
Router(config-subif)#ip address 100.100.100.1 255.255.255.0
Router(config-subif)#exit
Router(config)#int fa0/0.20
Router(config-subif)#
%LINK-5-CHANGED: Interface FastEthernet0/0.20, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0.20, changed state to up

Router(config-subif)#encapsulation dot1q 20
Router(config-subif)#ip address 200.200.200.1 255.255.255.0
Router(config-subif)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip interface brief
Interface              IP-Address      OK? Method Status                Protocol
FastEthernet0/0        unassigned      YES unset  up                    up
FastEthernet0/0.10     100.100.100.1   YES manual up                    up
FastEthernet0/0.20     200.200.200.1   YES manual up                    up
FastEthernet1/0        unassigned      YES unset  administratively down down
Serial2/0              unassigned      YES unset  administratively down down
Serial3/0              unassigned      YES unset  administratively down down
FastEthernet4/0        unassigned      YES unset  administratively down down
FastEthernet5/0        unassigned      YES unset  administratively down down
```

9. Lakukan pengecekan jaringan apakah sudah tersambung :

Vlan 10



Vlan 20