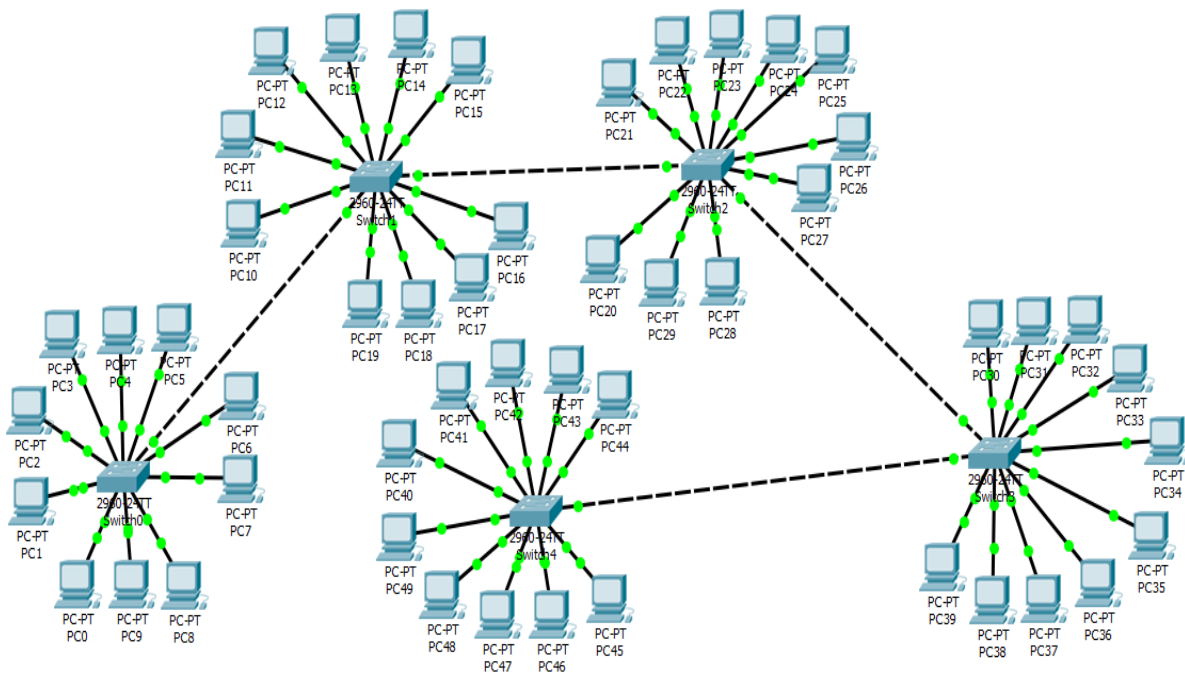


MODUL 3

SUBNETTING

Tugas Modul

1. Diketahui sebuah supermarket akan memasang sebuah jaringan komputer yang menggunakan network ID 202.155.19.0 dengan subnet mask default 255.255.255.0. supermarket tersebut mempunyai 5 divisi dan masing-masing divisi dapat berisi hingga 25 komputer.
2. Tugas anda adalah :
 - a. Buatlah desain jaringan tersebut dengan Packet Tracer
 - b. Gunakan switch seri generic dan gunakan juga 10 (sepuluh) unit PC



- c. Tentukan subnet mask yang harus digunakan pada semua komputer tersebut
5 subnet, jadi $x=3$ jadi ada 3 bit 1 dan $y=5$ jadi ada 5 bit 0, karena dalam satu blok terdapat 8 bit

11111111.11111111.11111111.11100000
255 . 255 . 255 . 224

- d. Tentukan subnet address yang terbentuk

$256-224=32$

Jadi ada 32 IP Address

- 202.155.19.0
- 202.155.19.32
- 202.155.19.64
- 202.155.19.98
- 202.155.19.130

Pengisian IP Address

PC1

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address: 202.155.19.1

Subnet Mask: 255.255.255.224

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::20A:41FF:FEC1:4257

IPv6 Gateway:

IPv6 DNS Server:

PC10

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 202.155.19.33

Subnet Mask 255.255.255.224

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::206:2AFF:FE11:CB66

IPv6 Gateway

IPv6 DNS Server

Top

PC20

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 202.155.19.66

Subnet Mask 255.255.255.224

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::250:FFF:FE45:C539

IPv6 Gateway

IPv6 DNS Server

Top

PC30

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 202.155.19.100

Subnet Mask 255.255.255.224

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::2D0:97FF:FE23:8A88

IPv6 Gateway

IPv6 DNS Server

PC40

Physical Config Desktop Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IP Address 202.155.19.131

