

# **PEMROGRAMAN JARINGAN**

## **Jobsheet Minggu-1: KONSEP JARINGAN**



Oleh :

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**PROGRAM STUDI TEKNIK INFORMATIKA  
JURUSAN TEKNOLOGI INFORMASI  
POLITEKNIK NEGERI MALANG**

## 1) Langkah – Langkah Praktikum

Pada praktikum kali ini, untuk mengingatkan kembali konsep jaringan ikuti langkah-langkah berikut:

### 1. Lakukan instalasi Paket Tracer.

- Melakukan ekstrak pada file rar

Name	Type	Compressed size	Password ...	Size	Ratio	Date modified
PacketTracer721_64bit_setup.exe	Application	562 KB	No	766 KB	27%	12/14/2018 4:59 PM
PacketTracer721_64bit_setup-1.bin	Adobe Acrobat Document	202,958 KB	No	202,896 KB	0%	12/14/2018 4:19 PM

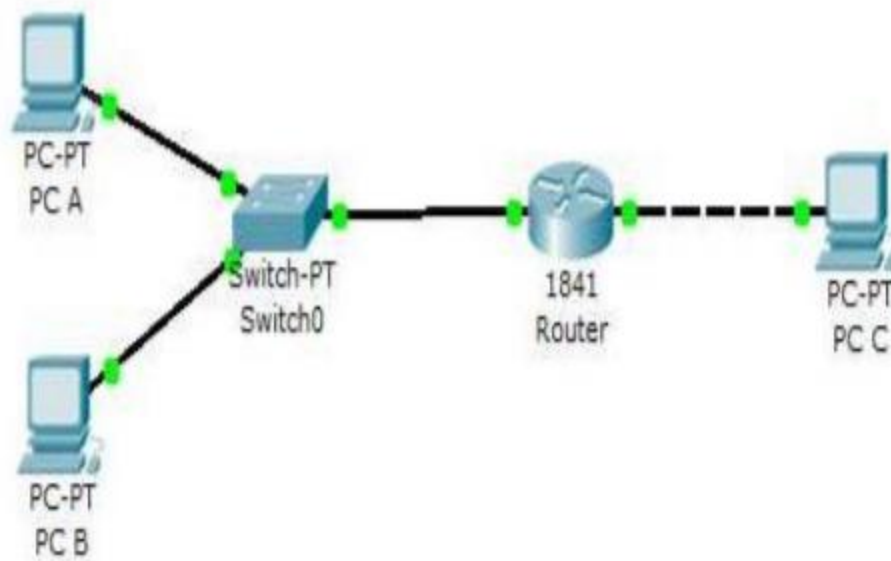
- Hasil dari ekstrak

This PC > OS (C:) > Program Files > Cisco Packet Tracer 7.2.1						
Name	Date modified	Type	Size			
art	11/26/2019 10:24	File folder				
backgrounds	11/26/2019 10:24	File folder				
bin	11/26/2019 10:24	File folder				
extensions	11/26/2019 10:24	File folder				
help	11/26/2019 10:24	File folder				
languages	11/26/2019 10:24	File folder				
saves	11/26/2019 10:24	File folder				
sounds	11/26/2019 10:24	File folder				
templates	11/26/2019 10:24	File folder				
unins000.dat	11/26/2019 10:25	GOM Media file(.d	667 KB			
unins000.exe	11/26/2019 10:24	Application	1,175 KB			

