TUGAS MODUL 2

Praktikum Jaringan Komputer 2022

Dosen Pengampu : I Ketut Purnamawan

Oleh:

DAVID MARIO YOHANES SAMOSIR ; 2115101055 ; ILMU KOMPUTER

UNIVERSITAS PENDIDIKAN GANESHA

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Permasalahan

The report must contain:

1. Theoretical review on the topic.

2. Method/Procedure of practicum.

3. The data obtained.

4. Analysis.

5. Conclusion.

Jawaban

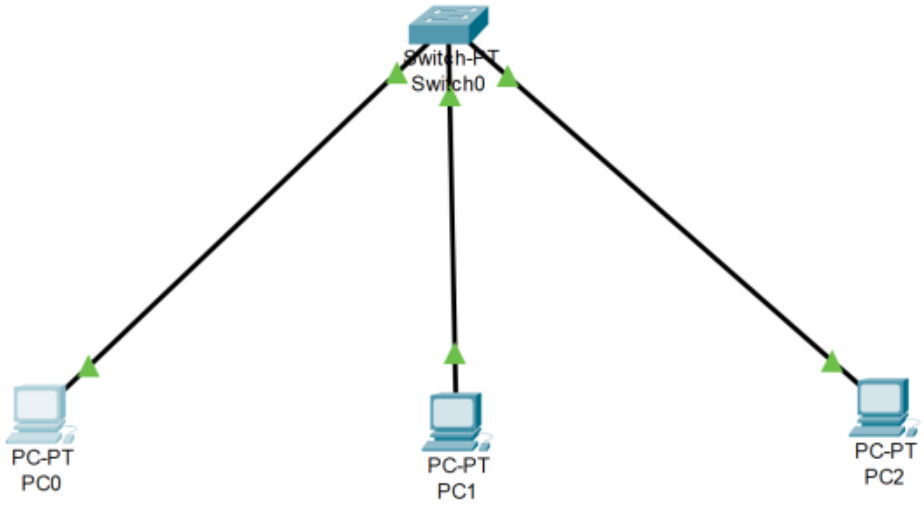
1. **Theoretical review on the topic.**

   Pada materi ini membahas tentang pengimplementasian jaringan terhadap switcher dan pemberian Ip Address, ketika PC diberi Ip dan terhubung dengan switcher maka PC yang berada di 1 jaringan yang sama dapat berhubungan antara PC 1 dengan PC lainnya, karena switcher ini bisa berfungsi untuk menghubungkan banyak device.

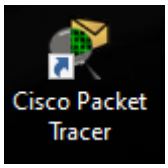
2. **Method/Procedure of practicum.**

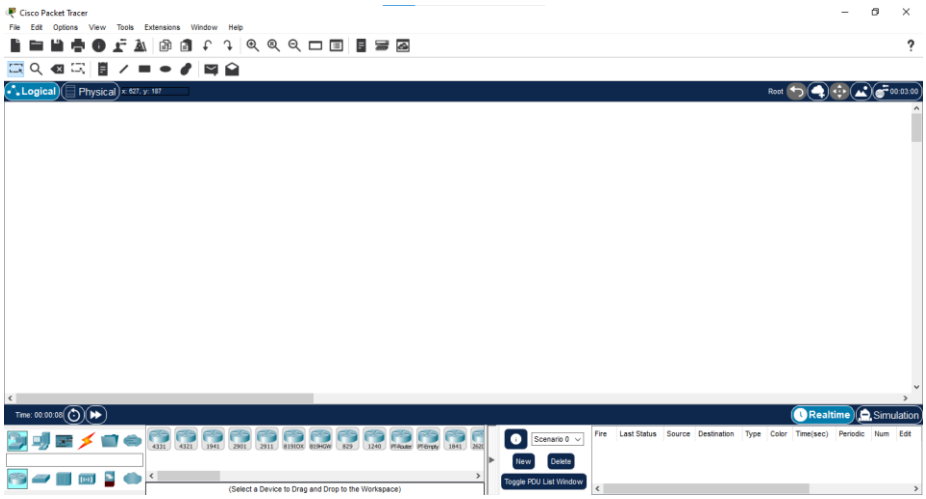
   A. Skenario 1

   Note: How to ping and how to show ARP Table will be explained in class/lab.



