

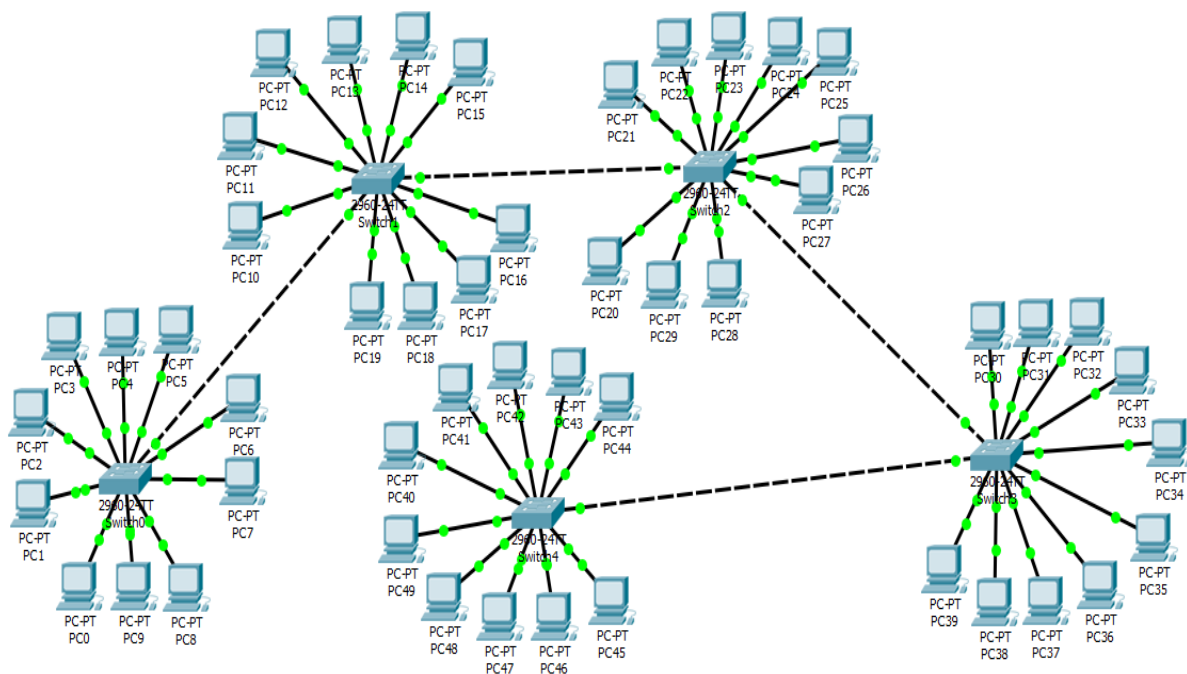
NAMA : BAITY JANNATIKA  
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KELAS : E / PRAKTIKUM JARINGAN KOMPUTER

## 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

The screenshot shows the 'IP Configuration' window for PC1. The window has tabs for Physical, Config, Desktop, Programming, and Attributes. The 'Config' tab is active, showing the 'IP Configuration' section. Under 'IP Configuration', the 'Static' radio button is selected. The fields are filled with: IP Address: 202.155.19.1, Subnet Mask: 255.255.255.224, Default Gateway: 0.0.0.0, and DNS Server: 0.0.0.0. Below this is the 'IPv6 Configuration' section, where 'Static' is also selected. The IPv6 Address field is empty, and the Link Local Address is FE80::20A:41FF:FEC1:4257. The IPv6 Gateway and IPv6 DNS Server fields are also empty.

IP Configuration	
<input type="radio"/> DHCP <input checked="" type="radio"/> 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	
<input type="radio"/> DHCP <input type="radio"/> Auto Config <input checked="" type="radio"/> 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

