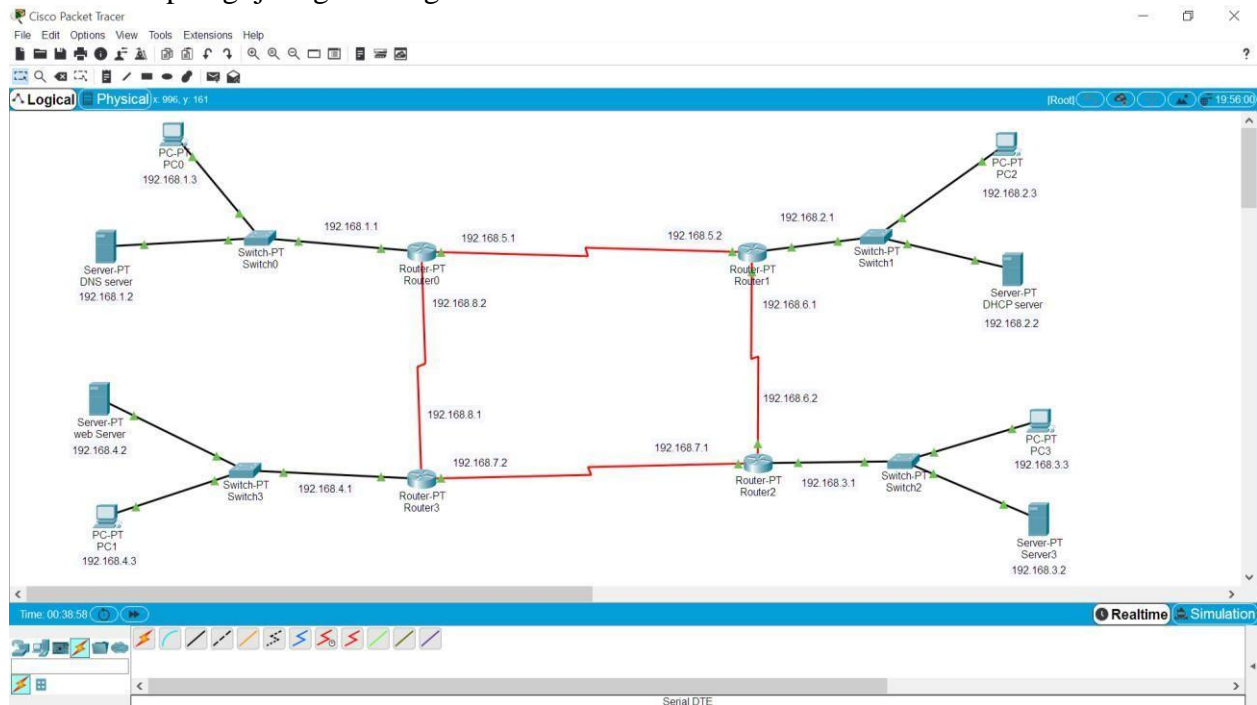


NAMA : ADNAN SHAFRY ARI PURNAMA AJI  
 NIM : L200170021  
 KELAS : A

## UAS PRAKTIKUM JARINGAN KOMPUTER

### NOMER 1

Membuat topologi jaringan sebagai berikut:



### NOMER 2

Konfigursi pengalamatan ip terhadap Router 1, 2, 3, 4, PC 1, 2, 3, dan 4(sesuai gambar diatas)

a)

Router 0	Server DNS	PC 0
SE 2/0 (ip add 192.168.5.1)	Ip add 192.168.1.2	Ip add 192.168.1.3
SE 3/0 (ip add 192.168.8.2)		
Fa 0/0 (ip add 192.168.1.1)		

b)

Router 1	Server DHCP	PC 2
SE 2/0 (ip add 192.168.6.1)	Ip add 192.168.2.2	Otomatis sesuai pengaturan dhcp yang dibuat (ip add 192.168.2.3)
SE 3/0 (ip add 192.168.5.2)		
Fa 0/0 (ip add 192.168.2.1)		

c)

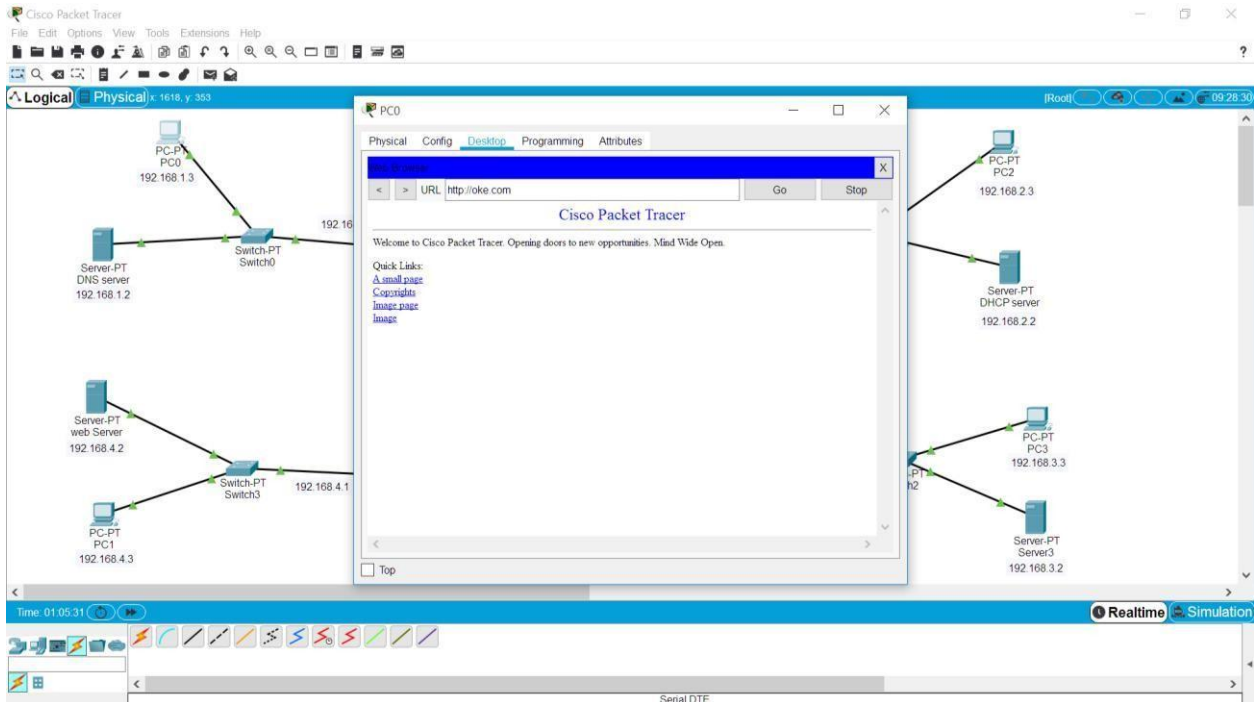
Router 2	Server3	PC 3
SE 2/0 (ip add 192.168.7.1)	Ip add 192.168.3.2	Ip add 192.168.3.3
SE 3/0 (ip add 192.168.6.2)		
Fa 0/0 (ip add 192.168.3.1)		

d)