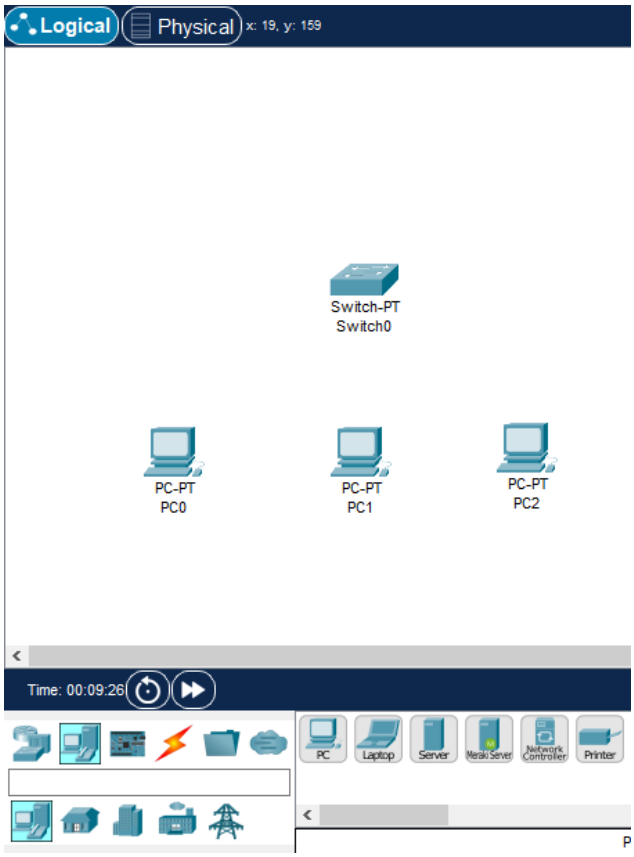
1) Buka Aplikasi Cisco Paket Tracer



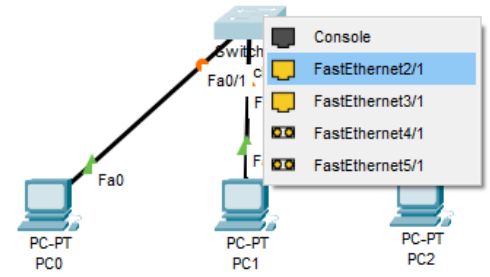


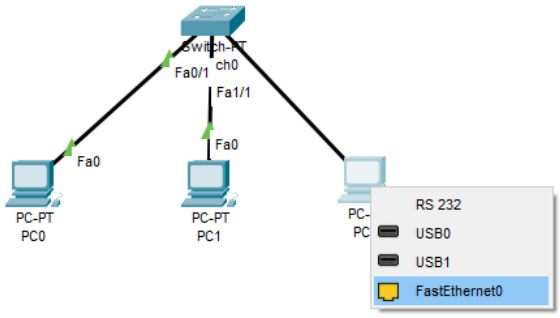
2) Pilih **Network Devices >> Switches >> PT_Switch** lalu letakkan di layar.

3) Pilih **End Devices >> PC** lalu letakkan di layar, lakukan sebanyak 3x.



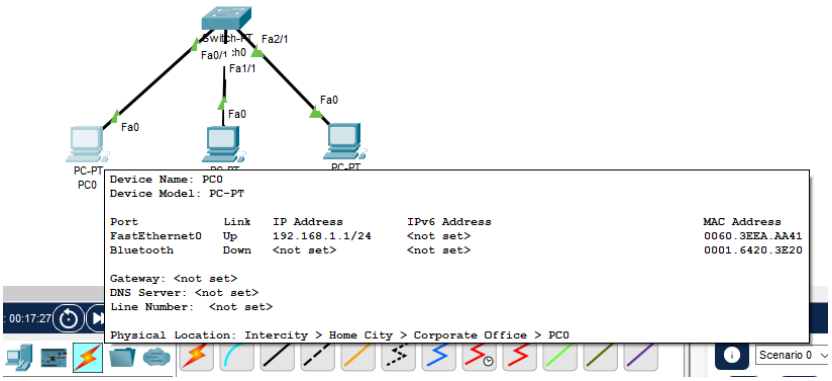
4) Lalu sambungkan PC dengan Switch pilih **Connections >> Staright**



