

LAPORAN PRAKTIKUM 7

Jaringan Komputer



Disusun Oleh :

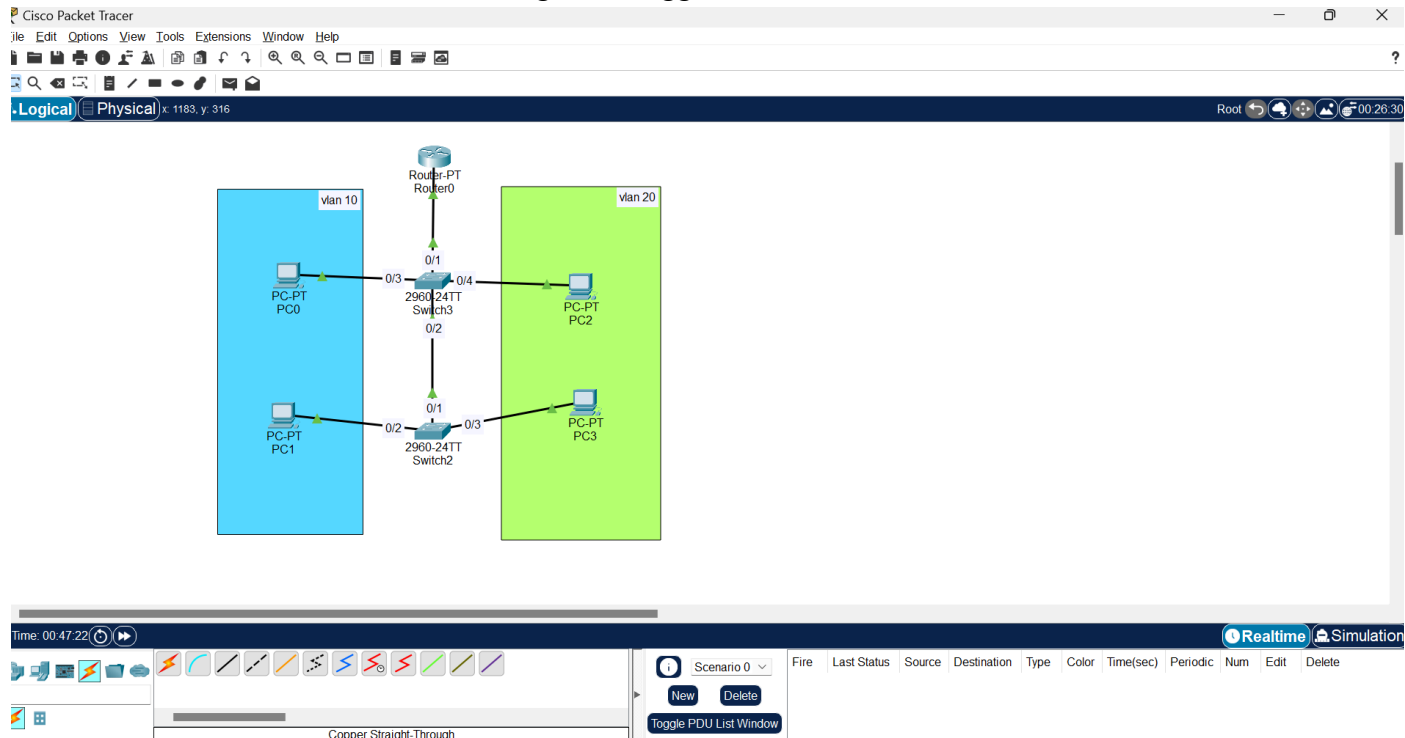
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PROGRAM STUDI SISTEM INFORMASI
FAKULTAS SAINS DAN TEKNOLOGI TERAPAN
UNIVERSITAS AHMAD DAHLAN