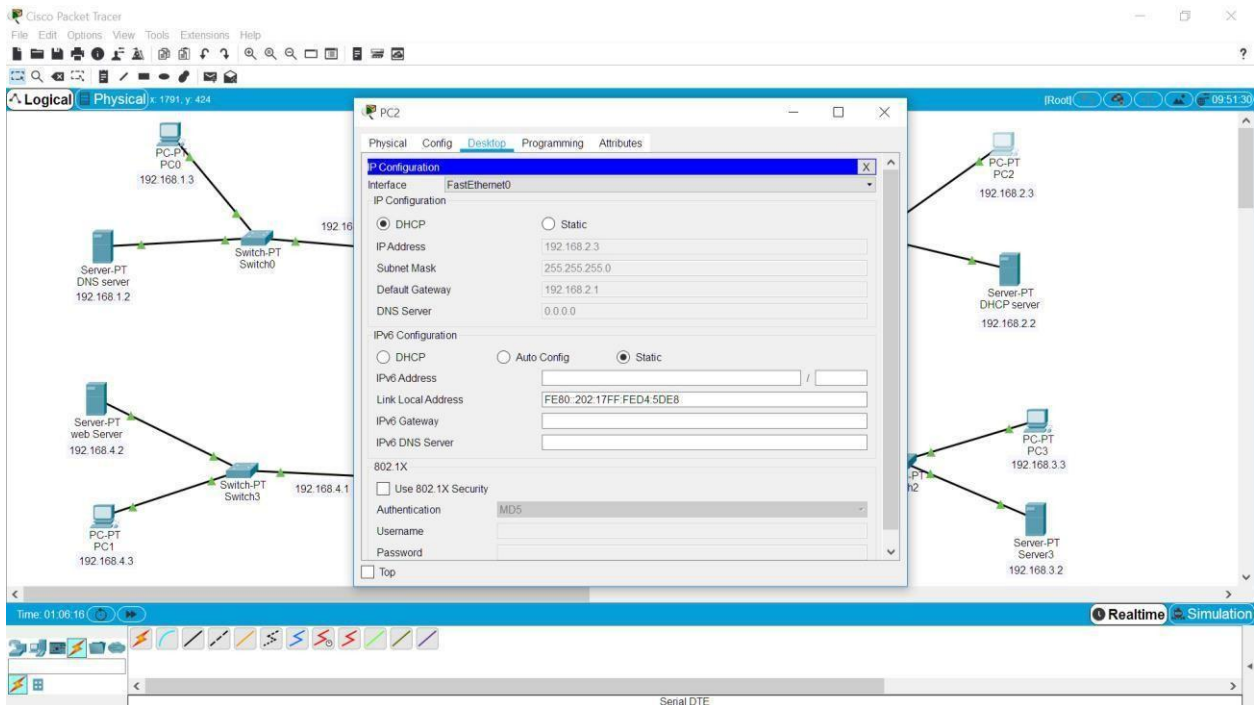
Router 3	Server Web	PC 1
SE 2/0 (ip add 192.168.8.1)	Ip add 192.168.4.2	Ip add 192.168.4.3
SE 3/0 (ip add 192.168.7.2)		
Fa 0/0 (ip add 192.168.4.1)		