Subnet Mask 255.255.255.224

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

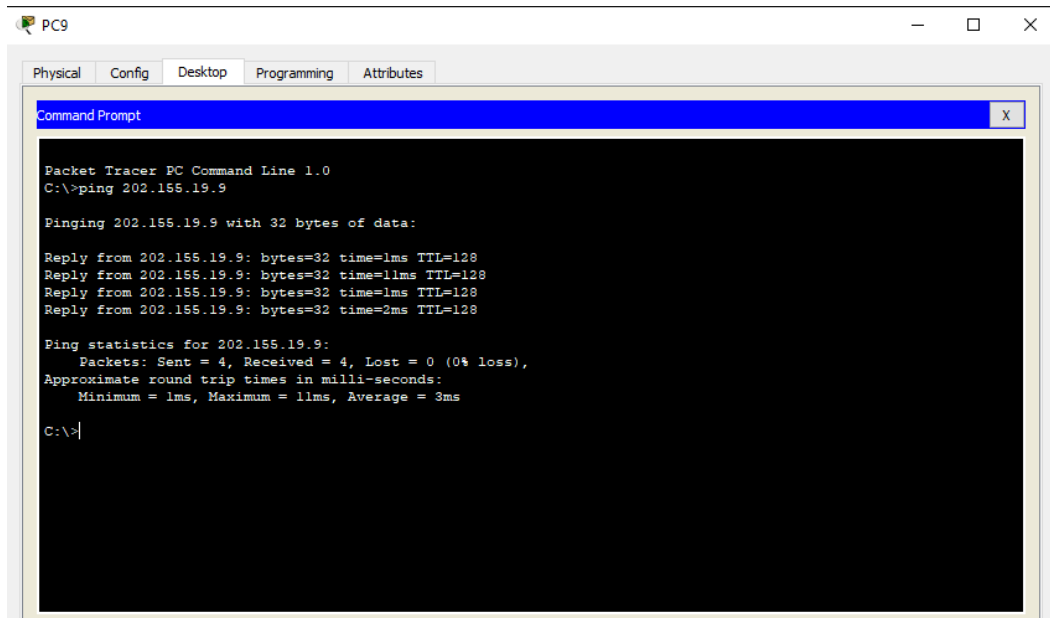
IPv6 Address /

Link Local Address FE80::250:FFF:FEC4:282B

IPv6 Gateway

IPv6 DNS Server

- e. Implementasikan menggunakan simulator
- f. Lakukan tes koneksi antara komputer-komputer yang ada
 1. Ping PC 9 ke PC di divisi 1 (**terhubung dan memberikan respon**)



The screenshot shows a Packet Tracer window for PC9. The 'Command Prompt' window is open, displaying the output of a ping command to 202.155.19.9. The output shows four successful replies with varying times (1ms, 11ms, 1ms, 2ms) and a TTL of 128. The statistics show 4 packets sent, 4 received, and 0% loss.

```
Packet Tracer PC Command Line 1.0
C:\>ping 202.155.19.9

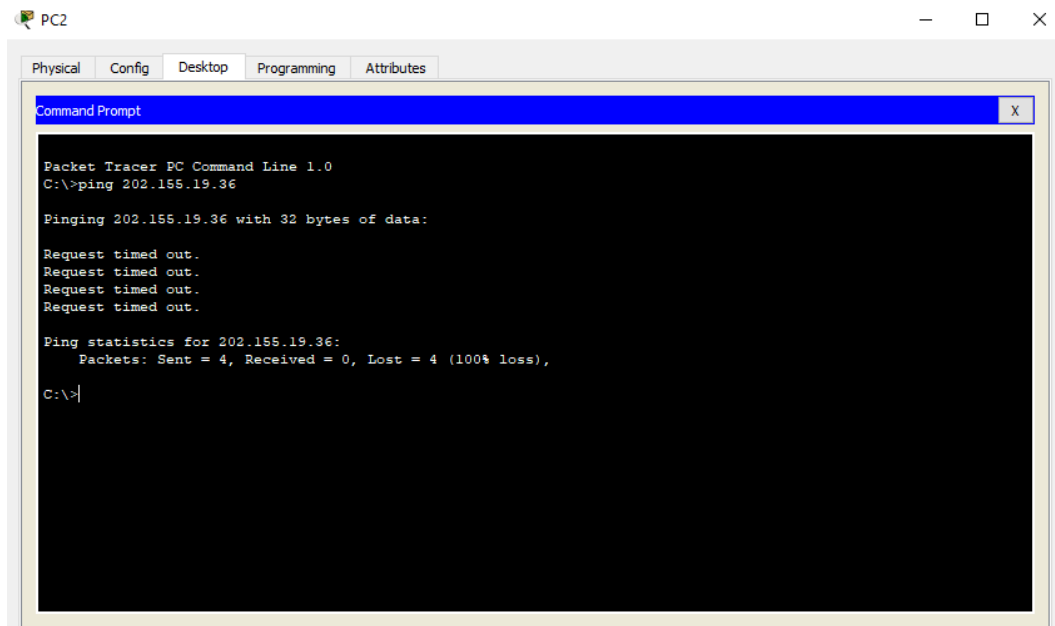
Pinging 202.155.19.9 with 32 bytes of data:

Reply from 202.155.19.9: bytes=32 time=1ms TTL=128
Reply from 202.155.19.9: bytes=32 time=11ms TTL=128
Reply from 202.155.19.9: bytes=32 time=1ms TTL=128
Reply from 202.155.19.9: bytes=32 time=2ms TTL=128

Ping statistics for 202.155.19.9:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 3ms

C:\>
```

2. Ping 2 ke PC 36 di divisi 2 (**tidak terhubung karena 1 dan 2 berbeda subnet mask nya dengan hasil Request Time Out**)



The screenshot shows a Packet Tracer window for PC2. The 'Command Prompt' window is open, displaying the output of a ping command to 202.155.19.36. The output shows four 'Request timed out' messages and statistics indicating 4 packets sent, 0 received, and 100% loss.

```
Packet Tracer PC Command Line 1.0
C:\>ping 202.155.19.36

Pinging 202.155.19.36 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 202.155.19.36:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```