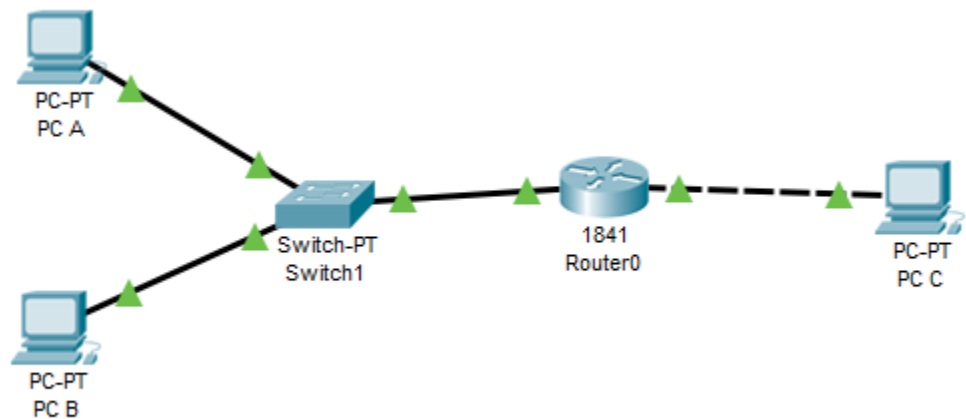
- Buka software Cisco Packet Tracer

This PC > OS (C:) > Program Files > Cisco Packet Tracer 7.2.1 > bin						
Name	Date modified	Type	Size			
usbcompuer_47.dll	3/3/2017 3:32 PM	DLL File	4,011 KB			
dbgcore.dll	6/23/2015 10:13 PM	DLL File	149 KB			
dbghelp.dll	6/23/2015 10:13 PM	DLL File	1,480 KB			
icudt57.dll	3/24/2017 5:49 PM	DLL File	25,071 KB			
icuin57.dll	3/24/2017 5:49 PM	DLL File	2,644 KB			
icuuc57.dll	3/24/2017 5:49 PM	DLL File	1,839 KB			
IEShims.dll	5/3/2017 3:32 PM	DLL File	287 KB			
libeay32.dll	5/14/2018 1:38 PM	DLL File	2,053 KB			
libEGL.dll	3/27/2017 7:39 PM	DLL File	15 KB			
libGLESv2.dll	3/27/2017 7:39 PM	DLL File	1,962 KB			
linguist.exe	7/13/2016 1:41 PM	Application	1,224 KB			
meta.exe	12/9/2018 8:26 PM	Application	35,548 KB			
msvcp140.dll	5/3/2017 3:33 PM	DLL File	619 KB			
PacketTracer7.exe	12/10/2018 1:41 PM	Application	61,966 KB			
PT.conf	9/21/2018 7:33 PM	CONF File	3 KB			
PT5C.exe	3/27/2017 7:32 PM	DLL File	4,005 KB			

### 2. Buatlah topopogi jaringan seperti berikut:



- Hasil Topologi jaringan saya



## 2) Tugas

Untuk mengingat kembali konsep jaringan komputer maka kerjakanlah beberapa soal berikut berdasarkan jaringan yang Anda buat dalam langkah praktikum di atas!

1. Ada berapa jaringankah yang ada pada diagram jaringan di atas ?

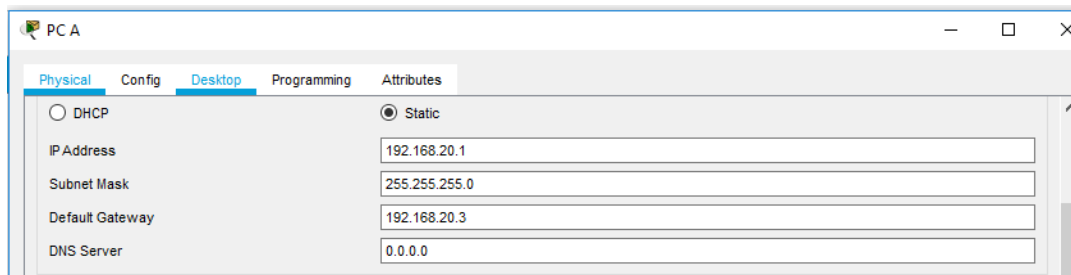
= Terdapat 2 Jaringan pada Topografi di atas

2. Perlukah router diberi konfigurasi routing agar jaringan-jaringan yang terkoneksi langsung dengan dirinya bisa saling berkomunikasi? Sebutkan alasannya!