## Test no.2

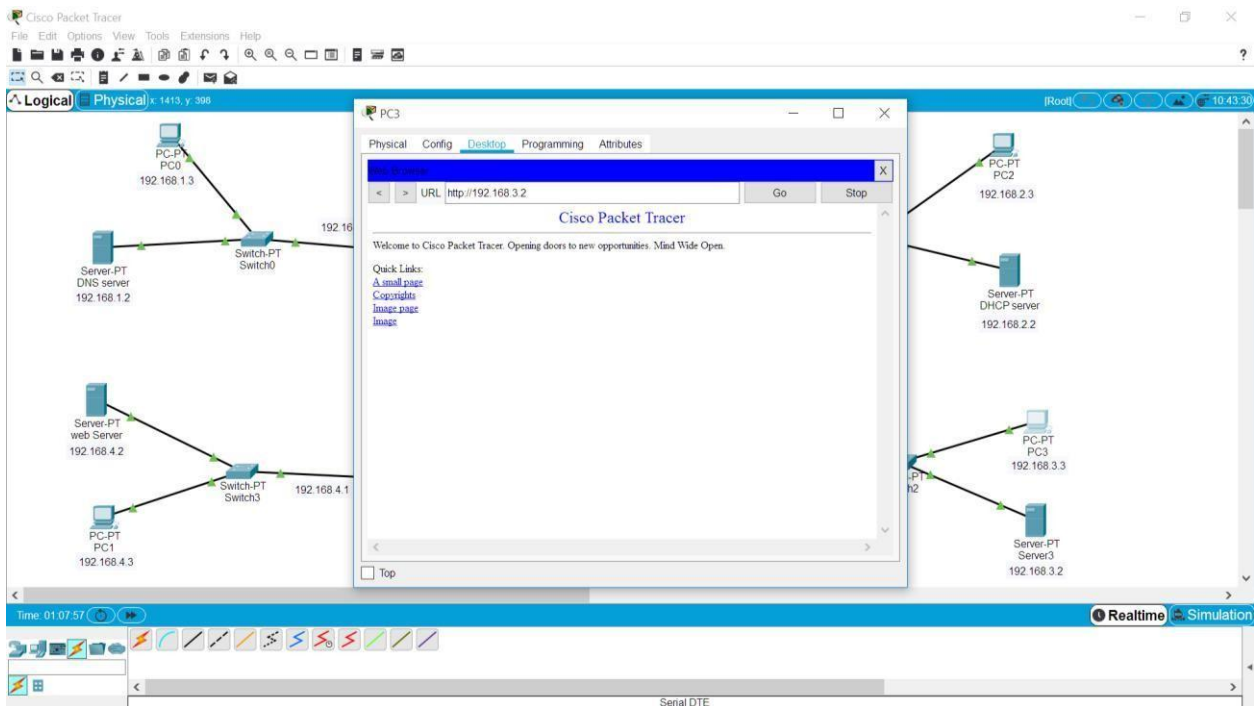
- DNS server



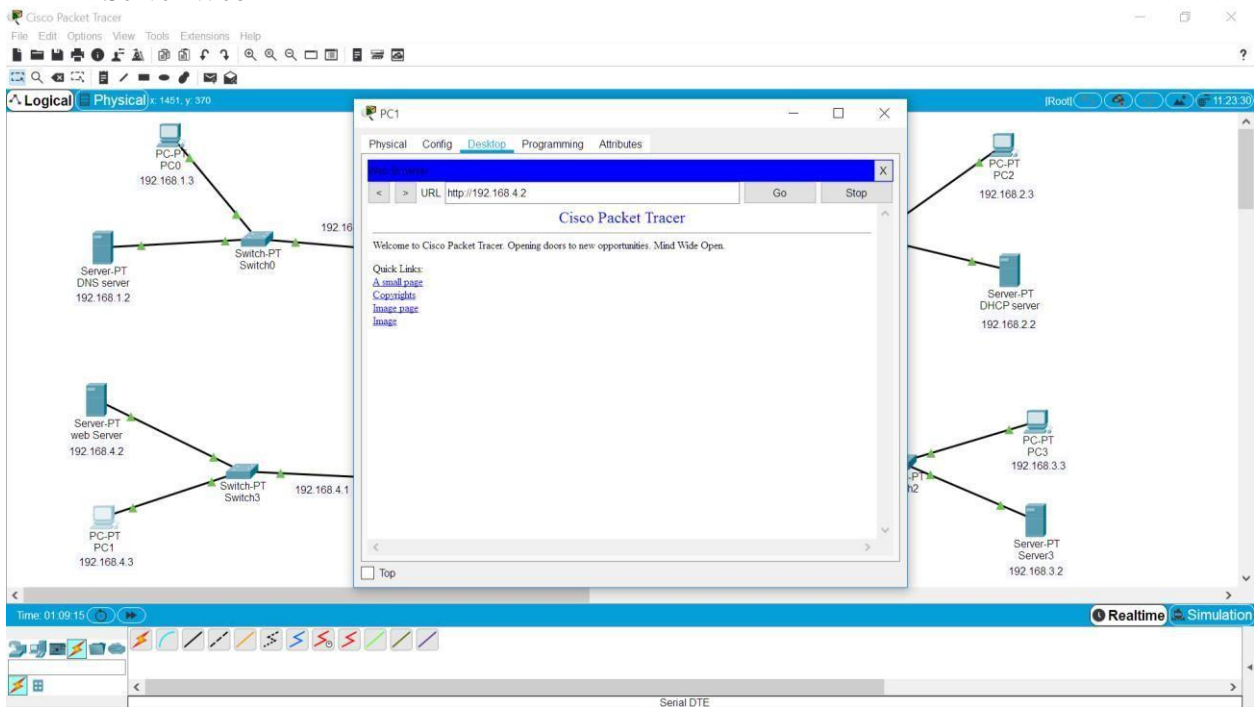
- DHCP Server



- Server3



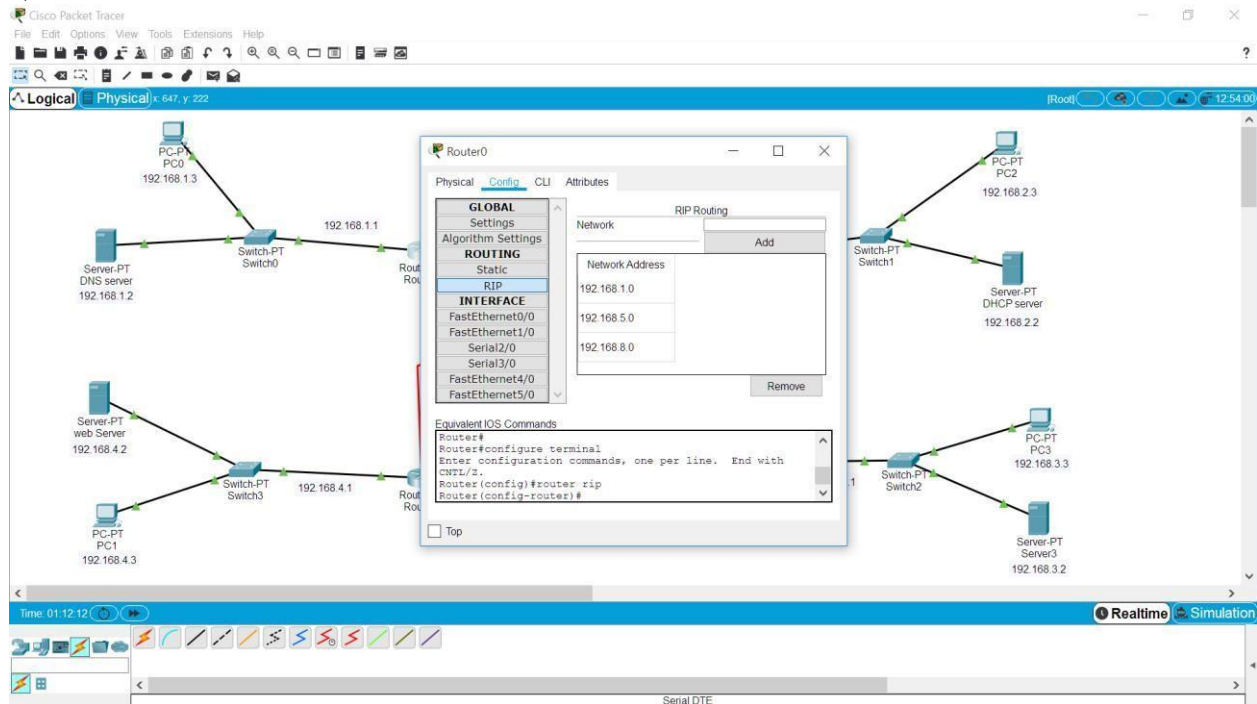