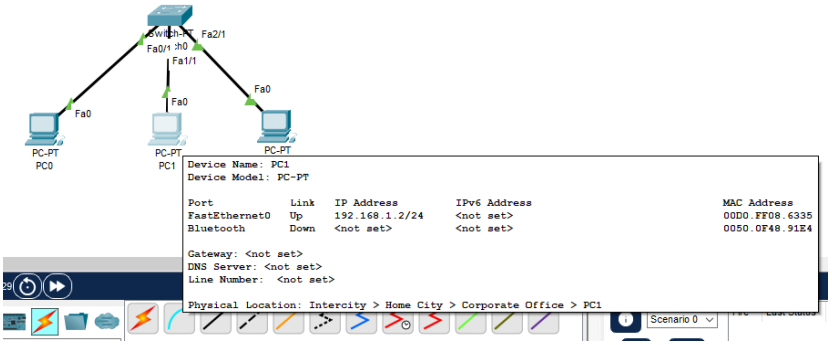


5) Lalu beri Ip Address pada setiap PC

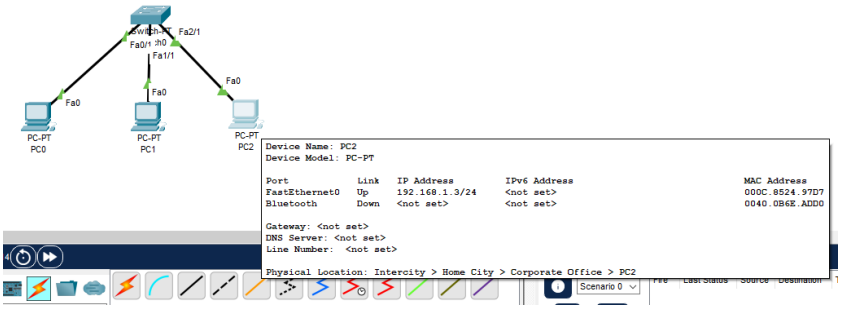
PC0 : 192.168.1.1 / 255.255.255.0



PC1 : 192.168.1.2 / 255.255.255.0



PC2 : 192.168.1.3 / 255/255/2550



6) Test Ping

- PC0 – 192.168.1.1
  - PC0 :

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=5ms TTL=128
Reply from 192.168.1.1: bytes=32 time=12ms TTL=128
Reply from 192.168.1.1: bytes=32 time=3ms TTL=128
Reply from 192.168.1.1: bytes=32 time=2ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 12ms, Average = 5ms
```

- PC1

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- PC2

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- PC1 – 192.168.1.2
  - PC0

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=10ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 2ms
```

- PC1

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=2ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=5ms TTL=128
Reply from 192.168.1.2: bytes=32 time=4ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 5ms, Average = 2ms
```

- PC2

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- PC2 – 192.168.1.3
  - PC0

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

  - PC1

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=11ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 11ms, Average = 2ms
```

  - PC2

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=10ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=11ms TTL=128
Reply from 192.168.1.3: bytes=32 time=7ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 11ms, Average = 7ms
```

7) Menampilkan network address dan physical address di PC

PC0

```
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.1.2           00d0.ff08.6335        dynamic
  192.168.1.3           000c.8524.97d7        dynamic
```

	Network Address	Physical Address
PC1	192.168.1.0	00d0.ff08.6335
PC2	192.168.1.0	000c.8524.97d7

PC1

```
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.1.1           0060.3eea.aa41        dynamic
  192.168.1.3           000c.8524.97d7        dynamic
```

	Network Address	Physical Address
PC0	192.168.1.0	0060.3eea.aa41
PC2	192.168.1.0	000c.8524.97d7

PC2