= Diperlukan, karena gateway jaringan 1 dan jaringan 2 belum terhubung, jadi untuk menghubungkan antara jaringan 1 dan jaringan 2 menggunakan perintah routing gateway kedua jaringan tersebut.

3. Untuk masing-masing host (PC A, PC B & PC C ), berikan alokasi pengalamatan agar diagram jaringan di atas bisa saling berkomunikasi. Dengan format :

PC A :

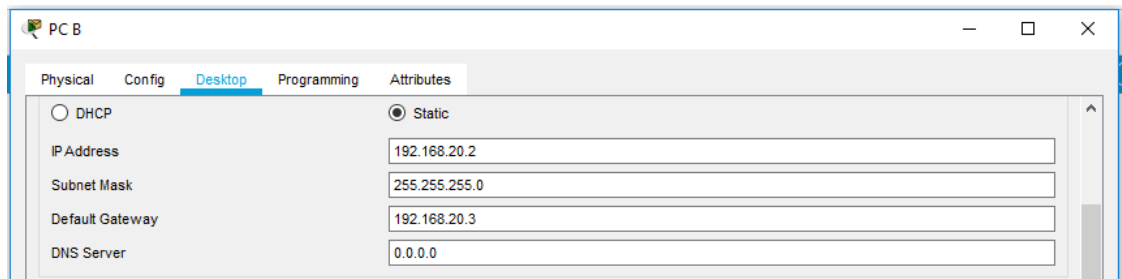


The screenshot shows the 'PC A' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The fields are filled with the following values:

Field	Value
IP Address	192.168.20.1
Subnet Mask	255.255.255.0
Default Gateway	192.168.20.3
DNS Server	0.0.0.0

IP address : 192.168.20.1  
Subnet mask : 255.255.255.0  
Gateway : 192.168.20.3  
Network ID : 192.168.20.0

PC B :

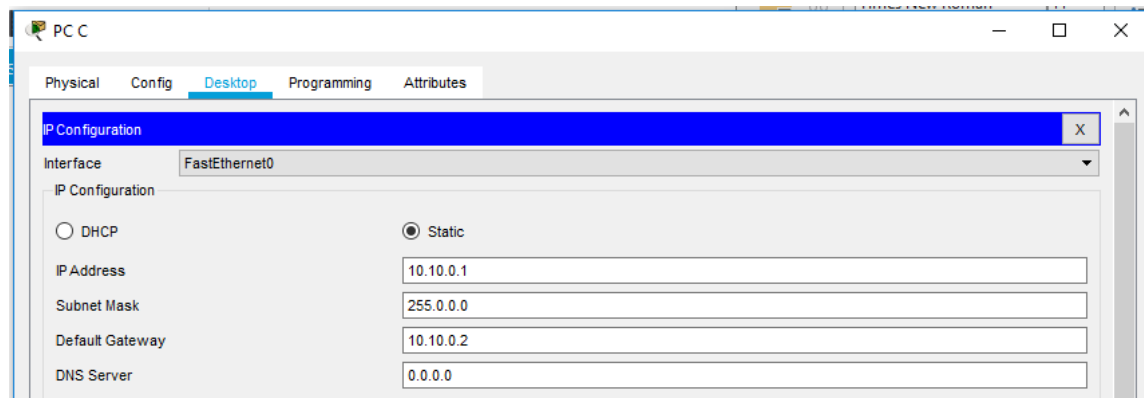


The screenshot shows the 'PC B' configuration window with the 'Desktop' tab selected. The 'Static' radio button is chosen for IP configuration. The fields are filled with the following values:

Field	Value
IP Address	192.168.20.2
Subnet Mask	255.255.255.0
Default Gateway	192.168.20.3
DNS Server	0.0.0.0

IP address : 192.168.20.2  
Subnet mask : 255.255.255.0  
Gateway : 192.168.20.3  
Network ID : 192.168.20.0

PC C :



IP address : 10.10.0.1  
Subnet mask : 255.0.0.0  
Gateway : 10.10.0.2  
Network ID : 10.10.0.1

4. Berikan konfigurasi pengalamatan untuk masing-masing interface fastethernet Router, dengan asumsi fastEthernet 0/0 terhubung ke switch, dan fastEthernet 0/1 terhubung langsung ke PC C.