- Server Web



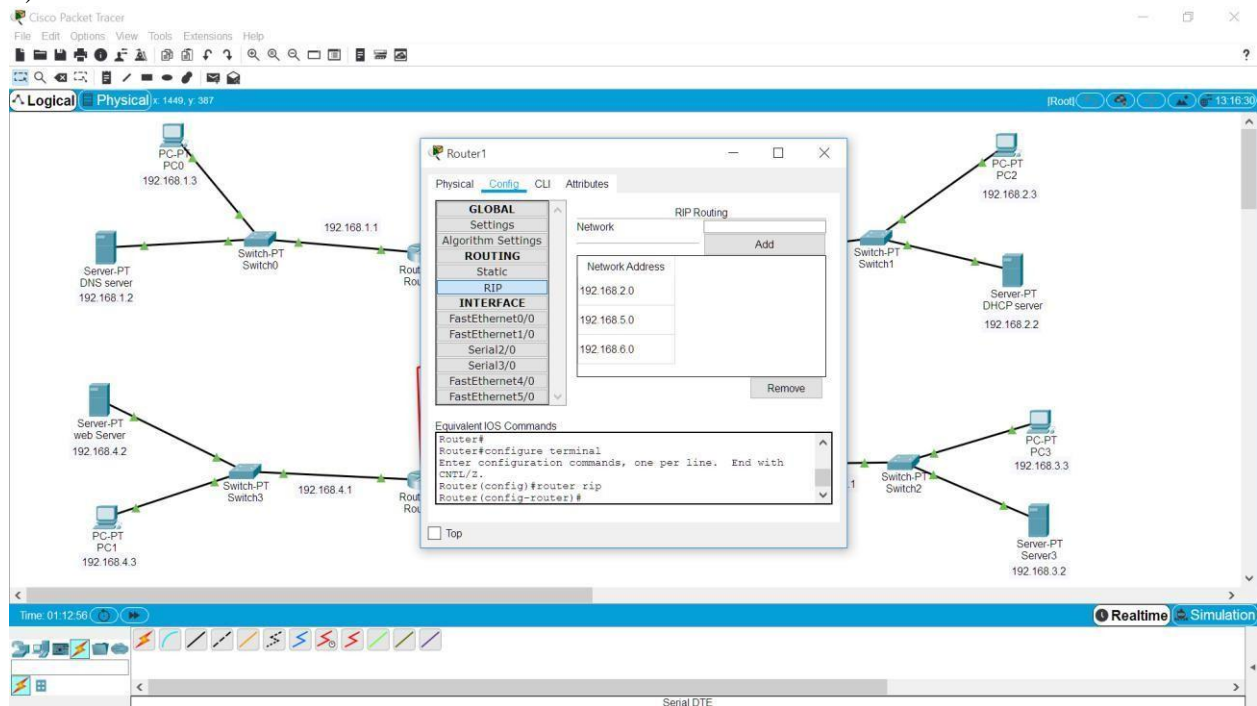
### NOMER 3

Konfigurasi routing dinamis menggunakan protocol routing RIP pada masing-masing router

