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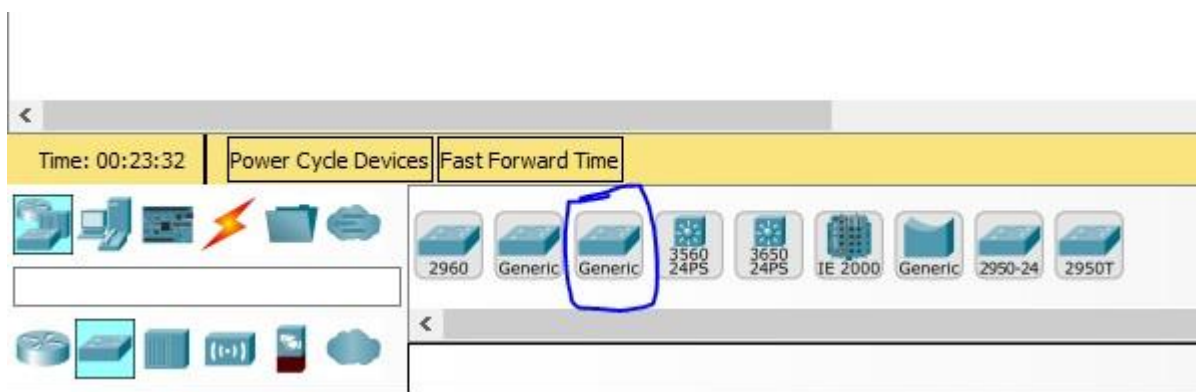
## **MODUL 3 SUBNETTING**

### **C. Kegiatan Praktikum**

#### **Kegiatan 1. Desain dan Konfigurasi Subnetting**

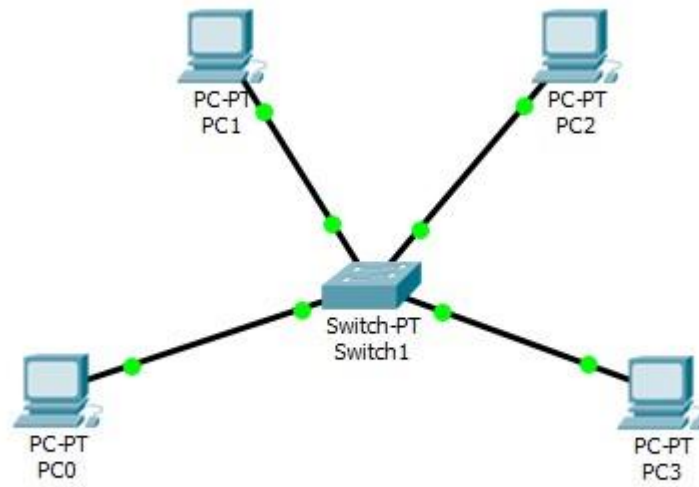
Ada 4 (empat) unit computer yang terhubung melalui switch. [PC1] dan [PC2] berada pada subnet address 1 (201.2 22.5.0) sedangkan [PC3] dan [PC4] berada pada subnet address 2 (201.222.5.8). Ikuti langkah langkah berikut untuk mendesain jaringan tersebut

1. Bukalah aplikasi Packet Tracer
2. Pada Kolom [Device and Connectors] pilih [Available Switches], lanjutkan dengan memilih [1900 series]
3. Klik dua kali pada switch tersebut sehingga masuk ke kolom kanan dan beri nama [switch 1].



4. Lanjutkan dengan menambahkan empat unit PC dan berikan nama masing masing PC1, PC2, PC3, dan PC4.
5. Tambahkan koneksi dari masing-masing [PC] ke [Switch1 ] dengan aturan seperti table di modul praktikum

6. Atur posisinya



7. Setelah packet Tracer terbuka, lakukan pengaturan alamat IP pada masing-masing [PC] dengan mengikuti ketentuan seperti di modul.

