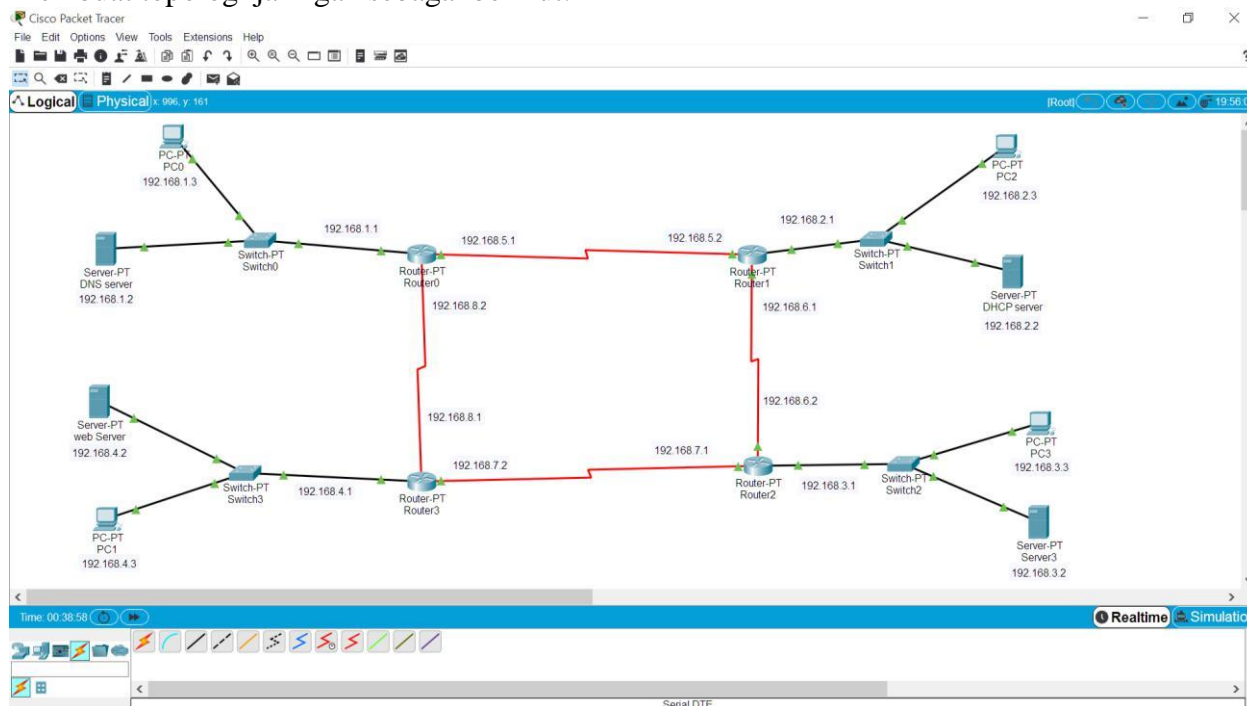


NAMA : ARLIN WIDYA RAHAYU
 NIM : L200170014
 KELAS : A

UAS JARINGAN KOMPUTER

No.1

Membuat topologi jaringan sebagai berikut:



No.2

Konfigurasi 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)