```
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.1.1           0060.3eea.aa41        dynamic
  192.168.1.2           00d0.ff08.6335        dynamic
```

	Network Address	Physical Address
PC0	192.168.1.0	0060.3eea.aa41
PC1	192.168.1.0	00d0.ff08.6335

B. **Skenario 2**

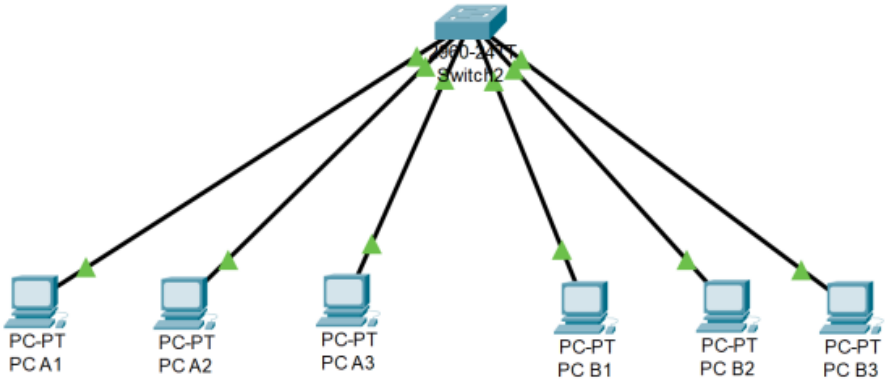


Image 2: Second Network.

1) Create network as shown on Image 2. The IP Addresses and Subnet Masks of all PCs are shown on Table 4.

Table 4: IP Addresses of all PCs on the second network.

PC	IP Address	Subnet Mask
PC A1	192.168.1.1	255.255.255.0
PC A2	192.168.1.2	255.255.255.0
PC A3	192.168.1.3	255.255.255.0
PC B1	192.168.2.1	255.255.255.0
PC B2	192.168.2.2	255.255.255.0
PC B3	192.168.2.3	255.255.255.0

PCA1	Device Name: PCA1 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.1/24 <not set> 00E0.8F57.84D4 Bluetooth Down <not set> <not set> 0090.0CE3.696C Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PCA1
PCA2	Device Name: PCA2 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.2/24 <not set> 0090.213B.3DA0 Bluetooth Down <not set> <not set> 0060.2FE0.5408 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PCA2

PCA3	Device Name: PCA3 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.3/24 <not set> 0001.C7A6.0152 Bluetooth Down <not set> <not set> 0002.4AB3.5748 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PCA3
PCB1	Device Name: PCB1 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.2.1/24 <not set> 0001.43E6.6A56 Bluetooth Down <not set> <not set> 000B.BE61.9E9B Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PCB1
PCB2	Device Name: PCB2 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.2.2/24 <not set> 000C.85D8.6B0B Bluetooth Down <not set> <not set> 00E0.8FED.30C0 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PCB2
PCB3	Device Name: PCB3 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.2.3/24 <not set> 0004.9A3B.CC73 Bluetooth Down <not set> <not set> 00E0.A339.D058 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PCB3

2) Do ping from each PC to all another PCs, and record the ping result, did it succeed or fail. Put ping results data on a matrix table as shown in Table 2.

- PCA1 **(192.168.1.1)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=3ms TTL=128
Reply from 192.168.1.1: bytes=32 time=9ms TTL=128
Reply from 192.168.1.1: bytes=32 time=9ms TTL=128
Reply from 192.168.1.1: bytes=32 time=9ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 3ms, Maximum = 9ms, Average = 7ms
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB1 192.168.2.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

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

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB2 192.168.2.2

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

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

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB3 192.168.2.3

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

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

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- PCA2 **(192.168.1.2)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=17ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 17ms, Average = 4ms
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=6ms TTL=128
Reply from 192.168.1.2: bytes=32 time=7ms TTL=128
Reply from 192.168.1.2: bytes=32 time=8ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 8ms, Average = 5ms
```

    - Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

    - Ping PCB1 192.168.2.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

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

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

    - Ping PCB2 192.168.2.2

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

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

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB3 192.168.2.3

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

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

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- PCA3 **(192.168.1.3)**
  - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

  - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

  - Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=12ms TTL=128
Reply from 192.168.1.3: bytes=32 time=8ms TTL=128
Reply from 192.168.1.3: bytes=32 time=15ms TTL=128
Reply from 192.168.1.3: bytes=32 time=5ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 5ms, Maximum = 15ms, Average = 10ms
```

- Ping PCB1 192.168.2.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

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

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB2 192.168.2.2

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

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

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB3 192.168.2.3

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

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

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- PCB1 **(192.168.2.1)**
  - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

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

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

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

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

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

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB1 192.168.2.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time=1ms TTL=128
Reply from 192.168.2.1: bytes=32 time=9ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 9ms, Average = 2ms
```

