PRAKTIKUM
JARINGAN KOMPUTER
(Computer Networking)

LAPORAN TUGAS
MODUL 9

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Kelas : D

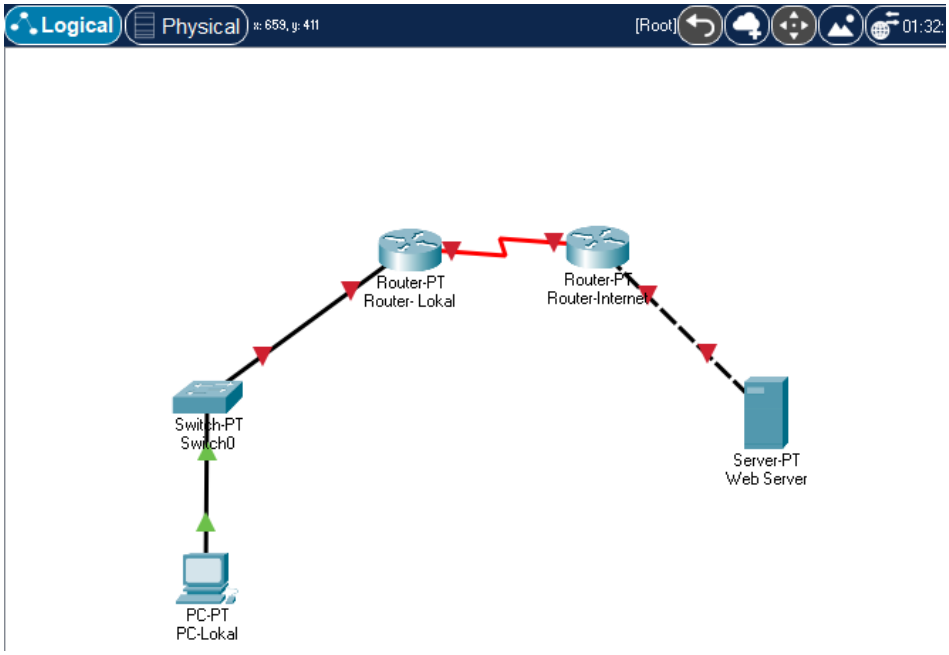
PROGRAM STUDI INFORMATIKA

FAKULTAS KOMUNIKASI DAN INFORMATIKA

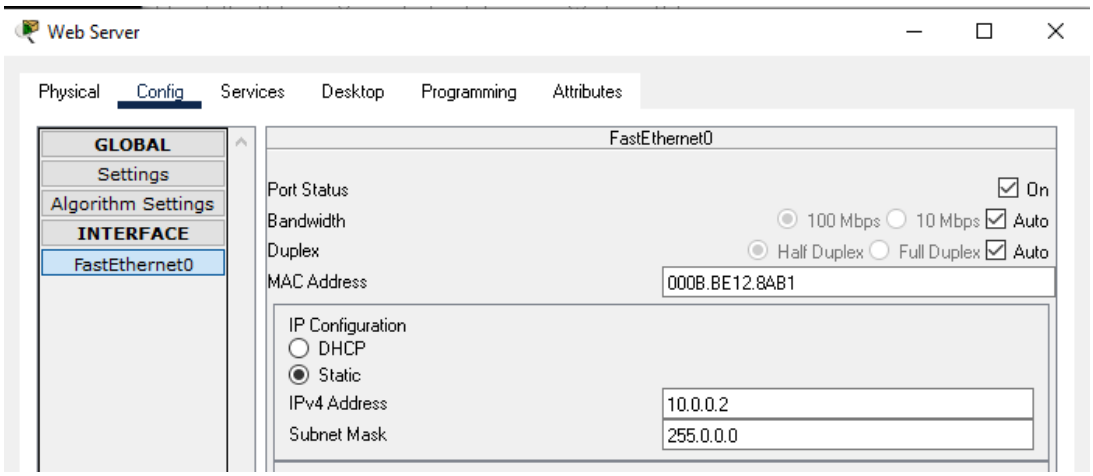
UNIVERSITAS MUHAMMADIYAH

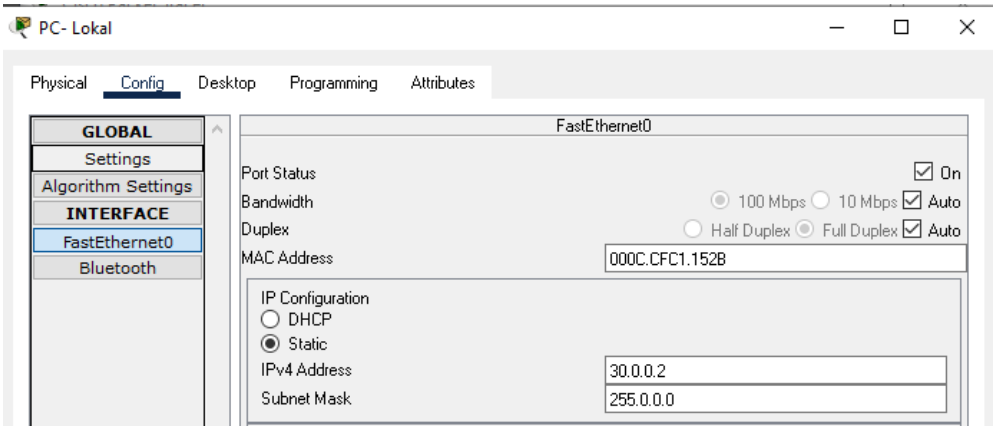
SURAKARTA

1. Topologi



2. Konfigurasi IP





Router-Internet

Physical Config CLI Attributes

10 S Command Line Interface

```
Would you like to enter the initial configuration dialog? [yes/no]: n


Press RETURN to get started!



Router>enable
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname Internet
Internet(config)#int fa 0/0
Internet(config-if)#ip add 10.0.0.1 255.0.0.0
Internet(config-if)#no shut

Internet(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

Internet(config-if)#exit
Internet(config)#int se 2/0
Internet(config-if)#ip add 20.0.0.2 255.0.0.0
Internet(config-if)#no shut

%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Internet(config-if)#exit
Internet(config)#ip route 30.0.0.0 255.0.0.0 20.0.0.1
Internet(config)#ip nat inside source static 10.0.0.2 50.0.0.1
Internet(config)#int fa 0/0
Internet(config-if)#ip nat inside
Internet(config-if)#exit
Internet(config)#int se 2/0
Internet(config-if)#ip nat outside
Internet(config-if)#exit
Internet(config)#
```