PC1

Physical

Config

Desktop

Programming

Attributes

☐ DHCP

☒ Static

IP Address

201.222.5.1

Subnet Mask

255.255.255.248

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:FE93:E2C5

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MDS

Username

Password

☐ Top

PC2

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 201.222.5.2

Subnet Mask 255.255.255.248

Default Gateway 201.222.5.2

DNS Server 255.255.255.48

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:C9FF:FE51:B66A

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

Password

☐ Top

PC3

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 201.222.5.9

Subnet Mask 255.255.255.248

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::201:C7FF:FE29:9B26

IPv6 Gateway

IPv6 DNS Server

802.1X

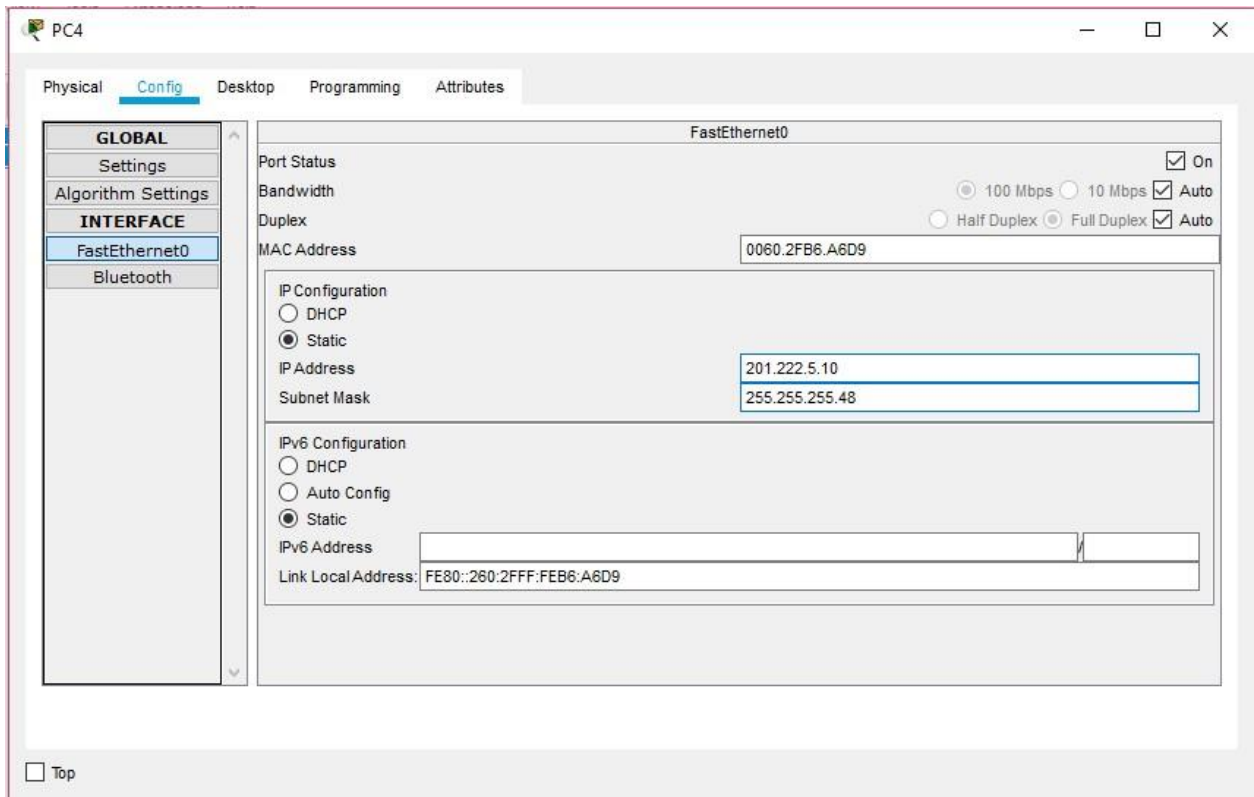
☐ Use 802.1X Security

Authentication MD5

Username

Password

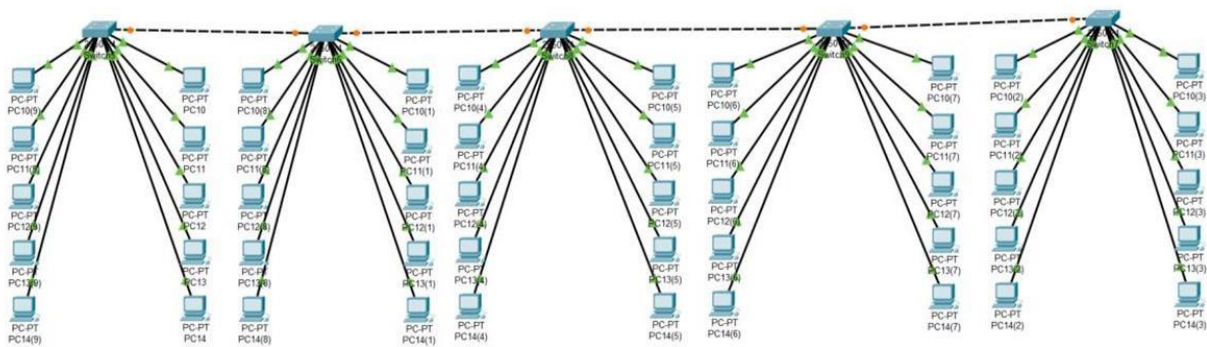
☐ Top



## D. Tugas Modul

1. Diketahui sebuah supermarket akan memasang sebuah jaringan computer 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 unit PC
  - c. Tentukan subnet mask yang harus digunakan pada semua computer tersebut
  - d. tentukan subnet address yang terbentuk
  - e. implementasikan menggunakan simulator
  - f. lakukan tes koneksi antara computer-komputer yang ada.

**Tugas :**



202.155.19.0

11001010.10011011.00010011.00000000

255.255.255.0

11111111.11111111.11111111.00000000

Jumlah Subnet =  $2^0 = 1$

Jumlah Host per-Subnet =  $2^8 - 2 = 256 - 2 = 254$

Blok Subnet =  $256 - 0 = 256$

Tabel Subnet :

<b>Network</b>	202.155.19.0
<b>Host Pertama</b>	202.155.19.1
<b>Host Terakhir</b>	202.155.19.254
<b>Broadcast</b>	202.155.19.255

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IP Address 202.155.19.1

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::260:2FFF:FE2A:6D55

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

☐ Top

PC19

Physical Config **Desktop** Programming Attributes

☐ DHCP ☒ Static

IP Address 202.155.19.254

Subnet Mask 255.255.255.0

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:FE96:3843

IPv6 Gateway

IPv6 DNS Server