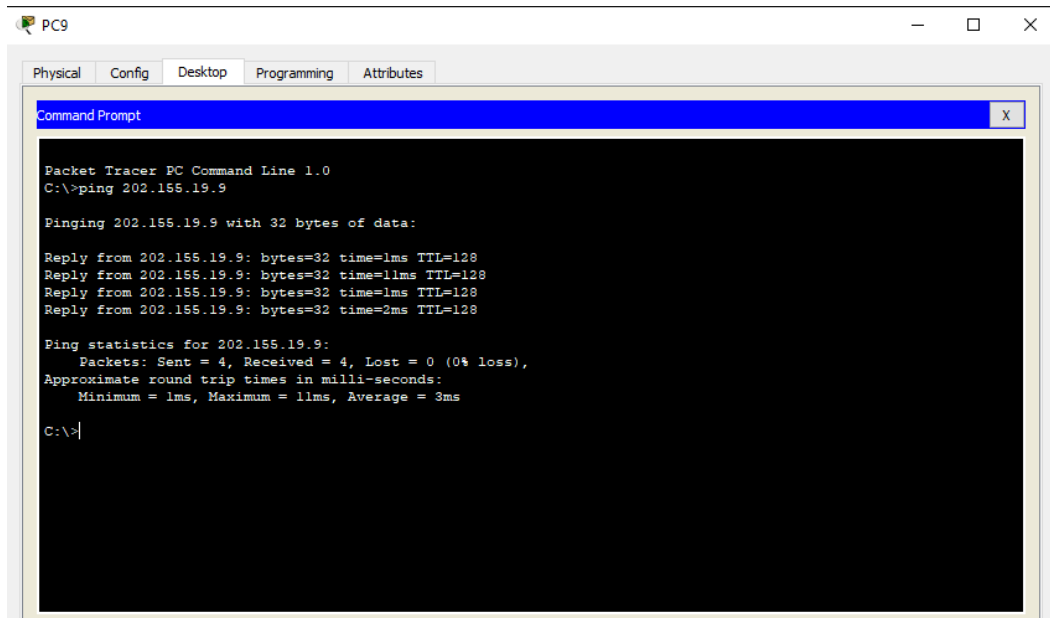
IPv6 Address /

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 PC window for PC9. The Command Prompt 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

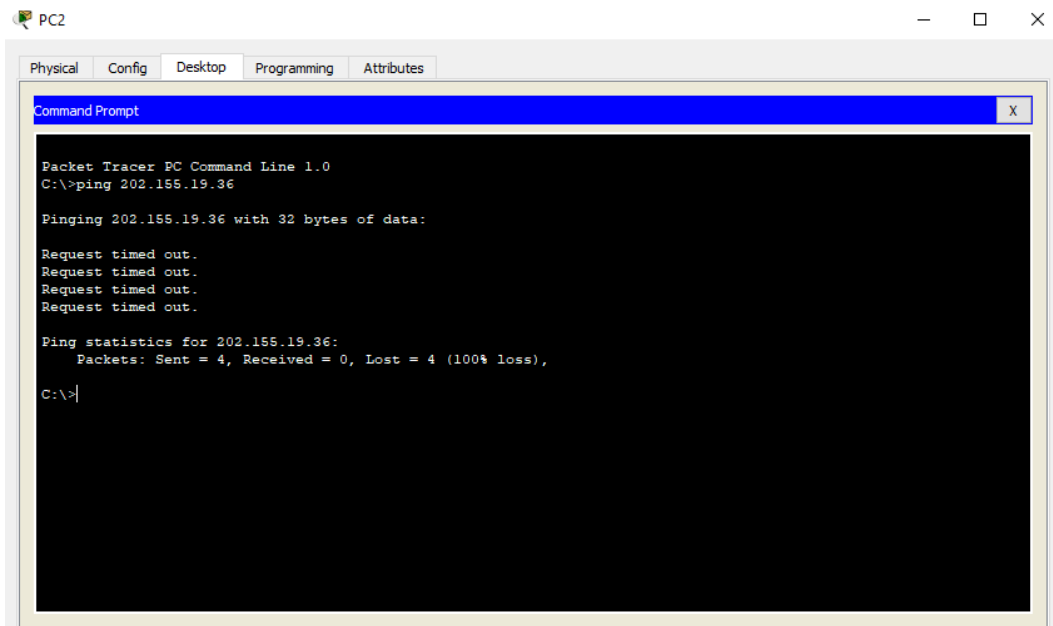
Pinging 202.155.19.9 with 32 bytes of data:

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 PC window for PC2. The Command Prompt is open, displaying the output of a ping command to 202.155.19.36. The output shows four 'Request timed out' messages. The statistics show 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:\>
```