- Ping PCB2 192.168.2.2

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=11ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time=1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 11ms, Average = 3ms
```

- Ping PCB3 192.168.2.3

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time<1ms TTL=128
Reply from 192.168.2.3: bytes=32 time<1ms TTL=128
Reply from 192.168.2.3: bytes=32 time<1ms TTL=128
Reply from 192.168.2.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- PCB2 **(192.168.2.2)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

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

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

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

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

    - Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

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

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

    - Ping PCB1 192.168.2.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB2 192.168.2.2

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=12ms TTL=128
Reply from 192.168.2.2: bytes=32 time=31ms TTL=128
Reply from 192.168.2.2: bytes=32 time=1ms TTL=128
Reply from 192.168.2.2: bytes=32 time=22ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 31ms, Average = 16ms
```

- Ping PCB3 192.168.2.3

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time<1ms TTL=128
Reply from 192.168.2.3: bytes=32 time<1ms TTL=128
Reply from 192.168.2.3: bytes=32 time<1ms TTL=128
Reply from 192.168.2.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- PCB3 **(192.168.2.3)**
  - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

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

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

  - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

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

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCA3 192.168.1.3

```
Pinging 192.168.1.3 with 32 bytes of data:

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

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

- Ping PCB1 192.168.2.1

```
C:\>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time<1ms TTL=128
Reply from 192.168.2.1: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping PCB2 192.168.2.2

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time=10ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 2ms
```

- Ping PCB3 192.168.2.3

```
C:\>ping 192.168.2.3

Pinging 192.168.2.3 with 32 bytes of data:

Reply from 192.168.2.3: bytes=32 time=13ms TTL=128
Reply from 192.168.2.3: bytes=32 time=10ms TTL=128
Reply from 192.168.2.3: bytes=32 time=9ms TTL=128
Reply from 192.168.2.3: bytes=32 time=22ms TTL=128

Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 9ms, Maximum = 22ms, Average = 13ms
```

3) Show ARP table from PC A1, and record Network Addresses and Physical Addresses of all PCs that has been shown. Put Network Addresses and Physical Addresses data of all PCs that has been shown on a table as shown in Table 3.

PCA1

```
C:\>arp -a
No ARP Entries Found
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.1.2           0090.213b.3da0        dynamic
  192.168.1.3           0001.c7a6.0152        dynamic
```

	Network Address	Physical Address
PCA2	192.168.1.0	0090.213b.3da0
PCA3	192.168.1.0	0001.c7a6.0152

4) Show ARP table from PC B1, and record Network Addresses and Physical Addresses of all PCs that has been shown. Put Network Addresses and Physical Addresses data of all PCs that has been shown on a table as shown in Table 3.

PCB1