**Router fastEthernet 0/0 :**

- Ip Address : 192.168.20.3
- Subnet mask : 255.255.255.0

**Router fastEthernet 0/1 :**

- IP Address : 10.10.0.2
- Subnet mask : 255.0.0.0

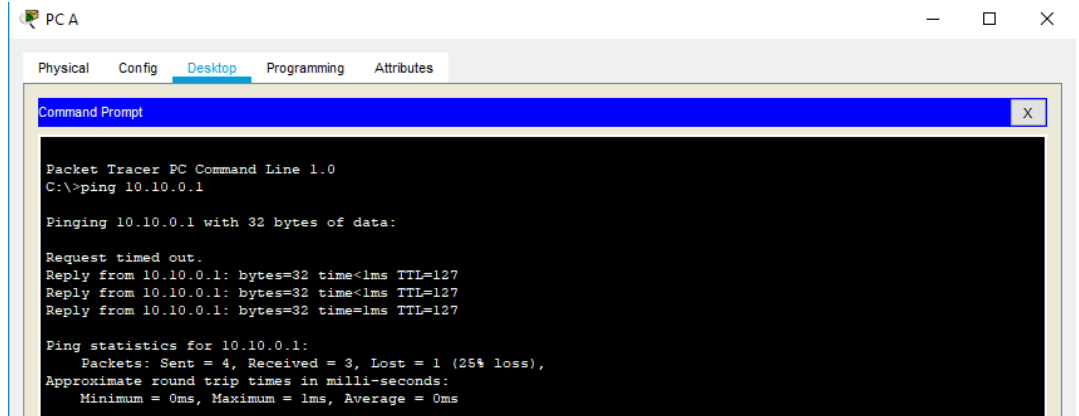
5. Kabel jenis bagaimanakah yang digunakan untuk menghubungkan masing-masing perangkat pada diagram jaringan di atas ? (Straight, Cross atau Rollover)

- PC A – Switch : Straight
- PC B - Switch : Straight
- Switch – Router : Straight
- Router – PC C : Cross Over