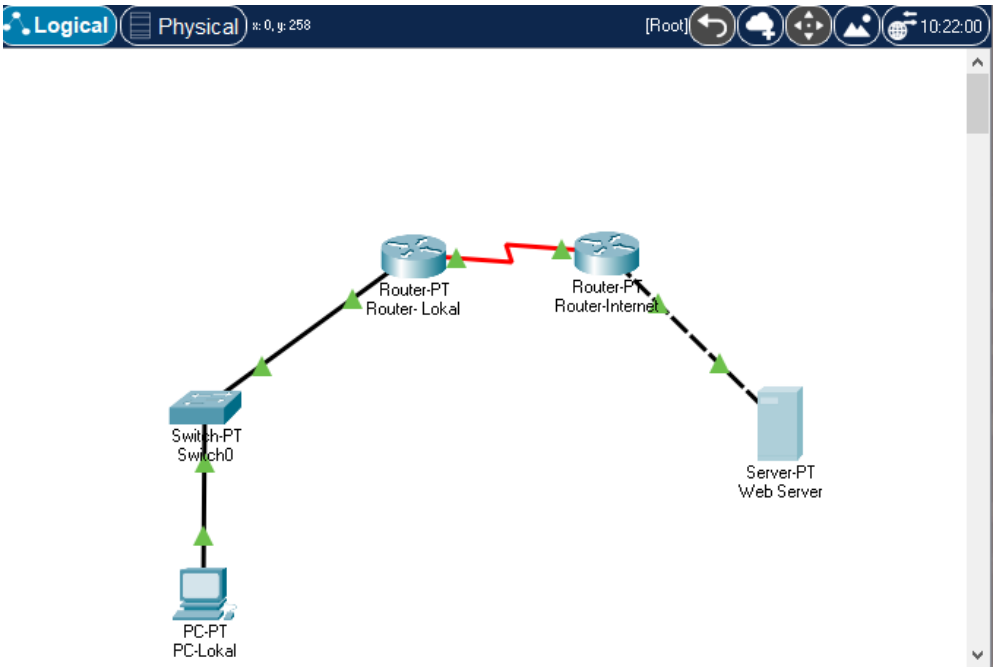
Router-Lokal

a Config CLI Attributes

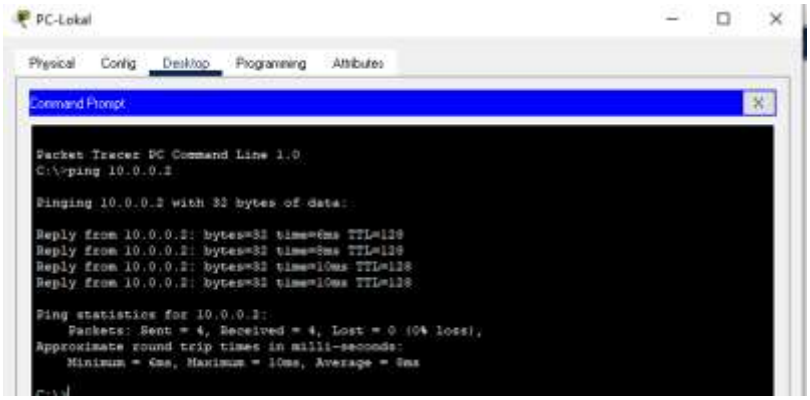
IOS Command Line Interface

```
            if
            if


Lokal(conIig-iIl4
%LINE-5-CHANGED: Interface Fast3thernet'J/O,

%LIN3P20FO-5-UPDOWN: Line protocol on Interlace Fast3thernetO/0, changed state to up

Lokal(conZig-iZl4exit
Lokal(conIig)#int se ?/O
Lokal(config-if)#ip add 20.0.0.1 255.0.0.0
Lokal(conIig-iI)#clock rate f4OOO
Ihis command applies only to DC3 interZaces
Lokal(conIig-iIl#bandwith 44

% Invalid input detected at "' marker.

Lokal(conIig-iIl#bandwith 44

% Invalid input detected at "' marker.

      config-if)
      config-if)

Lokal(conIig-iIl4
%LINK-5-CHANGED: Interface Serial?/O, changed state

Lokal(config-if)#
%LIN3P20IO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up

Lokal(conIig-iIl#ip route 5O.O.O.O ?55.O.O.O ?O.O.O.?
Lokal(config)#exit
Lokal#
%SYS-5-CONFIG I: Configured from console by console
```