```
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.2.2           000c.85d8.6b0b        dynamic
  192.168.2.3           0004.9a3b.cc73        dynamic
```

	Network Address	Physical Address
PCB2	192.168.2.0	000c.85d8.6b0b
PCB3	192.168.2.0	0004.9a3b.cc73

C. Skenario 3

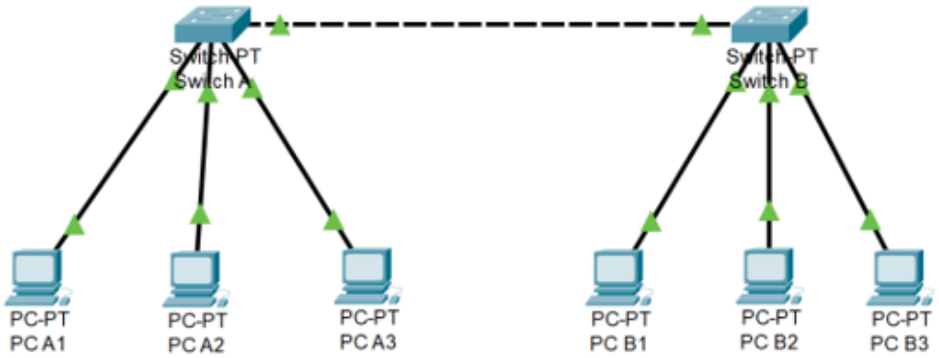


Image 3: Third Network.

1) Create network as shown on Image 3. The IP Addresses and Subnet Masks of all PCs are shown on Table 5.

Table 5: IP Addresses of all PCs on the third network.

PC	IP Address	Subnet Mask
PC A1	192.168.1.1	255.255.255.0
PC A2	192.168.1.2	255.255.255.0
PC A3	192.168.1.3	255.255.255.0
PC B1	192.168.1.4	255.255.255.0
PC B2	192.168.1.5	255.255.255.0
PC B3	192.168.1.6	255.255.255.0

PCA1	Device Name: PCA1 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.1/24 <not set> 0001.96EE.21EB Bluetooth Down <not set> <not set> 0001.64D6.3104 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PC0
PCA2	Device Name: PCA2 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.2/24 <not set> 0003.E4EC.7B47 Bluetooth Down <not set> <not set> 0002.17C2.8524 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PC1

PCA3	Device Name: PCA3 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.3/24 <not set> 0060.2F12.69D5 Bluetooth Down <not set> <not set> 0090.2B0D.A495 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PC2
PCB1	Device Name: PCB1 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.4/24 <not set> 0006.2A25.D397 Bluetooth Down <not set> <not set> 0000.0C97.5697 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PC3
PCB2	Device Name: PCB2 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.5/24 <not set> 000A.41E4.3046 Bluetooth Down <not set> <not set> 0001.9752.8545 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PC4
PCB3	Device Name: PCB3 Device Model: PC-PT Port Link IP Address IPv6 Address MAC Address FastEthernet0 Up 192.168.1.6/24 <not set> 0030.A38E.CAB9 Bluetooth Down <not set> <not set> 0006.2A77.B758 Gateway: <not set> DNS Server: <not set> Line Number: <not set> Physical Location: Intercity > Home City > Corporate Office > PC5

2) Do ping from each PC to all another PCs, and record the ping result, did it succeed or fail. Put ping results data on a matrix table as shown in Table 2.

- PCA1 **(192.168.1.1)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=12ms TTL=128
Reply from 192.168.1.1: bytes=32 time=24ms TTL=128
Reply from 192.168.1.1: bytes=32 time=1ms TTL=128
Reply from 192.168.1.1: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 24ms, Average = 9ms
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=7ms TTL=128
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 7ms, Average = 2ms
```

- Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping PCB1 192.168.1.4

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB2 192.168.1.5

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB3 192.168.1.6

```
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time=10ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 10ms, Average = 2ms
```

- PCA2 **(192.168.1.2)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=4ms TTL=128
Reply from 192.168.1.2: bytes=32 time=3ms TTL=128
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 4ms, Average = 2ms
```

    - Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

    - Ping PCB1 192.168.1.4

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB2 192.168.1.5

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time=1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping PCB3 192.168.1.6

```
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- PCA3 **(192.168.1.3)**
  - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

  - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time=5ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128
Reply from 192.168.1.3: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 5ms, Average = 2ms
```

- Ping PCB1 192.168.1.4

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping PCB2 192.168.1.5

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time=2ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

- Ping PCB3 192.168.1.6

```
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time=1ms TTL=128
Reply from 192.168.1.6: bytes=32 time=1ms TTL=128
Reply from 192.168.1.6: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- PCB1 **(192.168.1.4)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=49ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 49ms, Average = 12ms
```

    - Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=4ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 4ms, Average = 1ms
```

    - Ping PCB1 192.168.1.4

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time=7ms TTL=128
Reply from 192.168.1.4: bytes=32 time=3ms TTL=128
Reply from 192.168.1.4: bytes=32 time=1ms TTL=128
Reply from 192.168.1.4: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 7ms, Average = 3ms
```

- Ping PCB2 192.168.1.5

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB3 192.168.1.6

```
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- PCB2 **(192.168.1.5)**
  - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

  - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- Ping PCB1 192.168.1.4

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB2 192.168.1.5

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time=4ms TTL=128
Reply from 192.168.1.5: bytes=32 time=3ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 4ms, Average = 1ms
```

- Ping PCB3 192.168.1.6

```
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time=1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

- PCB3 **(192.168.1.6)**
    - Ping PCA1 192.168.1.1

```
C:\>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128
Reply from 192.168.1.1: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

    - Ping PCA2 192.168.1.2

```
C:\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time=3ms TTL=128
Reply from 192.168.1.2: bytes=32 time=2ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 3ms, Average = 1ms
```

    - Ping PCA3 192.168.1.3

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

    - Ping PCB1 192.168.1.4