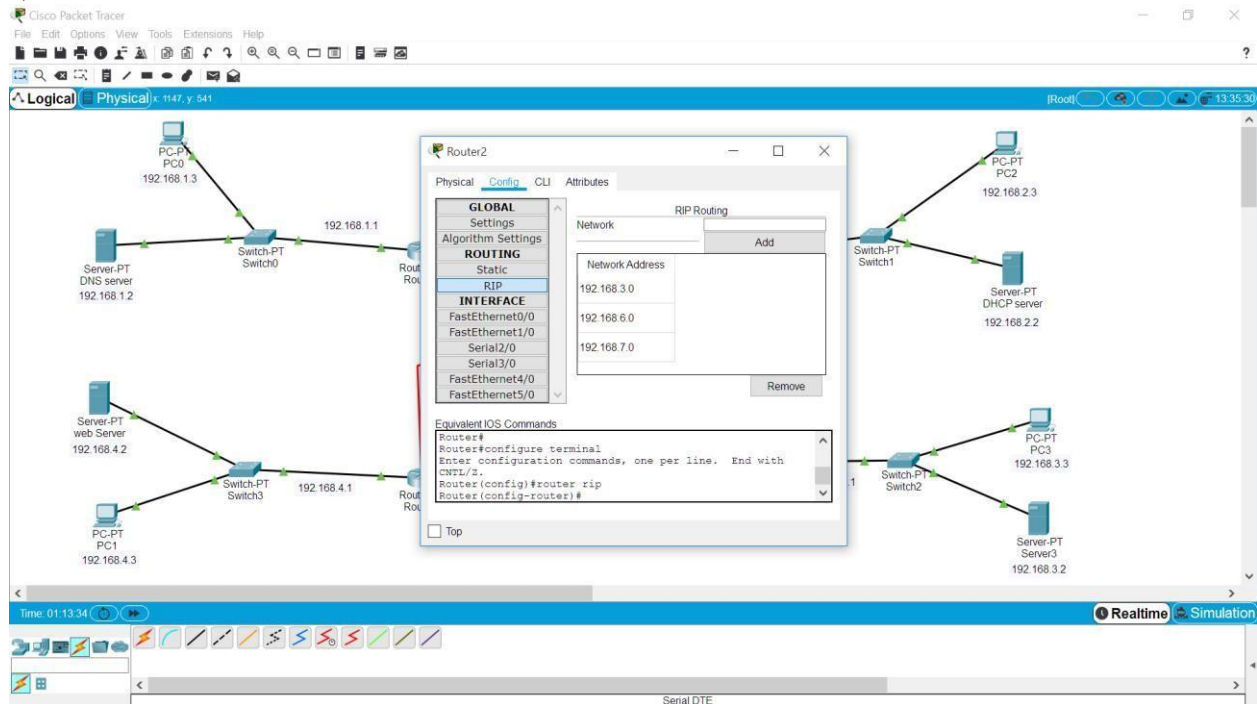
#### a) router 0



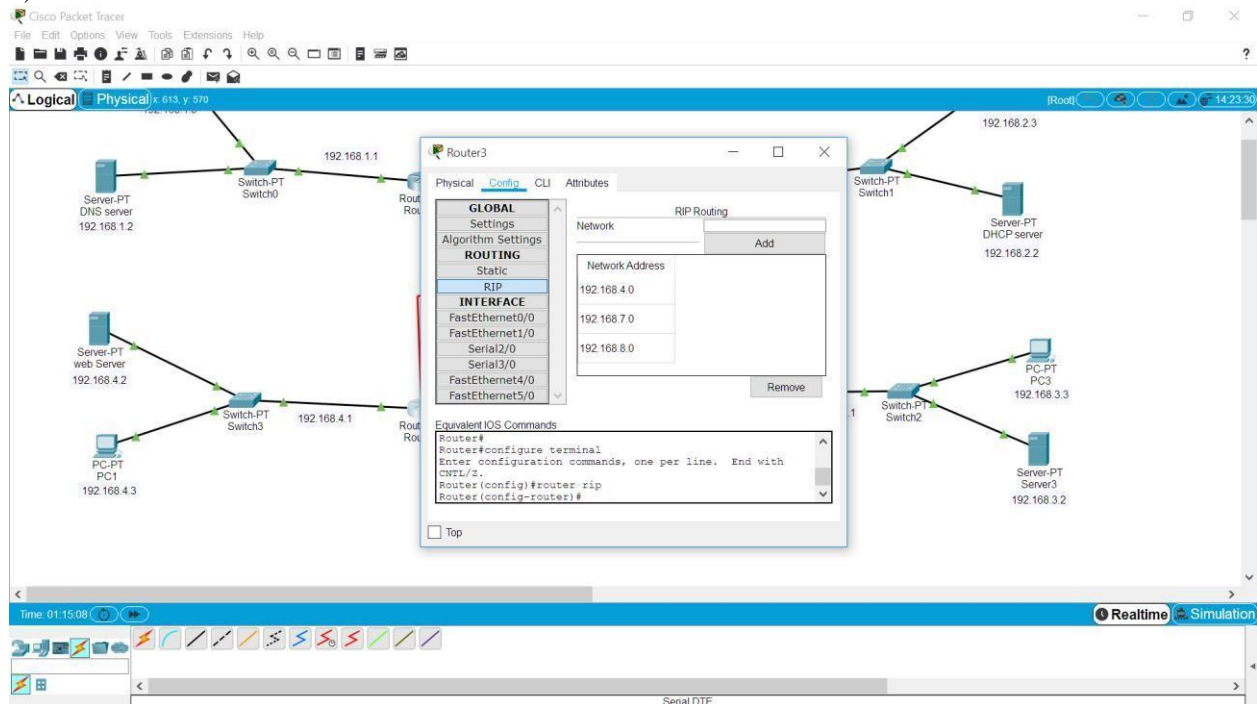
#### b) router 1



### c) router 2

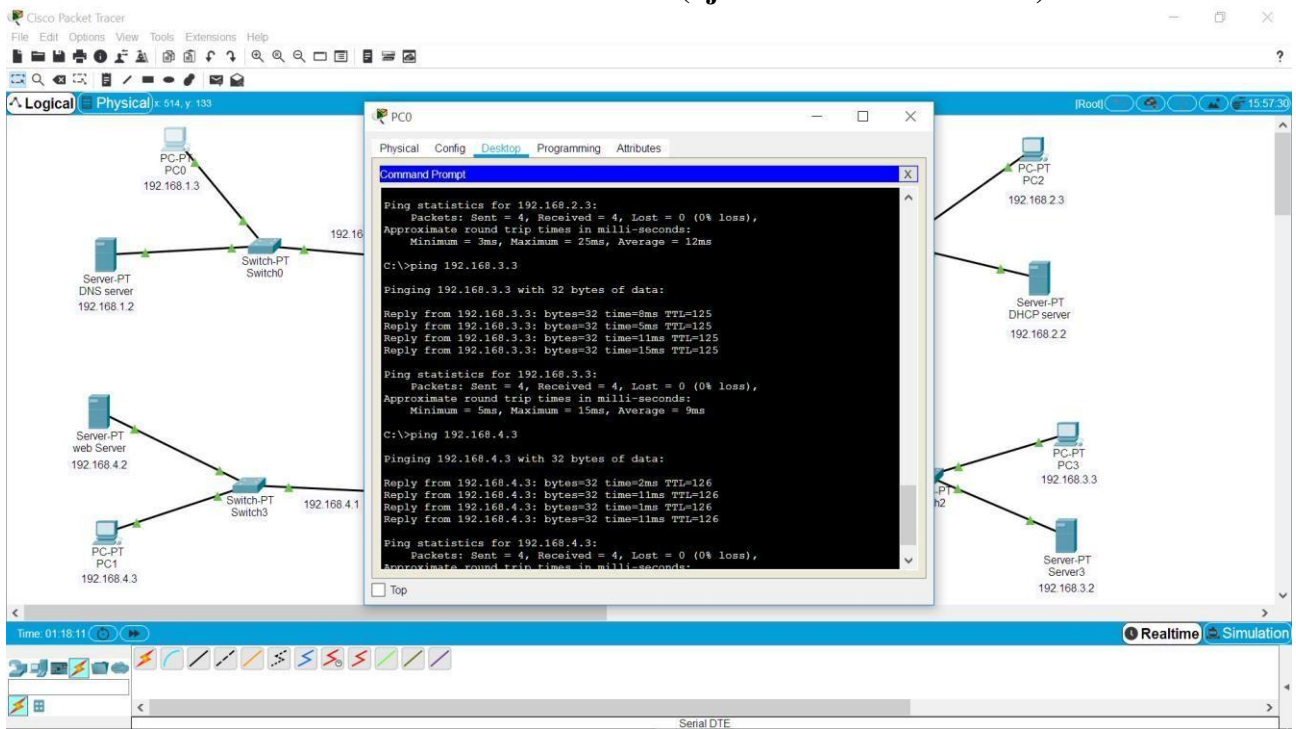


### d) router 3

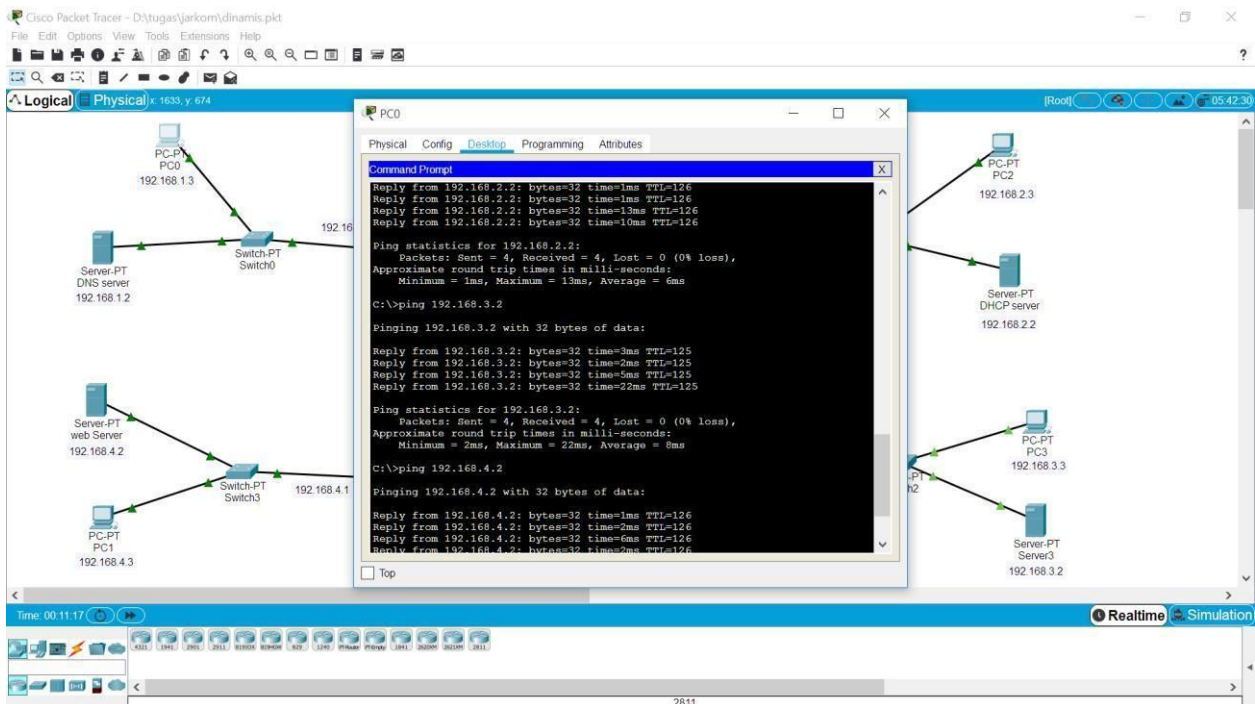




### Test no.3 router dinamis (uji konektivitas antar PC)



### Test no.3 router dinamis (uji konektivitas PC ke server antar router)



## NOMER 4

### Konfigurasi router statis

#### a) router 0

Router0 Configuration:

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.9.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.10.0 255.255.255.0 192.168.8.1
Router(config)#
```

#### b) router 1

Router1 Configuration:

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.9.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.10.0 255.255.255.0 192.168.6.2
Router(config)#
```

### c) router 2

The image shows the Cisco Packet Tracer interface for Router2. The left pane displays the configuration window with the following details:

- Static Routes:**
  - 192.168.1.0/24 via 192.168.7.2
  - 192.168.2.0/24 via 192.168.7.2
  - 192.168.3.0/24 via 192.168.7.2
  - 192.168.4.0/24 via 192.168.7.2
- Equivalent IOS Commands:**

```

Router#
Router#configure terminal
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.9.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.10.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.11.0 255.255.255.0 192.168.6.1
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

The right pane shows the network topology. Router2 (192.168.7.1) is connected to Router1 (192.168.5.2) and Router3 (192.168.7.2). Router1 is connected to Switch1 (192.168.2.1), which is connected to PC2 (192.168.2.3) and Server1 (192.168.2.2). Router3 is connected to Switch2 (192.168.3.1), which is connected to PC3 (192.168.3.3) and Server3 (192.168.3.2). The status bar at the bottom indicates 'Realtime' mode.

### c) router 3

The image shows the Cisco Packet Tracer interface for Router3. The left pane displays the configuration window with the following details:

- Static Routes:**
  - 192.168.1.0/24 via 192.168.7.1
  - 192.168.2.0/24 via 192.168.7.1
  - 192.168.3.0/24 via 192.168.7.1
  - 192.168.4.0/24 via 192.168.7.1
- Equivalent IOS Commands:**

```

Router>enable
Router#
Router#configure terminal
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.9.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.10.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.11.0 255.255.255.0 192.168.8.2
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