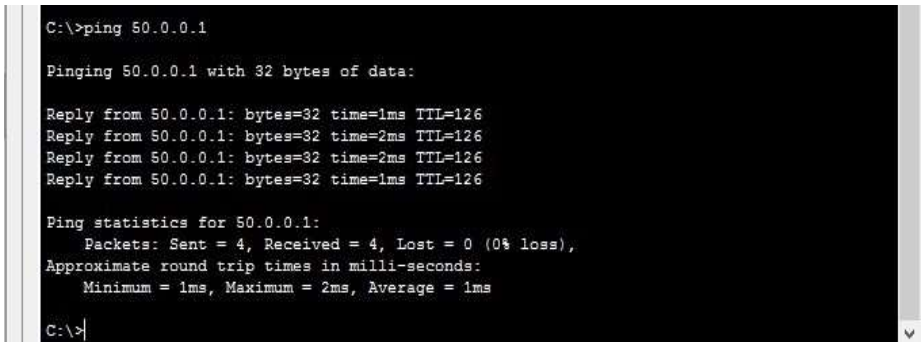
Hasil Konfigurasi Router



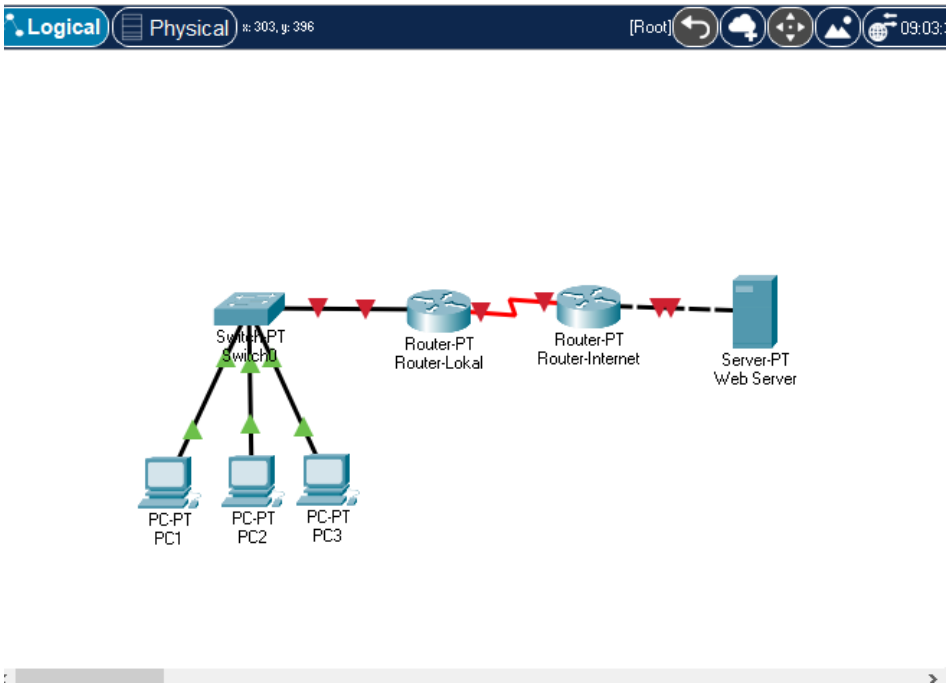
Ping ke IP asli web server (10.0.0.2)



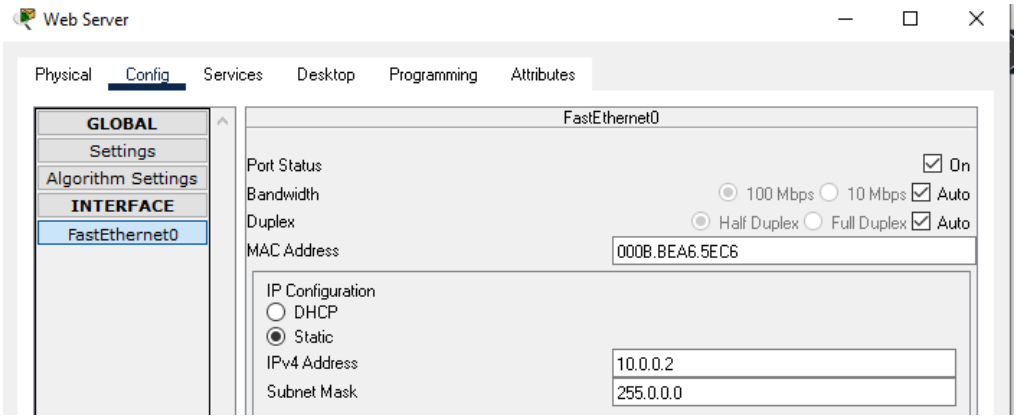
Ping ke IP Publik dari web server (50.0.0.1)

