

LAPORAN PRAKTIKUM 4

Jaringan Komputer



Disusun Oleh :

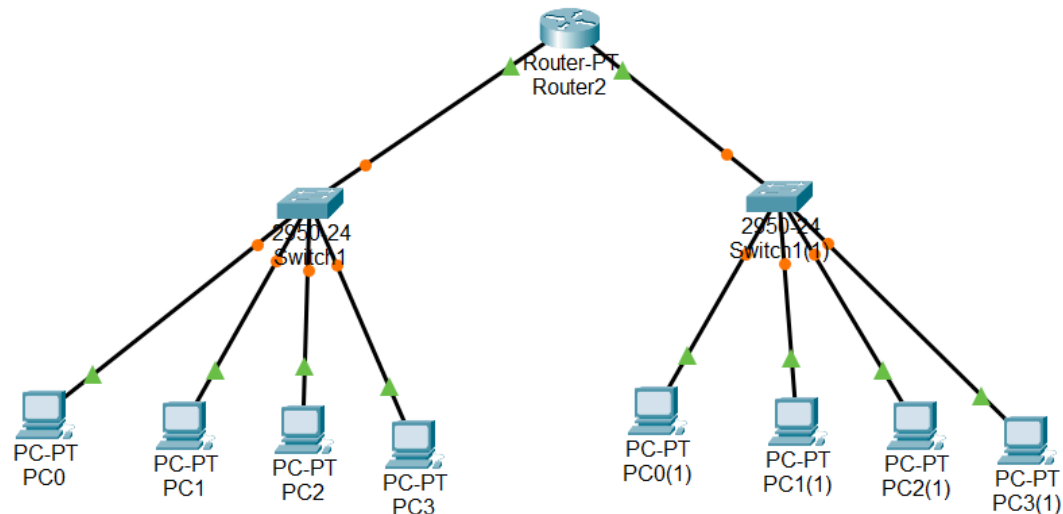
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PROGRAM STUDI SISTEM INFORMASI
FAKULTAS SAINS DAN TEKNOLOGI TERAPAN
UNIVERSITAS AHMAD DAHLAN

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1. Buat jaringan dengan 8 client pc menggunakan 2 switch, tiap switch mempunyai 4 client dan client dari tiap switch dapat terhubung. Hubungkan menggunakan kabel straight.



2. Client Switch pertama :

IP Address:	200.100.1.3
Network Address:	200.100.1.0
Usable Host IP Range:	200.100.1.1 - 200.100.1.62
Broadcast Address:	200.100.1.63
Total Number of Hosts:	64
Number of Usable Hosts:	62
Subnet Mask:	255.255.255.192

Client Switch kedua :

IP Address:	200.100.1.65
Network Address:	200.100.1.64
Usable Host IP Range:	200.100.1.65 - 200.100.1.126
Broadcast Address:	200.100.1.127
Total Number of Hosts:	64
Number of Usable Hosts:	62
Subnet Mask:	255.255.255.192

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

Switch 1 :

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP
 ☒ Static

IPv4 Address 200.100.1.4

Subnet Mask 255.255.255.192

Default Gateway 200.100.1.1

DNS Server 0.0.0.0

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP
 ☒ Static

IPv4 Address 200.100.1.5

Subnet Mask 255.255.255.192

Default Gateway 200.100.1.1

DNS Server 0.0.0.0

IP Configuration

InterfaceFastEthernet0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address200.100.1.6

Subnet Mask255.255.255.192

Default Gateway200.100.1.1

DNS Server0.0.0.0

IP Configuration

InterfaceFastEthernet0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address200.100.1.7

Subnet Mask255.255.255.192

Default Gateway200.100.1.1

DNS Server0.0.0.0

Switch 2 :