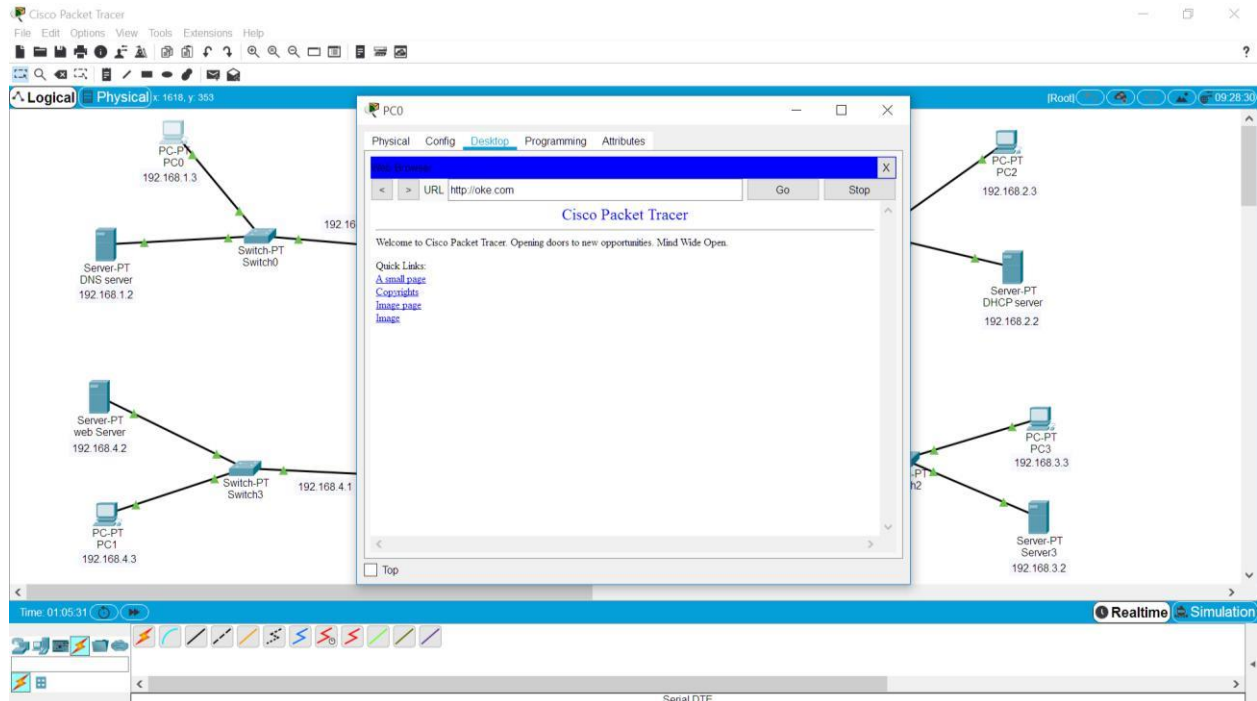
Router 2	Server3	PC 3
SE 2/0 (ip add 192.168.7.1)	Ip add 192.168.3.2	Ip add 192.168.3.3
SE 3/0 (ip add 192.168.6.2)		
Fa 0/0 (ip add 192.168.3.1)		

d)

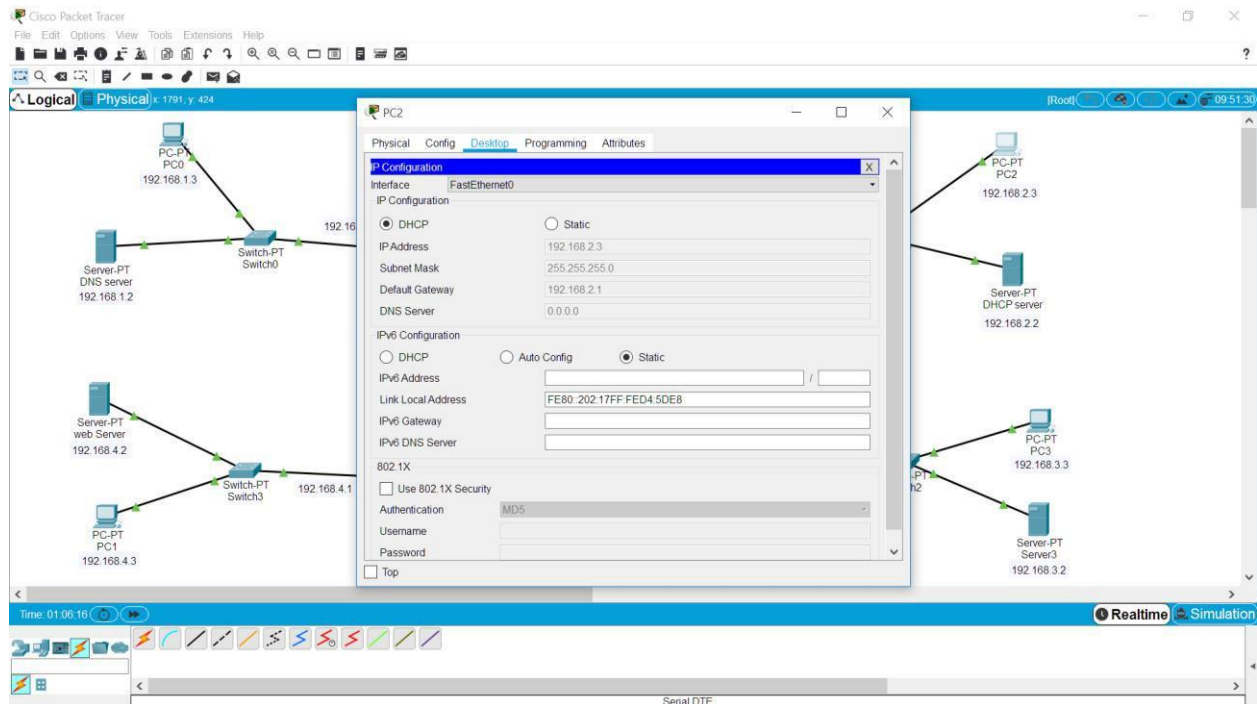
Router 3	Server Web	PC 1
SE 2/0 (ip add 192.168.8.1)	Ip add 192.168.4.2	Ip add 192.168.4.3
SE 3/0 (ip add 192.168.7.2)		
Fa 0/0 (ip add 192.168.4.1)		