6. Perintah apakah yang dapat digunakan untuk mengecek koneksi antar host yang ada ?

= Perintah dengan menggunakan Command Prompt

- Ping Ip Address PC A ke PC C



```
PC A
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.0.1

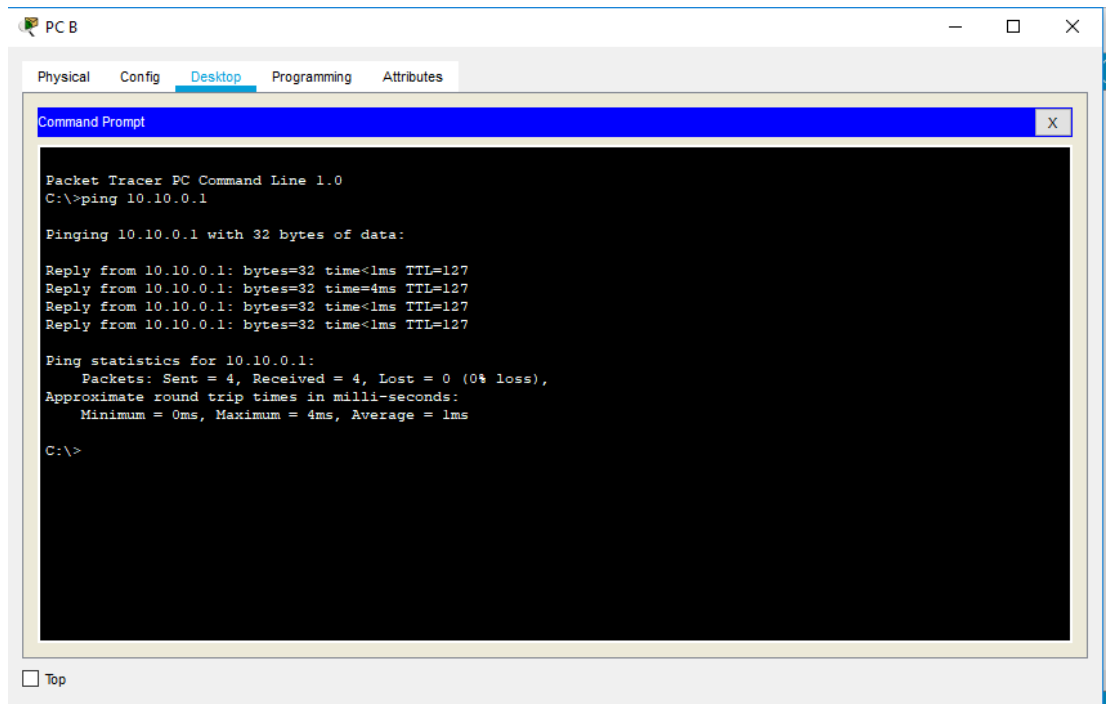
Pinging 10.10.0.1 with 32 bytes of data:

Request timed out.
Reply from 10.10.0.1: bytes=32 time<1ms TTL=127
Reply from 10.10.0.1: bytes=32 time<1ms TTL=127
Reply from 10.10.0.1: bytes=32 time<1ms TTL=127

Ping statistics for 10.10.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

PC A Berhasil mengirim sinyal atau ping kepada PC C

- Ping Ip Address PC B ke PC C



```
PC B
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 10.10.0.1

Pinging 10.10.0.1 with 32 bytes of data:

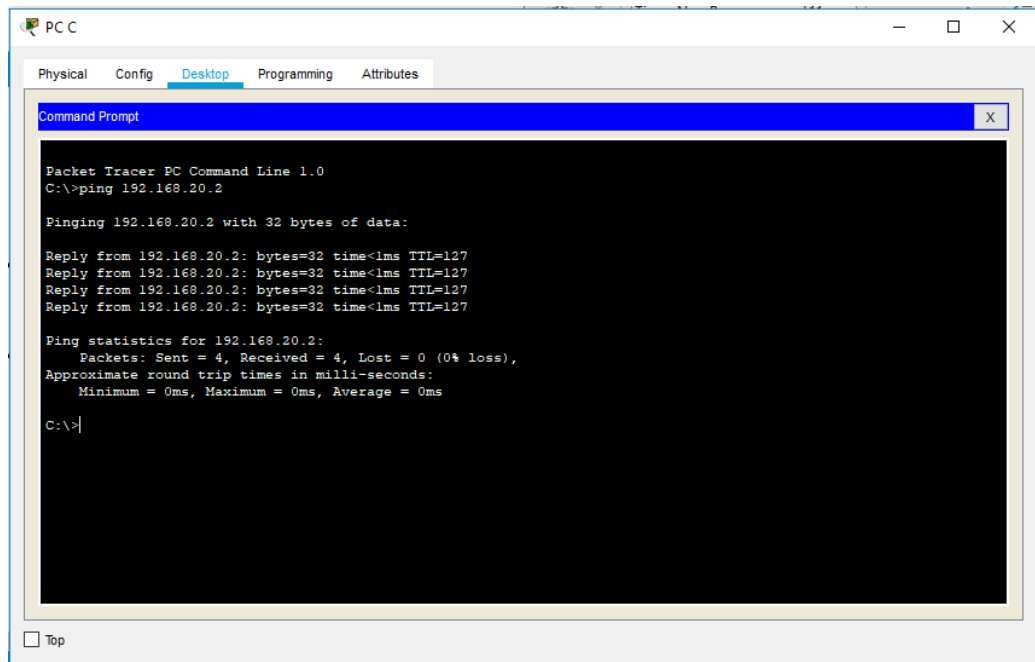
Reply from 10.10.0.1: bytes=32 time<1ms TTL=127
Reply from 10.10.0.1: bytes=32 time=4ms TTL=127
Reply from 10.10.0.1: bytes=32 time<1ms TTL=127
Reply from 10.10.0.1: bytes=32 time<1ms TTL=127