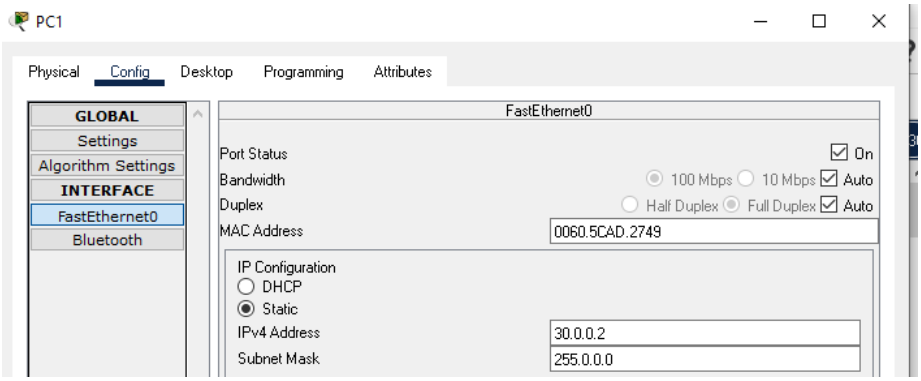


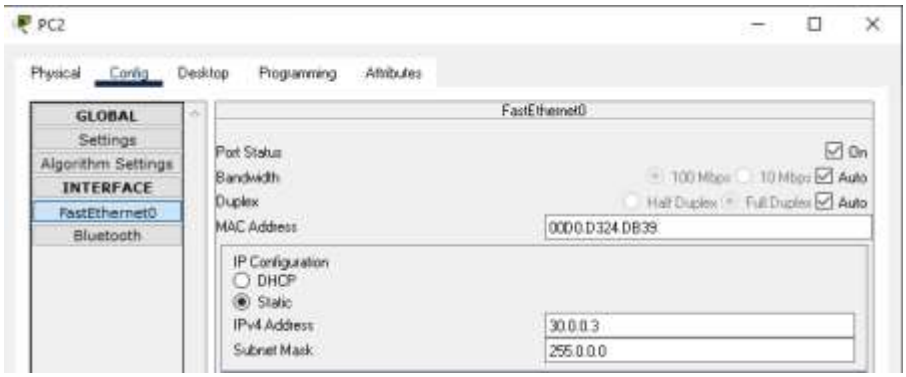
2. Topologi Jaringan

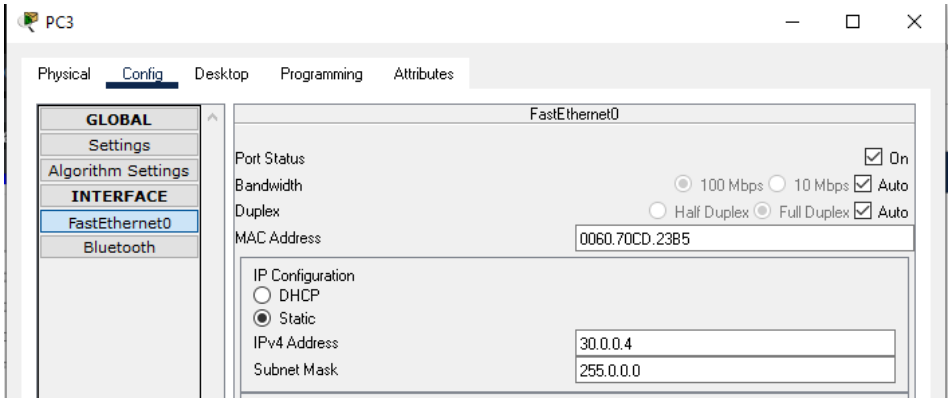


Konfigurasi IP address PC1, PC2, PC3 dan Web-Server

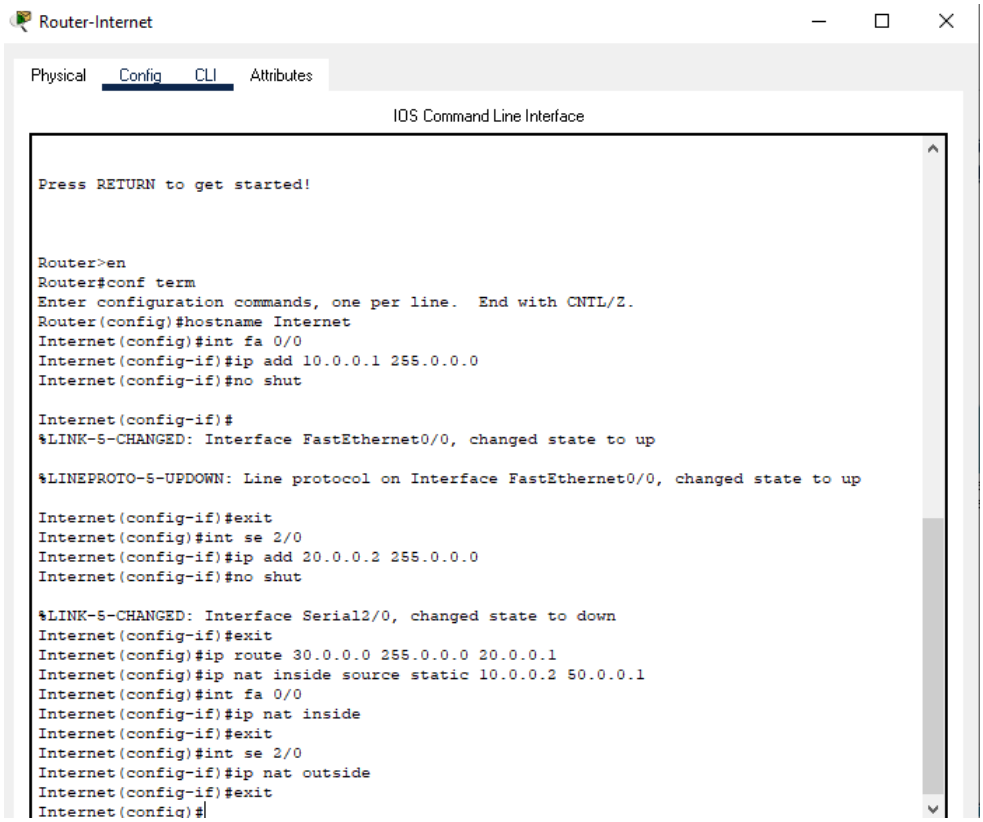


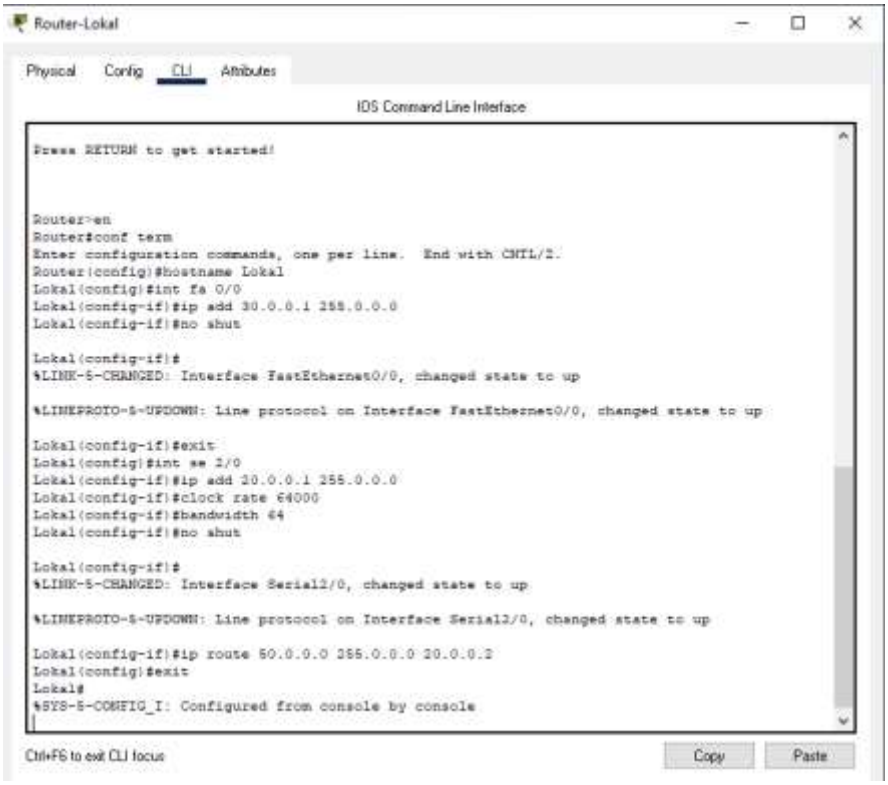




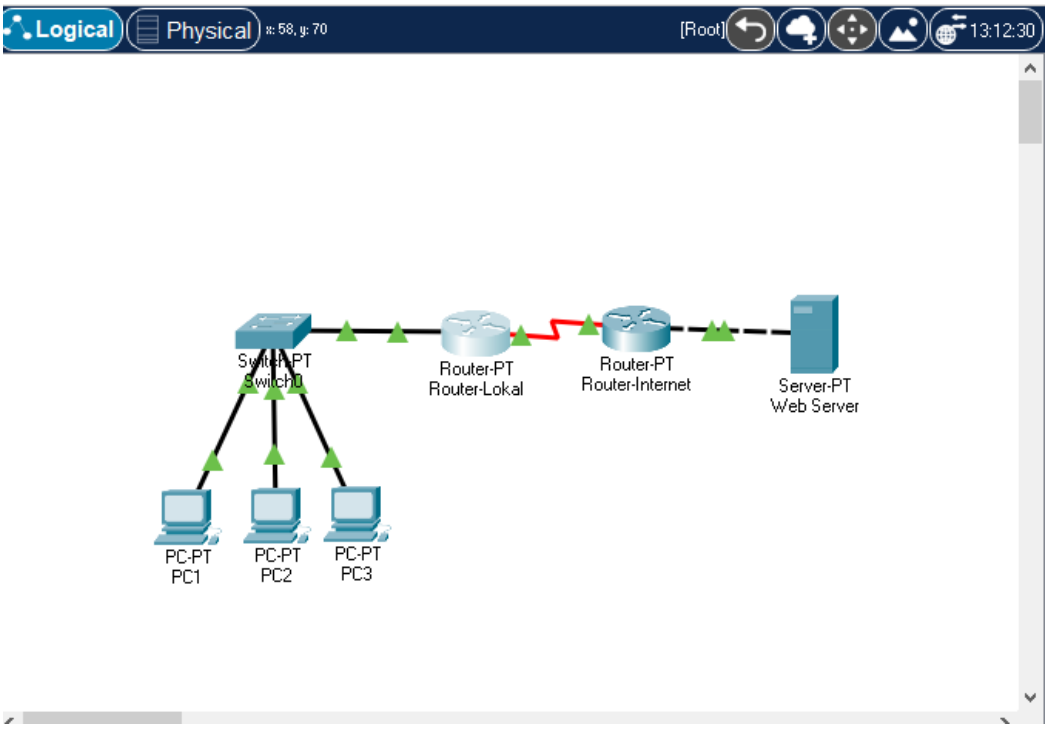


Konfigurasi Router





Hasil Konfigurasi Router



PC 1

Ping IP asli Web Server (10.0.0.2)

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 30.0.0.1: Destination host unreachable.
Reply from 30.0.0.1: Destination host unreachable.
Reply from 30.0.0.1: Destination host unreachable.
Reply from 30.0.0.1: Destination host unreachable.