Test no.2

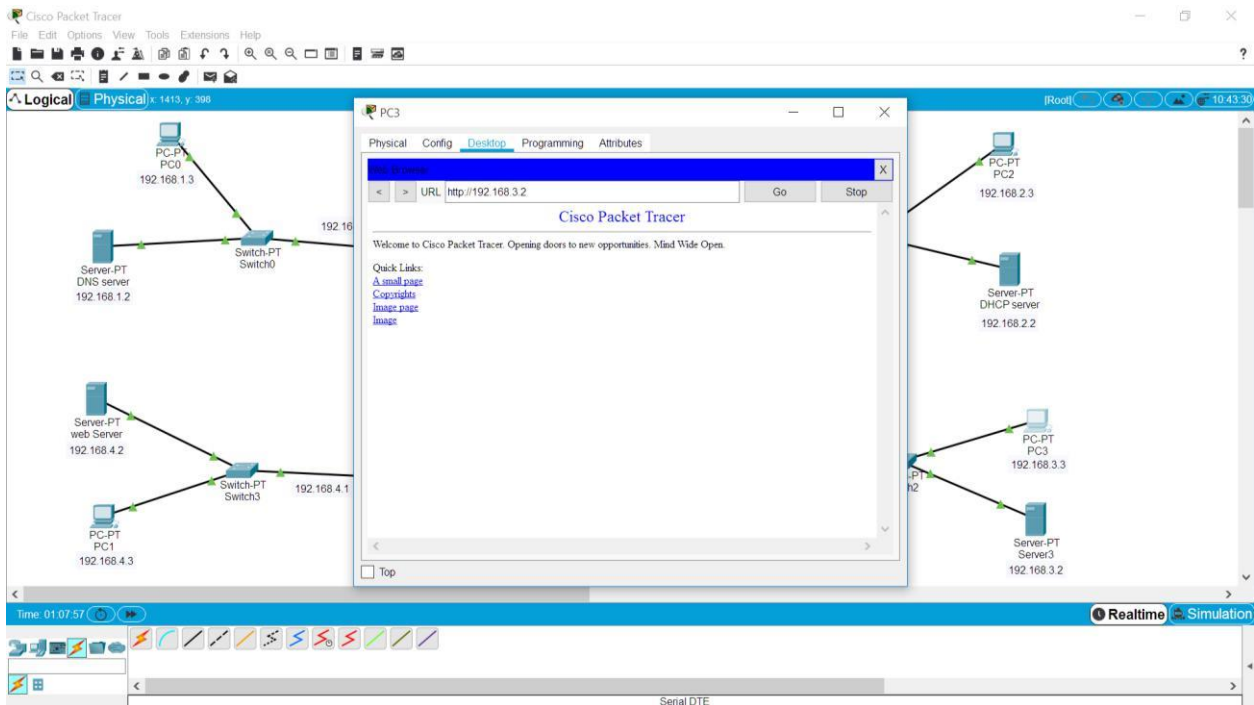
- DNS server



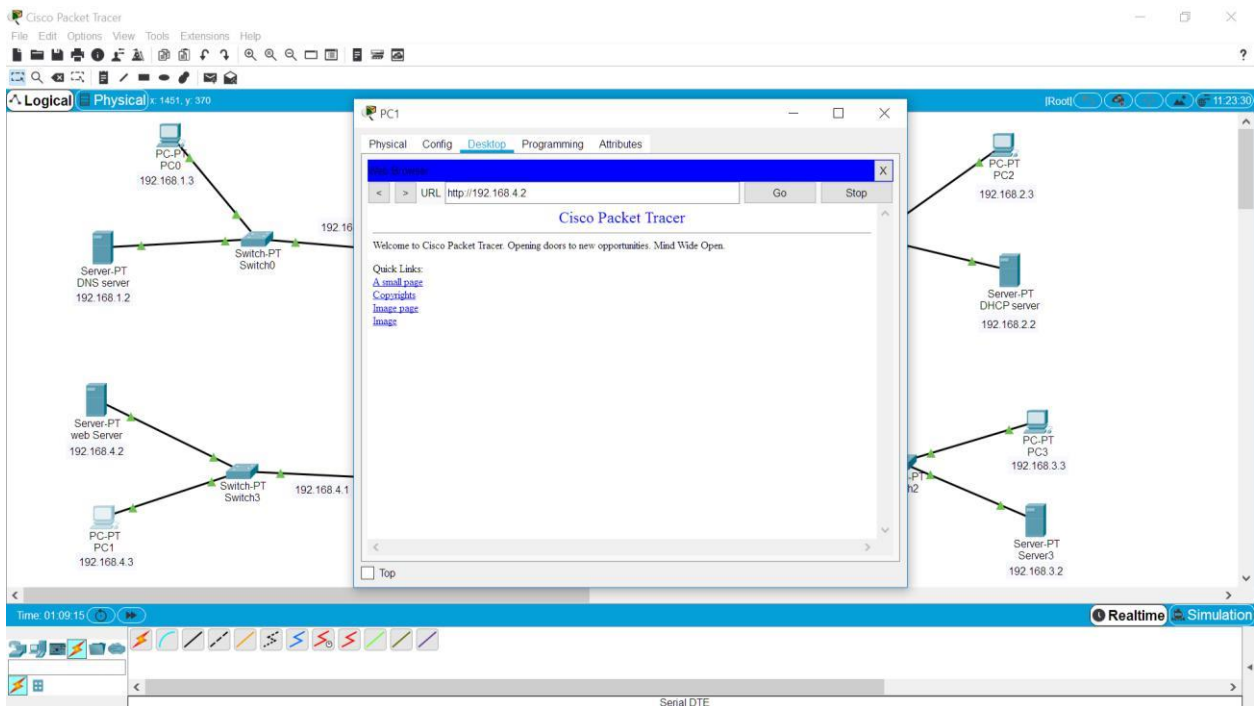
- DHCP Server



- Server3



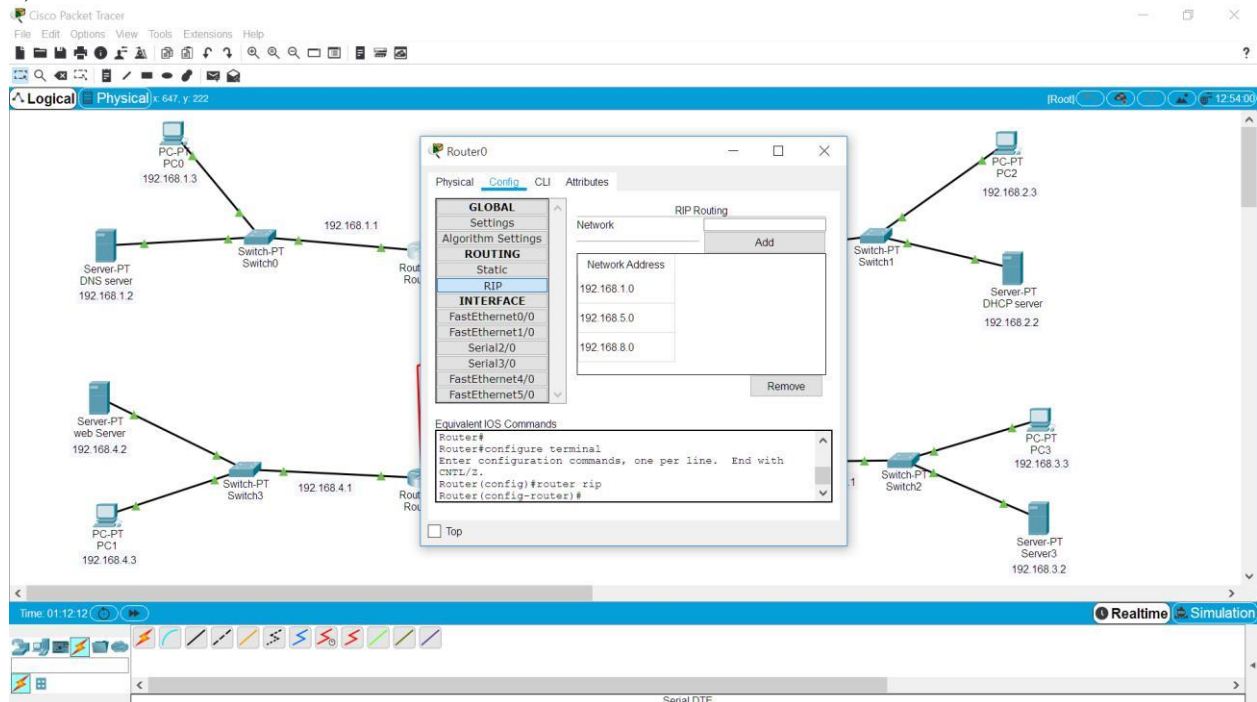
- Server Web



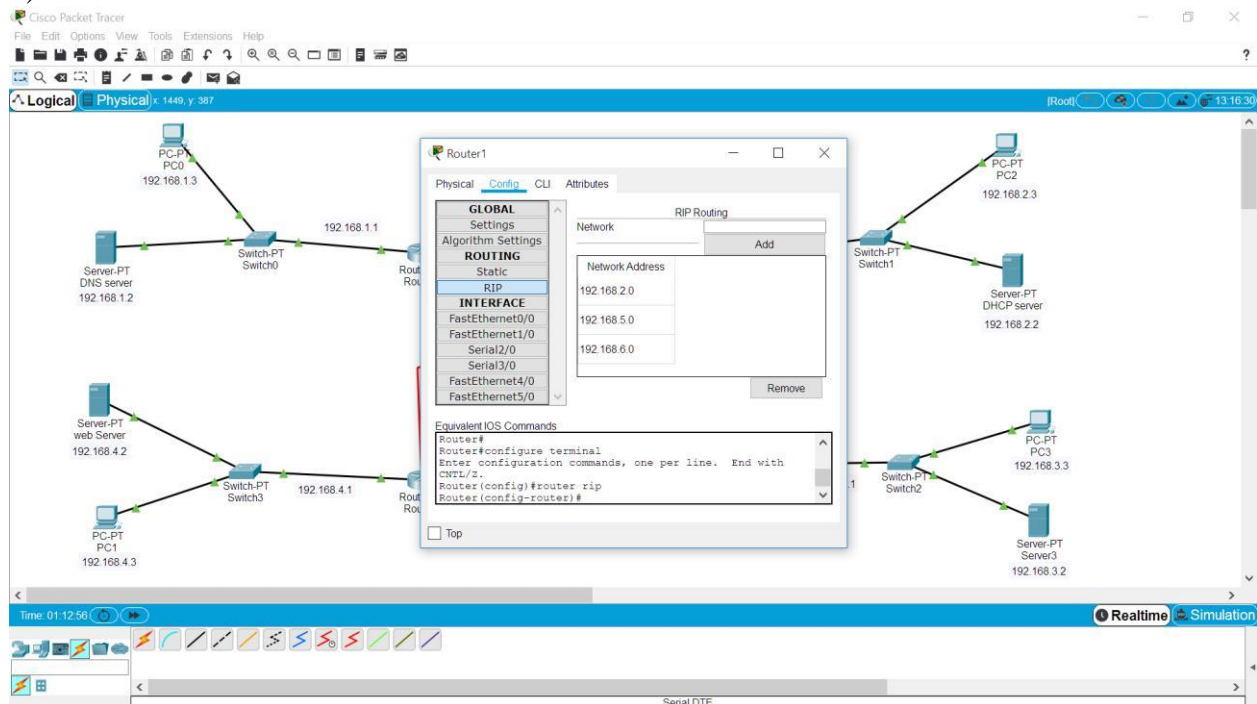
No.3

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

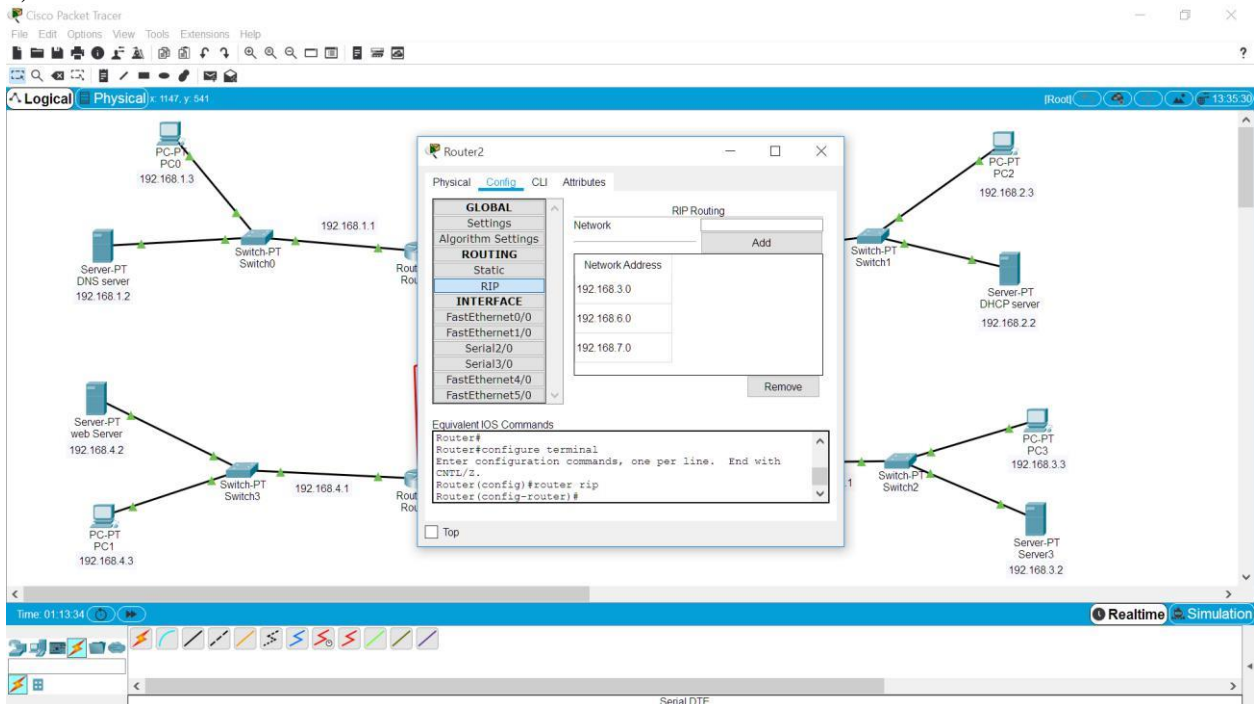
a) router 0



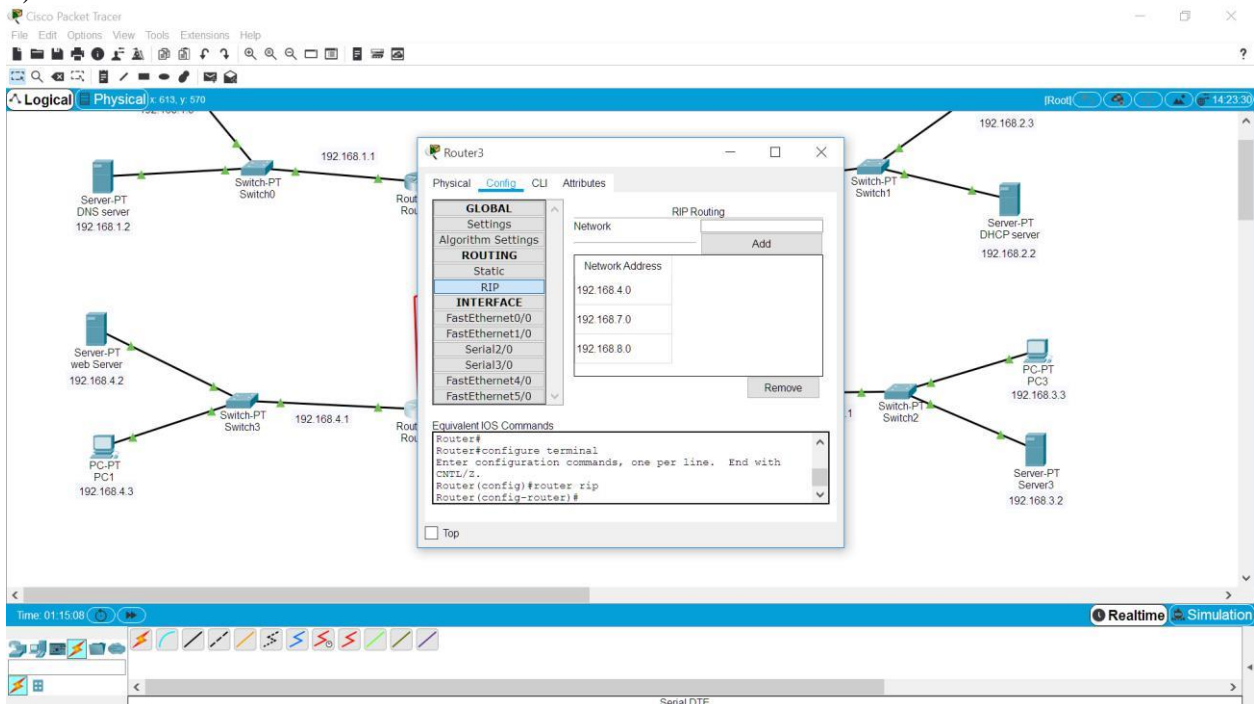
b) router 1



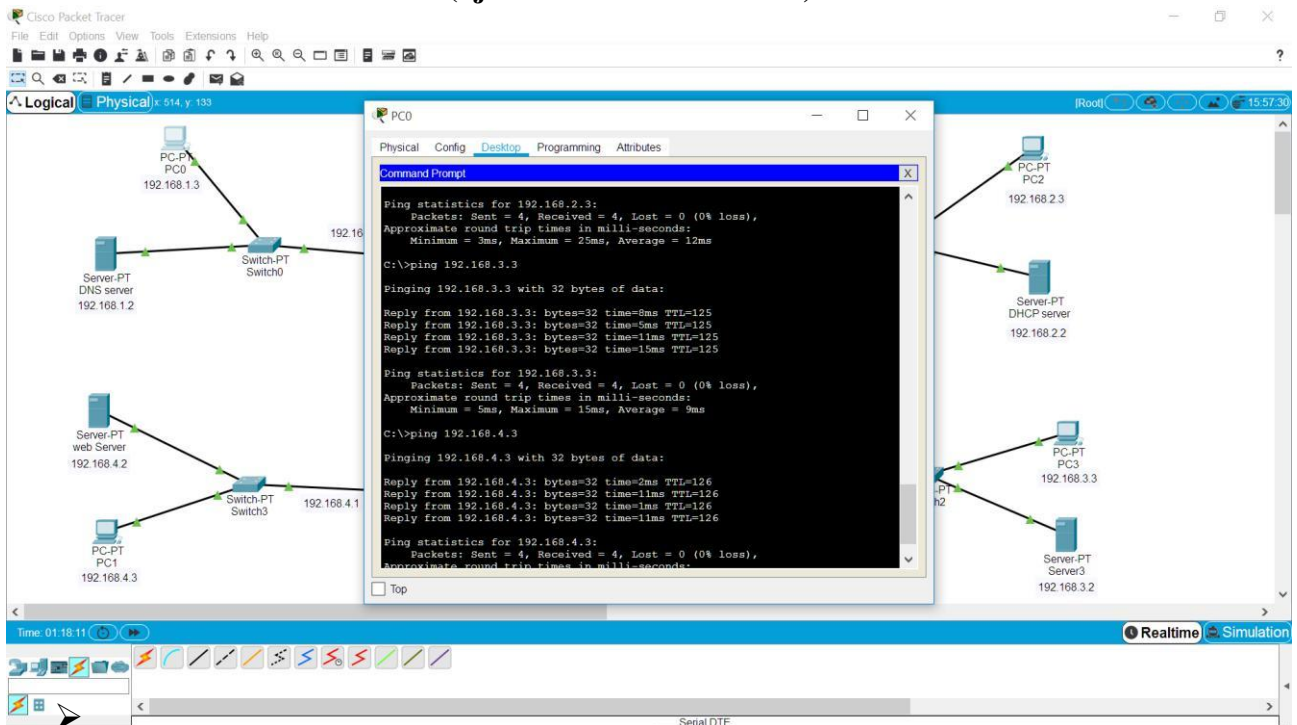
c)router 2



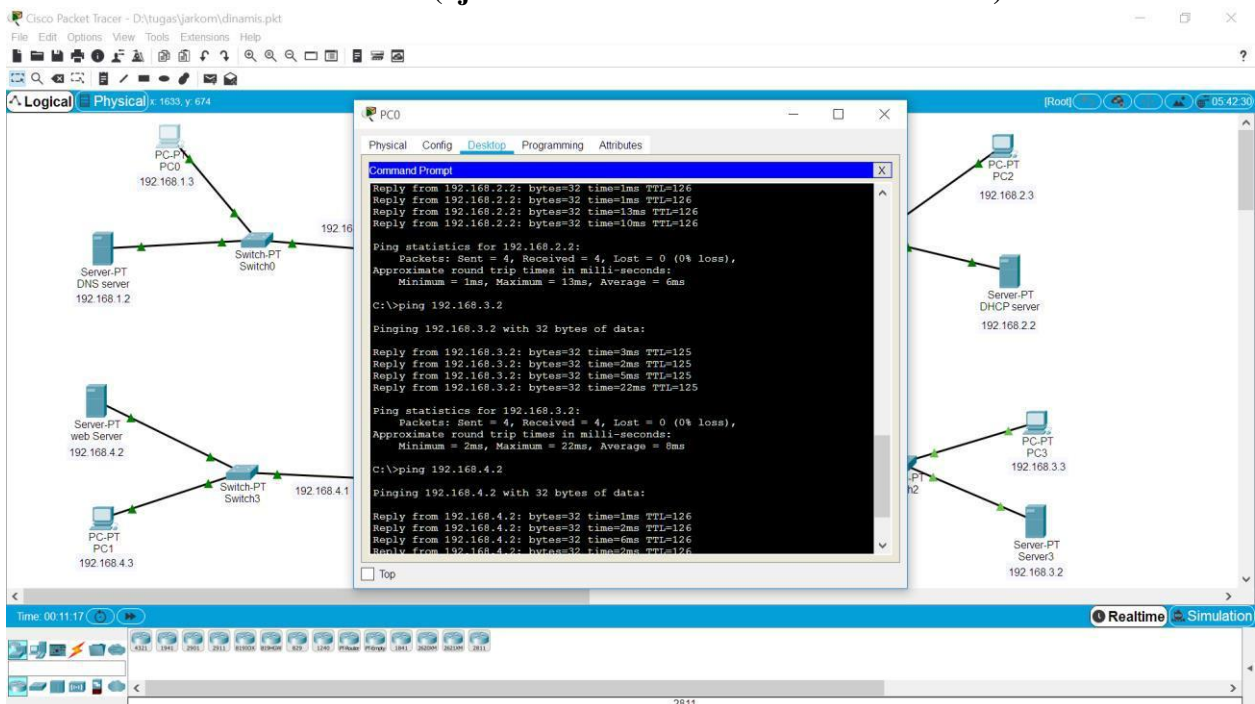
d)router 3



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



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



No.4

Konfigurasi router statis

a) router 0

The network diagram shows a topology with three routers: Router0, Router1, and Router2. Router0 is connected to Router1 via a serial link (192.168.1.1/24 