```
C:\>ping 192.168.1.4

Pinging 192.168.1.4 with 32 bytes of data:

Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128
Reply from 192.168.1.4: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

- Ping PCB2 192.168.1.5

```
C:\>ping 192.168.1.5

Pinging 192.168.1.5 with 32 bytes of data:

Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time=2ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128
Reply from 192.168.1.5: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.5:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 2ms, Average = 0ms
```

- Ping PCB3 192.168.1.6

```
C:\>ping 192.168.1.6

Pinging 192.168.1.6 with 32 bytes of data:

Reply from 192.168.1.6: bytes=32 time=4ms TTL=128
Reply from 192.168.1.6: bytes=32 time=1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128
Reply from 192.168.1.6: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.6:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 4ms, Average = 1ms
```

3) Show ARP table from PC A1, and record Network Addresses and Physical Addresses of all PCs that has been shown. Put Network Addresses and Physical Addresses data of all PCs that has been shown on a table as shown in Table 3.

```
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.1.2           0003.e4ec.7b47        dynamic
  192.168.1.3           0060.2f12.69d5        dynamic
  192.168.1.4           0006.2a25.d397        dynamic
  192.168.1.5           000a.41e4.3046        dynamic
  192.168.1.6           0030.a38e.cab9        dynamic
```

	Network Address	Physical Address

PCA2	192.168.1.0	0003.e4ec.7b47
PCA3	192.168.1.0	0060.2f12.69d5
PCB1	192.168.1.0	0006.2a25.d397
PCB2	192.168.1.0	000a.41e4.3046
PCB3	192.168.1.0	0030.a38e.cab9

4) Show ARP table from PC B1, and record Network Addresses and Physical Addresses of all PCs that has been shown. Put Network Addresses and Physical Addresses data of all PCs that has been shown on a table as shown in Table 3.

```
C:\>arp -a
  Internet Address      Physical Address      Type
  192.168.1.1           0001.96ee.21eb        dynamic
  192.168.1.2           0003.e4ec.7b47        dynamic
  192.168.1.3           0060.2f12.69d5        dynamic
  192.168.1.5           000a.41e4.3046        dynamic
  192.168.1.6           0030.a38e.cab9        dynamic
```

	Network Address	Physical Address
PCA1	192.168.1.0	0001.96ee.21eb
PCA2	192.168.1.0	0003.e4ec.7b47
PCA3	192.168.1.0	0060.2f12.69d5
PCB2	192.168.1.0	000a.41e4.3046
PCB3	192.168.1.0	0030.a38e.cab9

3. **The data obtained**

Skenario 1:

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PC0	PC1	ICMP		0.000	N	0	(ec
	Successful	PC0	PC2	ICMP		0.000	N	1	(ec
	Successful	PC1	PC2	ICMP		0.000	N	2	(ec

PC0

	Network Address	Physical Address
PC1	192.168.1.0	00d0.ff08.6335
PC2	192.168.1.0	000c.8524.97d7

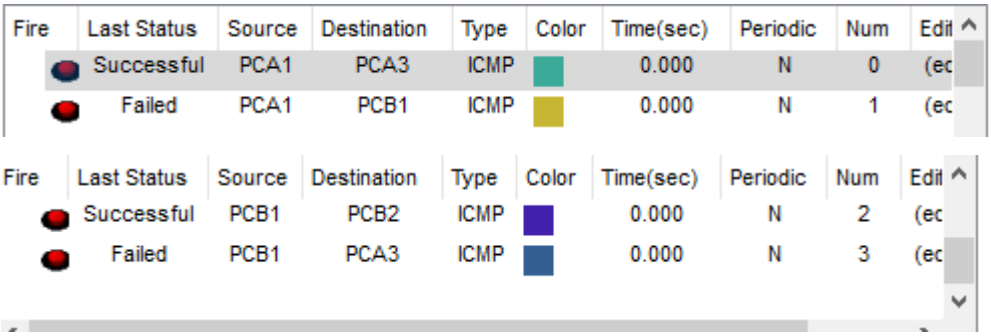
PC1

	Network Address	Physical Address
PC0	192.168.1.0	0060.3eea.aa41
PC2	192.168.1.0	000c.8524.97d7