IP Configuration

InterfaceFastEthernet0

IP Configuration

☐ DHCP

☒ Static

IPv4 Address200.100.1.70

Subnet Mask255.255.255.192

Default Gateway200.100.1.65

DNS Server0.0.0.0

IP Configuration

InterfaceFastEthernet0

IP Configuration

☐ DHCP

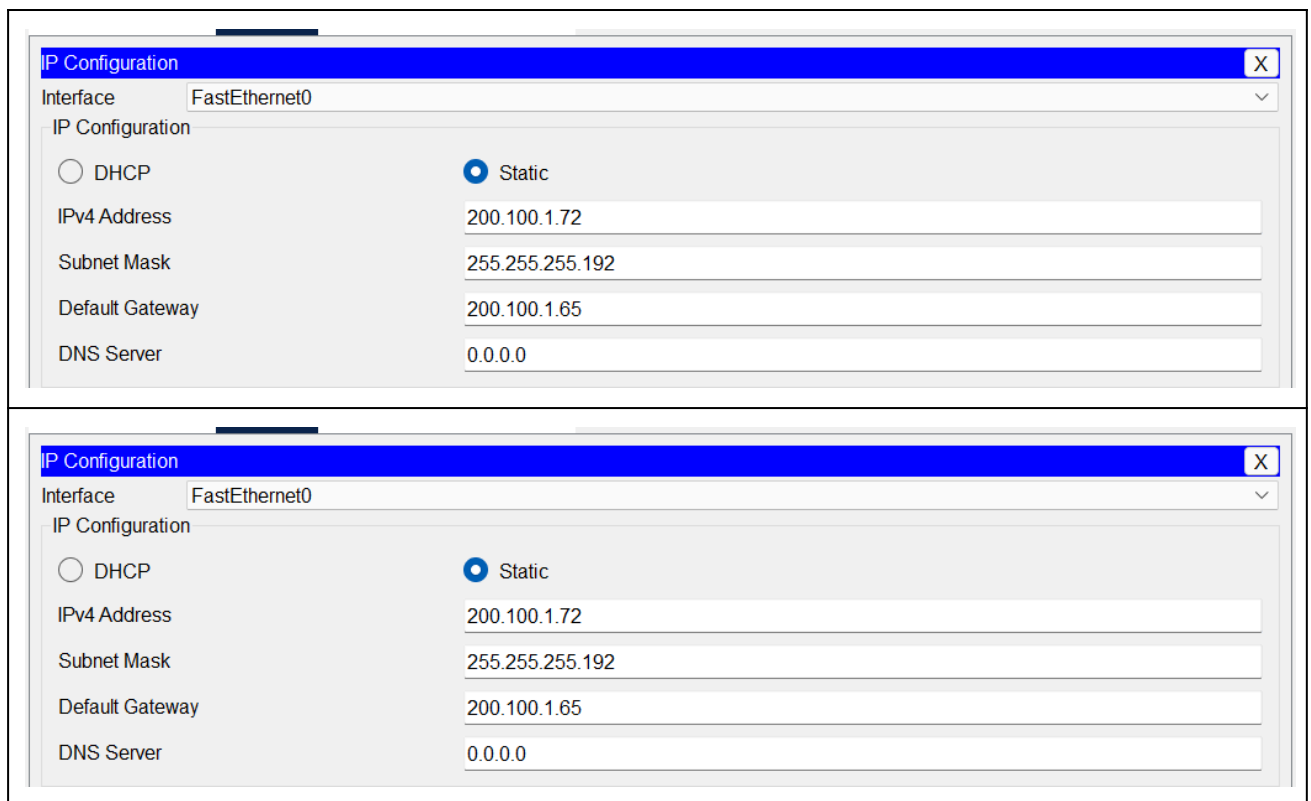
☒ Static

IPv4 Address200.100.1.71

Subnet Mask255.255.255.192

Default Gateway200.100.1.65

DNS Server0.0.0.0



4. Selanjutnya kita akan melakukan setting pada router agar masing masing client dari tiap switch dapat terhubung satu sama lain. lakukan enable lalu ketik configure terminal untuk masuk ke dalam mode konfigurasi pada router

```
Router>enable
Router#configure terminal
```

5. Lakukan setting pada fastEthernet0/0 untuk memberikan ip address 200.100.1.1 dan menggunakan subnet 255.255.255.192

```
Router(config)#interface fastEthernet0/0
Router(config-if)#no shutdown

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

Router(config-if)#ip address 200.100.1.1 255.255.255.192
Router(config-if)#exit
```

6. Lanjutkan dengan melakukan setting pada fastEthernet1/0 dengan memberikan ip address 200.100.1.65 dengan ip address 255.255.255.192

```
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

Router(config-if)#ip address 200.100.1.65 255.255.255.192
Router(config-if)#exit
```

7. Setelahnya lakukan routing agar tiap client pada setiap switch dapat saling terhubung

```
Router(config)#ip route 200.100.1.0 255.255.255.192 200.100.1.64
Router(config)#ip route 200.100.1.64 255.255.255.192 200.100.1.0
```

8. Lakukan pengecekan routing yang baru saja dibuat

```
Router>show ip route
```

```
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route
```