The right pane shows the network topology. Router3 (192.168.7.2) is connected to Router1 (192.168.5.1) and Router2 (192.168.7.1). Router1 is connected to Switch0 (192.168.1.1), which is connected to PC0 (192.168.1.3) and Server0 (192.168.1.2). Router2 is connected to Switch3 (192.168.4.1), which is connected to PC1 (192.168.4.3) and Server2 (192.168.4.2). The status bar at the bottom indicates 'Realtime' mode.



## Test no.4 router statis(uji konektivitas antar PC)

The screenshot shows a Cisco Packet Tracer workspace with a network topology. The topology includes:

- PC-PT PC0 (192.168.1.3) connected to Switch-PT Switch0.
- Server-PT DNS server (192.168.1.2) connected to Switch-PT Switch0.
- Server-PT web Server (192.168.4.2) connected to Switch-PT Switch3.
- PC-PT PC1 (192.168.4.3) connected to Switch-PT Switch3.
- Switch-PT Switch0 (192.168.1.1) connected to Switch-PT Switch3 (192.168.4.1).
- PC-PT PC2 (192.168.2.3) connected to Server-PT DHCP server (192.168.2.2).
- PC-PT PC3 (192.168.3.3) connected to Server-PT Server3 (192.168.3.2).

The Command Prompt window for PC1 shows the following output:

```

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=2ms TTL=126
Reply from 192.168.1.3: bytes=32 time=11ms TTL=124
Reply from 192.168.1.3: bytes=32 time=13ms TTL=122
Reply from 192.168.1.3: bytes=32 time=11ms TTL=124
Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 13ms, Average = 9ms
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=5ms TTL=125
Reply from 192.168.2.3: bytes=32 time=16ms TTL=121
Reply from 192.168.2.3: bytes=32 time=13ms TTL=125
Reply from 192.168.2.3: bytes=32 time=13ms TTL=121
Ping statistics for 192.168.2.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 5ms, Maximum = 16ms, Average = 11ms
C:\>ping 192.168.3.3
Pinging 192.168.3.3 with 32 bytes of data:
Reply from 192.168.3.3: bytes=32 time=5ms TTL=124
Reply from 192.168.3.3: bytes=32 time=11ms TTL=126

```

## Test no.4 router statis (uji konektivitas PC ke server antar router)

The screenshot shows a Cisco Packet Tracer workspace with a network topology. The topology includes:

- PC-PT PC0 (192.168.1.3) connected to Switch-PT Switch0.
- Server-PT DNS server (192.168.1.2) connected to Switch-PT Switch0.
- Server-PT web Server (192.168.4.2) connected to Switch-PT Switch3.
- PC-PT PC1 (192.168.4.3) connected to Switch-PT Switch3.
- Switch-PT Switch0 (192.168.1.1) connected to Switch-PT Switch3 (192.168.4.1).
- PC-PT PC2 (192.168.2.3) connected to Server-PT DHCP server (192.168.2.2).
- PC-PT PC3 (192.168.3.3) connected to Server-PT Server3 (192.168.3.2).