2024

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



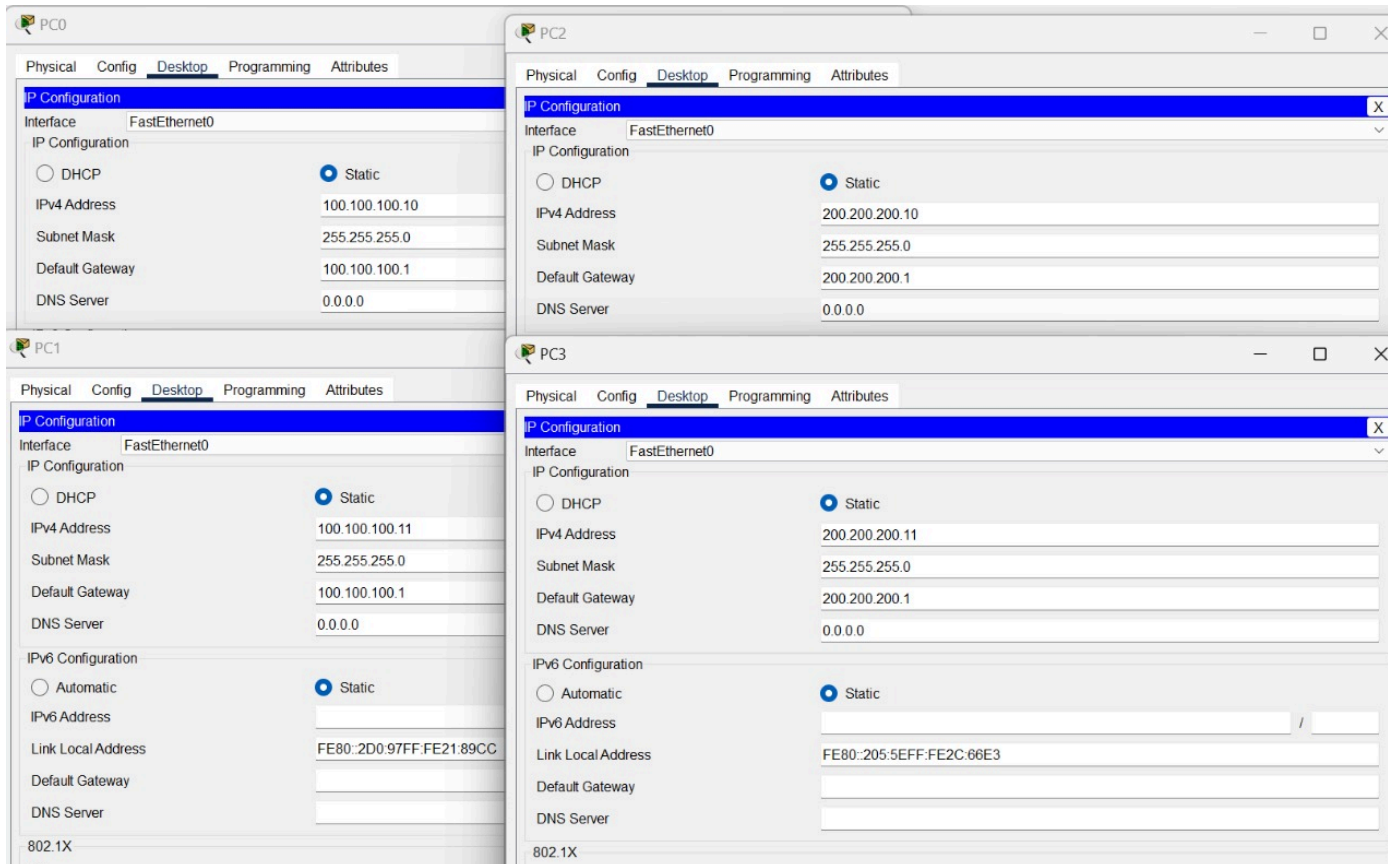
2. vlan10 :

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

2. vlan20

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	sektaris	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 bawah :

```
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(config)#int fa0/2
Switch(config-if)#switchport 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

```
C:\>ipconfig

FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: FE80::201:97FF:FE87:A514
    IPv6 Address . . . . .: ::
    IPv4 Address . . . . .: 100.100.100.10
    Subnet Mask . . . . .: 255.255.255.0
    Default Gateway . . . . .:
                                100.100.100.1

Bluetooth Connection:

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: ::
    IPv6 Address . . . . .: ::
    IPv4 Address . . . . .: 0.0.0.0
    Subnet Mask . . . . .: 0.0.0.0
    Default Gateway . . . . .:
                                0.0.0.0

C:\>ping 100.100.100.11

Pinging 100.100.100.11 with 32 bytes of data:

Reply from 100.100.100.11: bytes=32 time<1ms TTL=128
Reply from 100.100.100.11: bytes=32 time<1ms TTL=128
Reply from 100.100.100.11: bytes=32 time<1ms TTL=128
Reply from 100.100.100.11: bytes=32 time<1ms TTL=128

Ping statistics for 100.100.100.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Vlan 20

```
C:\>ipconfig

FastEthernet0 Connection: (default port)

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: FE80::201:42FF:FE09:4C22
    IPv6 Address . . . . .: ::
    IPv4 Address . . . . .: 200.200.200.10
    Subnet Mask . . . . .: 255.255.255.0
    Default Gateway . . . . .:
                                200.200.200.1

Bluetooth Connection:

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: ::
    IPv6 Address . . . . .: ::
    IPv4 Address . . . . .: 0.0.0.0
    Subnet Mask . . . . .: 0.0.0.0
    Default Gateway . . . . .:
                                0.0.0.0

C:\>ping 200.200.200.11

Pinging 200.200.200.11 with 32 bytes of data:

Reply from 200.200.200.11: bytes=32 time<1ms TTL=128
Reply from 200.200.200.11: bytes=32 time<1ms TTL=128
Reply from 200.200.200.11: bytes=32 time<1ms TTL=128
Reply from 200.200.200.11: bytes=32 time<1ms TTL=128

Ping statistics for 200.200.200.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```