Ping statistics for 10.10.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 4ms, Average = 1ms

C:\>
```

PC B Berhasil mengirim sinyal atau ping kepada PC C

- Ping Ip Address PC C ke PC B



The screenshot shows a Packet Tracer PC window for PC C. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 192.168.20.2'. The output indicates that the ping was successful, with four replies received from 192.168.20.2, each with 32 bytes of data, a time of less than 1ms, and a TTL of 127. The ping statistics show that all packets were sent and received, with 0% loss.

```
PC C
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.20.2

Pinging 192.168.20.2 with 32 bytes of data:

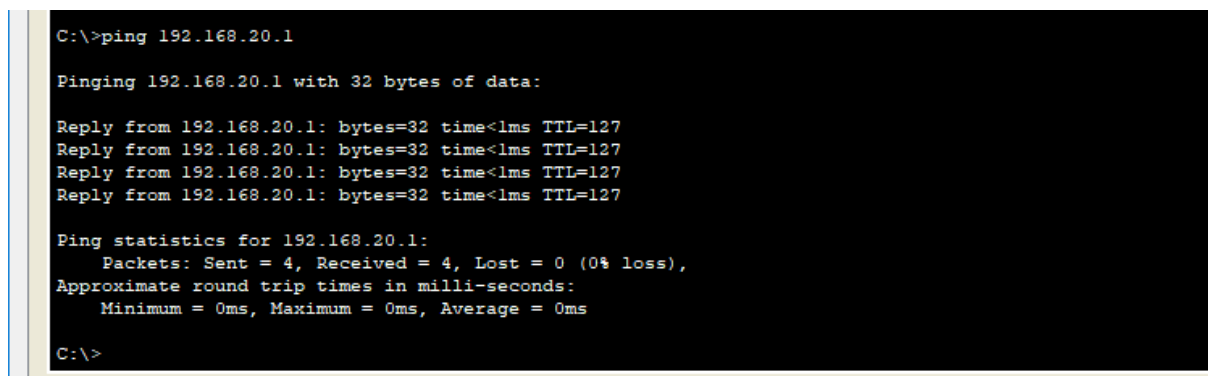
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127
Reply from 192.168.20.2: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

PC C Berhasil mengirim sinyal atau ping kepada PC B

- Ping Ip Address PC C ke PC A



The screenshot shows a Packet Tracer PC window for PC C. The 'Desktop' tab is active, displaying a Command Prompt window. The command prompt shows the execution of the command 'ping 192.168.20.1'. The output indicates that the ping was successful, with four replies received from 192.168.20.1, each with 32 bytes of data, a time of less than 1ms, and a TTL of 127. The ping statistics show that all packets were sent and received, with 0% loss.

```
C:\>ping 192.168.20.1

Pinging 192.168.20.1 with 32 bytes of data:

Reply from 192.168.20.1: bytes=32 time<1ms TTL=127
Reply from 192.168.20.1: bytes=32 time<1ms TTL=127
Reply from 192.168.20.1: bytes=32 time<1ms TTL=127
Reply from 192.168.20.1: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.20.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

PC C Berhasil mengirim sinyal atau ping kepada PC A