The Command Prompt window for PC1 shows the following output:

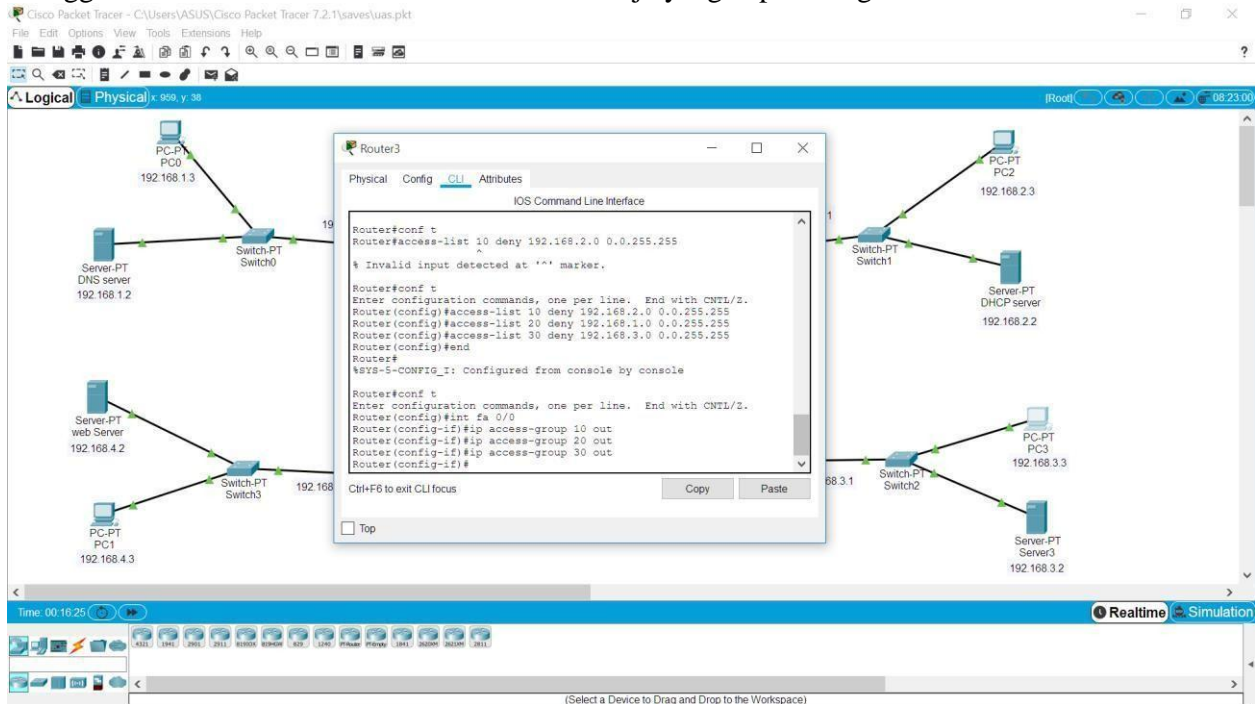
```

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=122
Reply from 192.168.1.2: bytes=32 time=13ms TTL=124
Reply from 192.168.1.2: bytes=32 time=13ms TTL=126
Reply from 192.168.1.2: bytes=32 time=3ms TTL=124
Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 13ms, Average = 8ms
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=6ms TTL=121
Reply from 192.168.2.2: bytes=32 time=12ms TTL=125
Reply from 192.168.2.2: bytes=32 time=6ms TTL=121
Reply from 192.168.2.2: bytes=32 time=2ms TTL=125
Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 12ms, Average = 6ms
C:\>ping 192.168.3.2
Pinging 192.168.3.2 with 32 bytes of data:
Reply from 192.168.3.2: bytes=32 time=9ms TTL=124
Reply from 192.168.3.2: bytes=32 time=14ms TTL=122

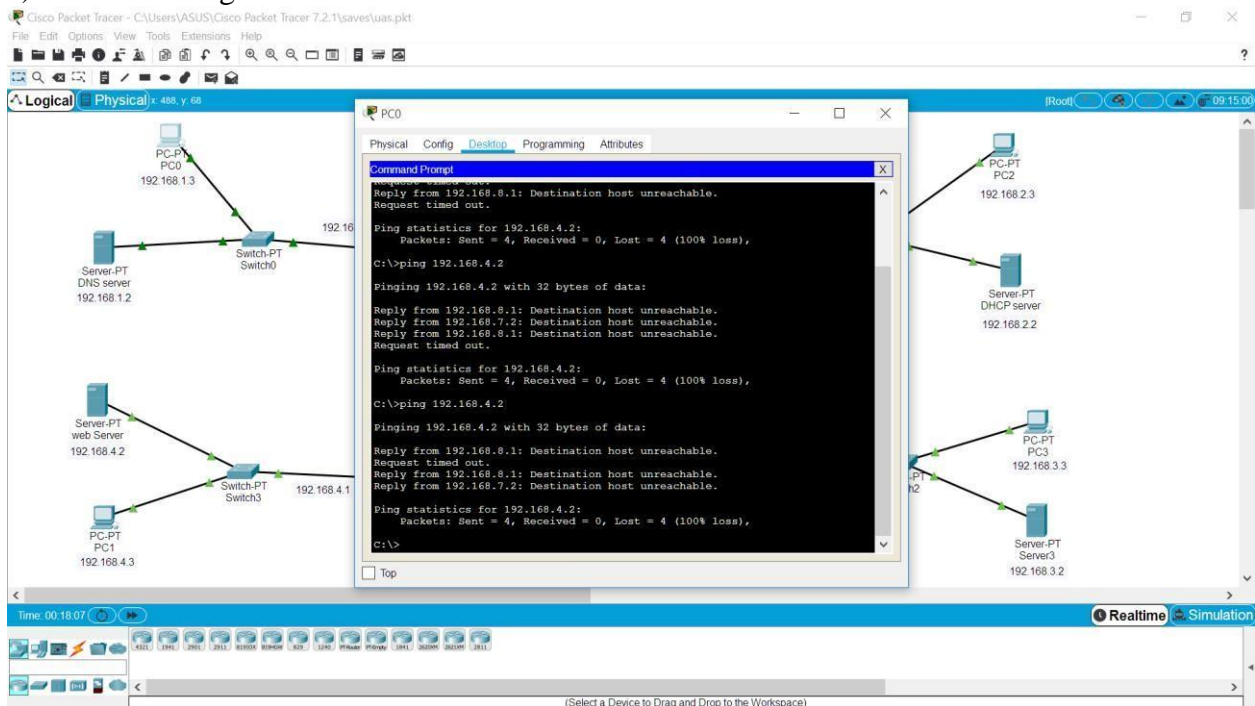
```