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping ke IP public Web Server (50.0.0.1)

```
C:\>ping 50.0.0.1

Pinging 50.0.0.1 with 32 bytes of data:

Reply from 50.0.0.1: bytes=32 time=13ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126

Ping statistics for 50.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 13ms, Average = 4ms
```

PC 2

Ping IP asli Web Server (10.0.0.2)

```
Packet Tracer PC Command Line 1.0
C:\>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 30.0.0.1: Destination host unreachable.
Reply from 30.0.0.1: Destination host unreachable.
Reply from 30.0.0.1: Destination host unreachable.
Reply from 30.0.0.1: Destination host unreachable.

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Ping ke IP public Web Server (50.0.0.1)

```
C:\>ping 50.0.0.1

Pinging 50.0.0.1 with 32 bytes of data:

Reply from 50.0.0.1: bytes=32 time=13ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=1ms TTL=126
Reply from 50.0.0.1: bytes=32 time=10ms TTL=126

Ping statistics for 50.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 13ms, Average = 6ms
```

Kesimpulan :

Kesimpulan yang saya dapatkan setelah saya mengerjakan pratikum modul 9 ini adalah dengan menggunakan NAT lebih mudah dibandingan tanpa menggunakan NAT karena NAT menggabungkan lebih dari satu komputer untuk dihubungkan ke dalam jaringan internet hanya dengan menggunakan sebuah alamat IP.