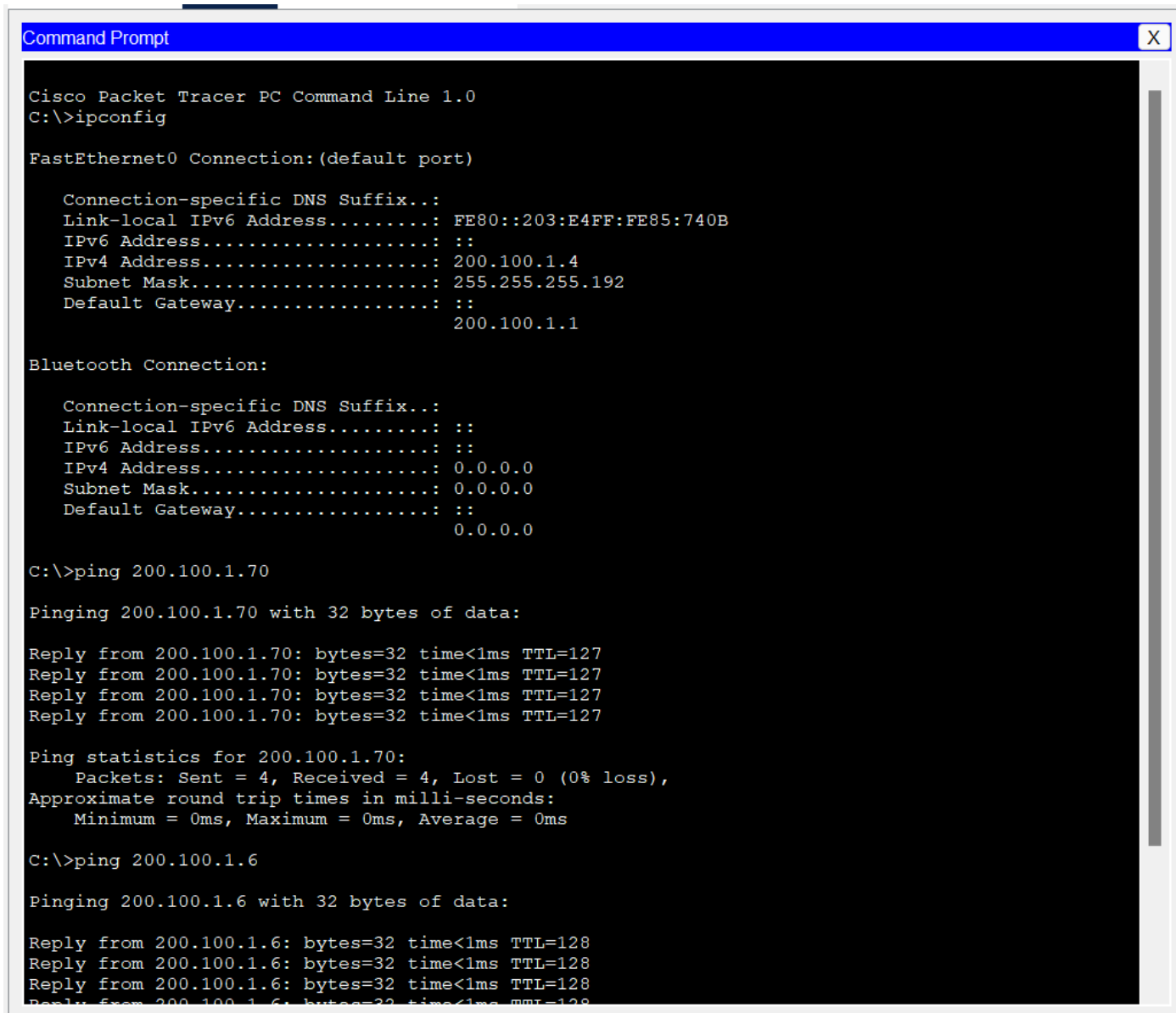
```
Gateway of last resort is not set
```

```
200.100.1.0/26 is subnetted, 2 subnets
```

```
C      200.100.1.0 is directly connected, FastEthernet0/0
```

```
C      200.100.1.64 is directly connected, FastEthernet1/0
```

9. Lakukan pengecekan pada client, apakah client dengan client yang memiliki blok ip berbeda dapat terhubung :



```
Command Prompt
Cisco Packet Tracer PC Command Line 1.0
C:\>ipconfig

FastEthernet0 Connection:(default port)

    Connection-specific DNS Suffix...:
    Link-local IPv6 Address . . . . .: FE80::203:E4FF:FE85:740B
    IPv6 Address . . . . .: ::
    IPv4 Address . . . . .: 200.100.1.4
    Subnet Mask . . . . .: 255.255.255.192
    Default Gateway . . . . .: ::
                                200.100.1.1

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 200.100.1.70

Pinging 200.100.1.70 with 32 bytes of data:

Reply from 200.100.1.70: bytes=32 time<1ms TTL=127
Reply from 200.100.1.70: bytes=32 time<1ms TTL=127
Reply from 200.100.1.70: bytes=32 time<1ms TTL=127
Reply from 200.100.1.70: bytes=32 time<1ms TTL=127

Ping statistics for 200.100.1.70:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>ping 200.100.1.6

Pinging 200.100.1.6 with 32 bytes of data:

Reply from 200.100.1.6: bytes=32 time<1ms TTL=128
Reply from 200.100.1.6: bytes=32 time<1ms TTL=128
Reply from 200.100.1.6: bytes=32 time<1ms TTL=128
Reply from 200.100.1.6: bytes=32 time<1ms TTL=128
```