## NOMER 5

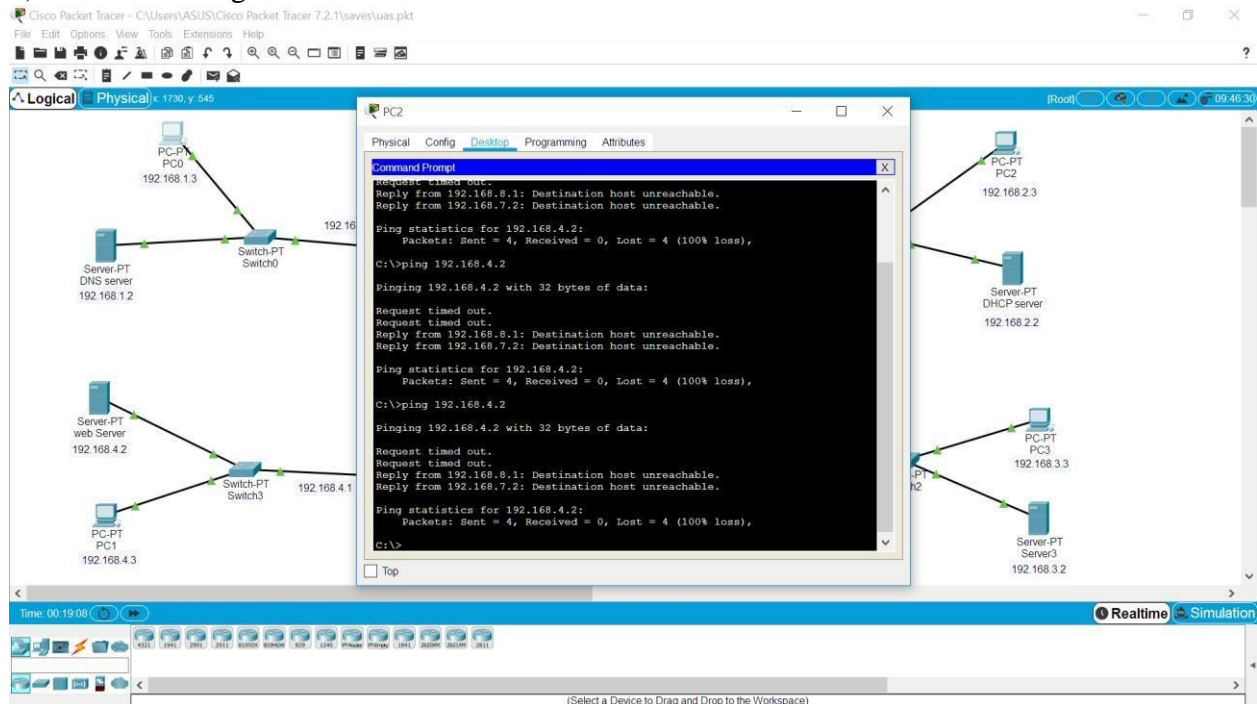
Menggunakan access list untuk membatasi 1 PC saja yang dapat mengakses server web



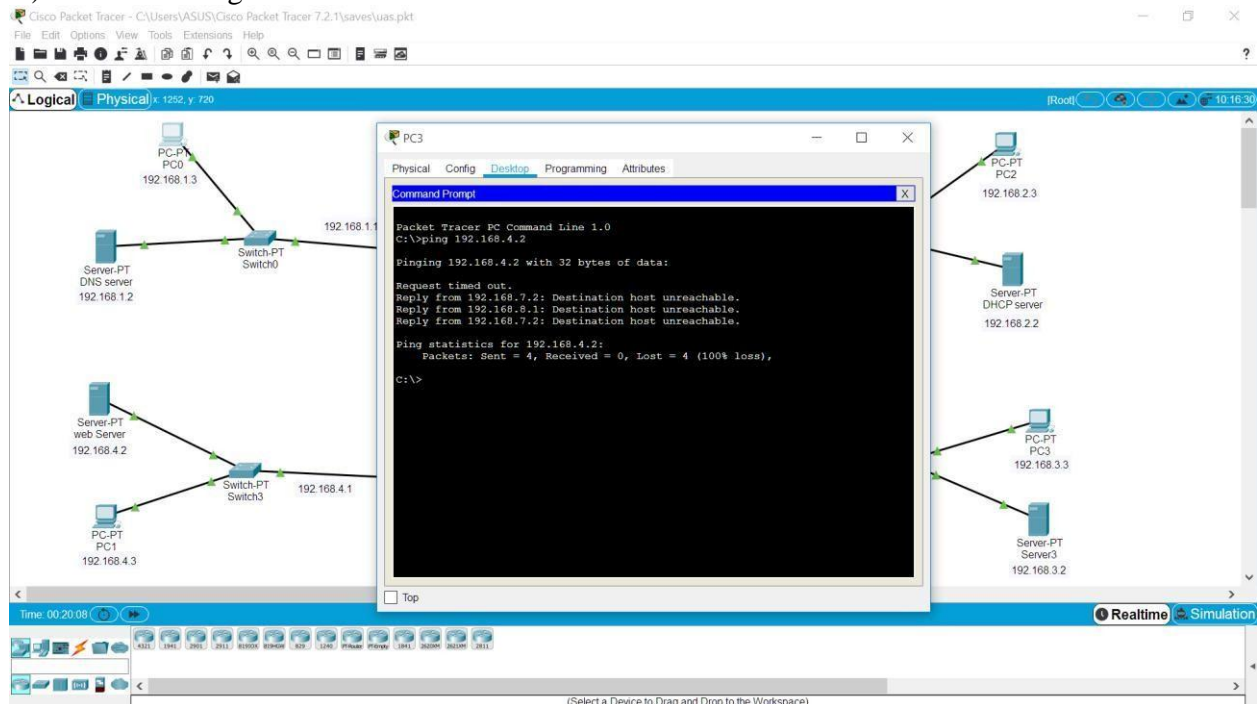
a) Test akses dengan PC 0



## b) Test akses dengan PC 2



## c) Test akses dengan PC 3



#### d) Test akses dengan PC 1

Cisco Packet Tracer - C:\Users\ASUS\Cisco Packet Tracer 7.2.1\saves\uas.pkt

File Edit Options View Tools Extensions Help

Logical Physical 1636 y.645

PC1

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.4.2

Pinging 192.168.4.2 with 32 bytes of data:
Reply from 192.168.4.2: bytes=32 time=1ms TTL=128
Reply from 192.168.4.2: bytes=32 time=1ms TTL=128
Reply from 192.168.4.2: bytes=32 time=1ms TTL=128
Reply from 192.168.4.2: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

PC0 192.168.1.3

Server-PT DNS Server 192.168.1.2

Switch-PT Switch0 192.168.1.1

Server-PT web Server 192.168.4.2

Switch-PT Switch3 192.168.4.1

PC-PT PC1 192.168.4.3

PC-PT PC2 192.168.2.3

Server-PT DHCP server 192.168.2.2

PC-PT PC3 192.168.3.3

Server-PT Server3 192.168.3.2

Time: 00:20:57

Realtime Simulation

(Select a Device to Drag and Drop to the Workspace)