802.1X

☐ Use 802.1X Security

Authentication MDS

Username

Password

☐ Top

PC0

Physical Config Desktop Programming Attributes

Command Prompt

```
Reply from 202.155.19.19: bytes=32 time=73ms TTL=128
Reply from 202.155.19.17: bytes=32 time=73ms TTL=128
Reply from 202.155.19.16: bytes=32 time=73ms TTL=128
Reply from 202.155.19.15: bytes=32 time=90ms TTL=128
Reply from 202.155.19.14: bytes=32 time=95ms TTL=128
Reply from 202.155.19.13: bytes=32 time=95ms TTL=128
Reply from 202.155.19.12: bytes=32 time=95ms TTL=128
Reply from 202.155.19.21: bytes=32 time=95ms TTL=128
Reply from 202.155.19.22: bytes=32 time=95ms TTL=128
Reply from 202.155.19.23: bytes=32 time=95ms TTL=128
Reply from 202.155.19.24: bytes=32 time=95ms TTL=128
Reply from 202.155.19.25: bytes=32 time=95ms TTL=128
Reply from 202.155.19.26: bytes=32 time=95ms TTL=128
Reply from 202.155.19.27: bytes=32 time=95ms TTL=128
Reply from 202.155.19.28: bytes=32 time=95ms TTL=128
Reply from 202.155.19.29: bytes=32 time=95ms TTL=128
Reply from 202.155.19.30: bytes=32 time=95ms TTL=128
Reply from 202.155.19.40: bytes=32 time=95ms TTL=128
Reply from 202.155.19.39: bytes=32 time=95ms TTL=128
Reply from 202.155.19.37: bytes=32 time=95ms TTL=128
Reply from 202.155.19.36: bytes=32 time=95ms TTL=128
Reply from 202.155.19.35: bytes=32 time=95ms TTL=128
Reply from 202.155.19.34: bytes=32 time=106ms TTL=128
Reply from 202.155.19.33: bytes=32 time=105ms TTL=128
Reply from 202.155.19.32: bytes=32 time=105ms TTL=128
Reply from 202.155.19.31: bytes=32 time=105ms TTL=128
Reply from 202.155.19.154: bytes=32 time=105ms TTL=128
Reply from 202.155.19.150: bytes=32 time=105ms TTL=128
Reply from 202.155.19.140: bytes=32 time=105ms TTL=128
Reply from 202.155.19.120: bytes=32 time=105ms TTL=128
Reply from 202.155.19.100: bytes=32 time=105ms TTL=128
Reply from 202.155.19.90: bytes=32 time=105ms TTL=128
Reply from 202.155.19.80: bytes=32 time=105ms TTL=128
Reply from 202.155.19.80: bytes=32 time=105ms TTL=128

Ping statistics for 202.155.19.0:
    Packets: Sent = 4, Received = 180, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 930ms, Average = 247ms

C:\>
```

☐ Top