PC2

	Network Address	Physical Address
PC0	192.168.1.0	0060.3eea.aa41
PC1	192.168.1.0	00d0.ff08.6335

Skenario 2:



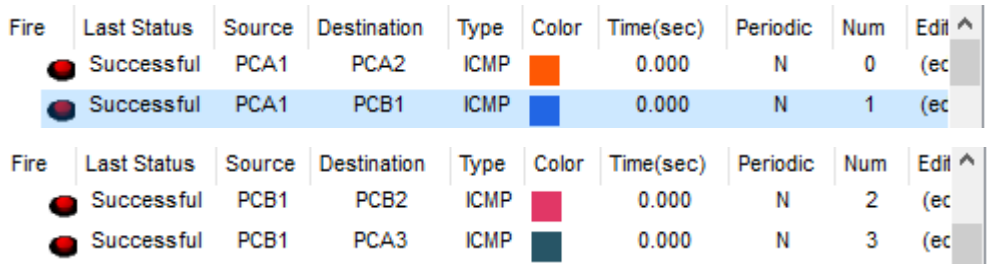
PCA1

	Network Address	Physical Address
PCA2	192.168.1.0	0090.213b.3da0
PCA3	192.168.1.0	0001.c7a6.0152

PCB1

	Network Address	Physical Address
PCB2	192.168.2.0	000c.85d8.6b0b
PCB3	192.168.2.0	0004.9a3b.cc73

Skenario 3:



Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PCA1	PCA2	ICMP		0.000	N	0	(ec
	Successful	PCA1	PCB1	ICMP		0.000	N	1	(ec

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PCB1	PCB2	ICMP		0.000	N	2	(ec
	Successful	PCB1	PCA3	ICMP		0.000	N	3	(ec

PCA1

	Network Address	Physical Address
PCA2	192.168.1.0	0003.e4ec.7b47
PCA3	192.168.1.0	0060.2f12.69d5
PCB1	192.168.1.0	0006.2a25.d397
PCB2	192.168.1.0	000a.41e4.3046
PCB3	192.168.1.0	0030.a38e.cab9

PCB1

	Network Address	Physical Address
PCA1	192.168.1.0	0001.96ee.21eb
PCA2	192.168.1.0	0003.e4ec.7b47
PCA3	192.168.1.0	0060.2f12.69d5
PCB2	192.168.1.0	000a.41e4.3046
PCB3	192.168.1.0	0030.a38e.cab9

4. **Analysis.**

   Skenario 1 : Dari skema jaringan pada skenario 1 hasil data yang diperoleh adalah bisa saling ping dan saling terhubung karena memiliki 1 jaringan yang sama. Pada menampilkan arp, ip/jaringan yang muncul adalah ip yang terhubung dengan ip PC tersebut.

   Skenario 2 : Dari skema jaringan pada skenario 2 hasil data yang diperoleh adalah TTL dan RTO, hanya pc yang memiliki jaringan yang sama yang dapat saling terhubung/ping, sedangkan yang berbeda jaringan akan RTO / tidak dapat terhubung. Pada menampilkan arp, ip/jaringan yang muncul adalah ip yang terhubung dengan ip PC tersebut.

   Skenario 3 : Pada skema jaringan skenario 3 semua pc dapat terhubung karena berada di satu alamat jaringan yang sama walau beda switcher, karena di skema ini switcher berfungsi sebagai penghubung dan penyebar dari device satu ke device lainnya. Pada menampilkan arp, ip/jaringan yang muncul adalah ip yang terhubung dengan ip PC tersebut.

5. **Conclution**

   Dalam sebuah jaringan, terdapat beberapa perangkat atau device yang saling terhubung dan memiliki alamat Ip address dan network, jika sebuah jaringan berada di network yang sama maka device tersebut akan bisa saling terhubung namun jika berbeda network maka jaringan tidak dapat berhubung, perangkat switcher dapat berfungsi sebagai penghubung dan penyebaran relasi agar dari satu device bisa berhubungan ke lebih dari satu device lainnya. Ketika device di lakukan uji coba ping akan menampilkan pesan balik berupa TTL jika terhubung dan RTO jika tidak terhubung, ketika user mencoba menampilkan arp untuk mengecek ip yang terhubung maka dapat mengetik sintak “arp –a” untuk menampilkan seluruh jaringan yang terhubung pada device tersebut.