on Router0, 192.168.1.2/24 on Router1). Router1 is connected to Router2 via a serial link (192.168.2.1/24 on Router1, 192.168.2.2/24 on Router2). Router0 has three interfaces: FastEthernet0/0 (192.168.1.1/24), FastEthernet1/0 (192.168.2.1/24), and FastEthernet5/0 (192.168.8.1/24). Router1 has two interfaces: FastEthernet0/0 (192.168.1.2/24) and FastEthernet1/0 (192.168.2.2/24). Router2 has two interfaces: FastEthernet0/0 (192.168.2.1/24) and FastEthernet1/0 (192.168.8.1/24). The configuration for Router0 is shown in the right pane, including static routes for the 192.168.1.0/24, 192.168.2.0/24, and 192.168.8.0/24 networks.

Router0 Configuration:

```
Router>enable
Router#configure terminal
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.1.2
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.2.2
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

The network diagram shows a topology with three routers: Router0, Router1, and Router2. Router0 is connected to Router1 via a serial link (192.168.1.1/24 on Router0, 192.168.1.2/24 on Router1). Router1 is connected to Router2 via a serial link (192.168.2.1/24 on Router1, 192.168.2.2/24 on Router2). Router0 has three interfaces: FastEthernet0/0 (192.168.1.1/24), FastEthernet1/0 (192.168.2.1/24), and FastEthernet5/0 (192.168.8.1/24). Router1 has two interfaces: FastEthernet0/0 (192.168.1.2/24) and FastEthernet1/0 (192.168.2.2/24). Router2 has two interfaces: FastEthernet0/0 (192.168.2.1/24) and FastEthernet1/0 (192.168.8.1/24). The configuration for Router1 is shown in the right pane, including static routes for the 192.168.1.0/24, 192.168.2.0/24, and 192.168.8.0/24 networks.

Router1 Configuration:

```
Router>enable
Router#configure terminal
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.1.1
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.2.1
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)#
```

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

```

Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.7.2
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 192.168.8.0 255.255.255.0 192.168.7.2
Router(config)#ip route 192.168.9.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.6.1
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

The right pane shows the network topology. Router2 (PT Router2) is connected to Router1 (PT Router1) via a serial link (192.168.7.1 to 192.168.5.2). Router1 is connected to Switch1 (PT Switch1) via a serial link (192.168.6.1 to 192.168.2.1). Switch1 is connected to PC2 (PT PC2) and Server3 (PT DHCP server). Router2 is also connected to Switch2 (PT Switch2) via a serial link (192.168.6.2 to 192.168.3.1). Switch2 is connected to PC3 (PT PC3) and Server3 (PT Server3). The interface configuration for Router2 is shown in the bottom pane.

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

```

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.7.1
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 192.168.8.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.9.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.8.2
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

The right pane shows the network topology. Router3 (PT Router3) is connected to Router0 (PT Router0) via a serial link (192.168.8.1 to 192.168.5.1). Router0 is connected to Switch0 (PT Switch0) via a serial link (192.168.8.2 to 192.168.1.1). Switch0 is connected to PC0 (PT PC0) and Server3 (PT DNS server). Router3 is also connected to Switch3 (PT Switch3) via a serial link (192.168.7.2 to 192.168.4.1). Switch3 is connected to PC1 (PT PC1) and Server3 (PT web Server). The interface configuration for Router3 is shown in the bottom pane.

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

The screenshot shows a Cisco Packet Tracer workspace with a network topology. On the left, a PC (PC0) with IP 192.168.1.3 is connected to a switch (Switch0) with IP 192.168.1.2. On the right, a PC (PC1) with IP 192.168.2.3 is connected to a switch (Switch3) with IP 192.168.2.2. A Command Prompt window is open on PC1, showing the following output:

```
Command Prompt
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
```

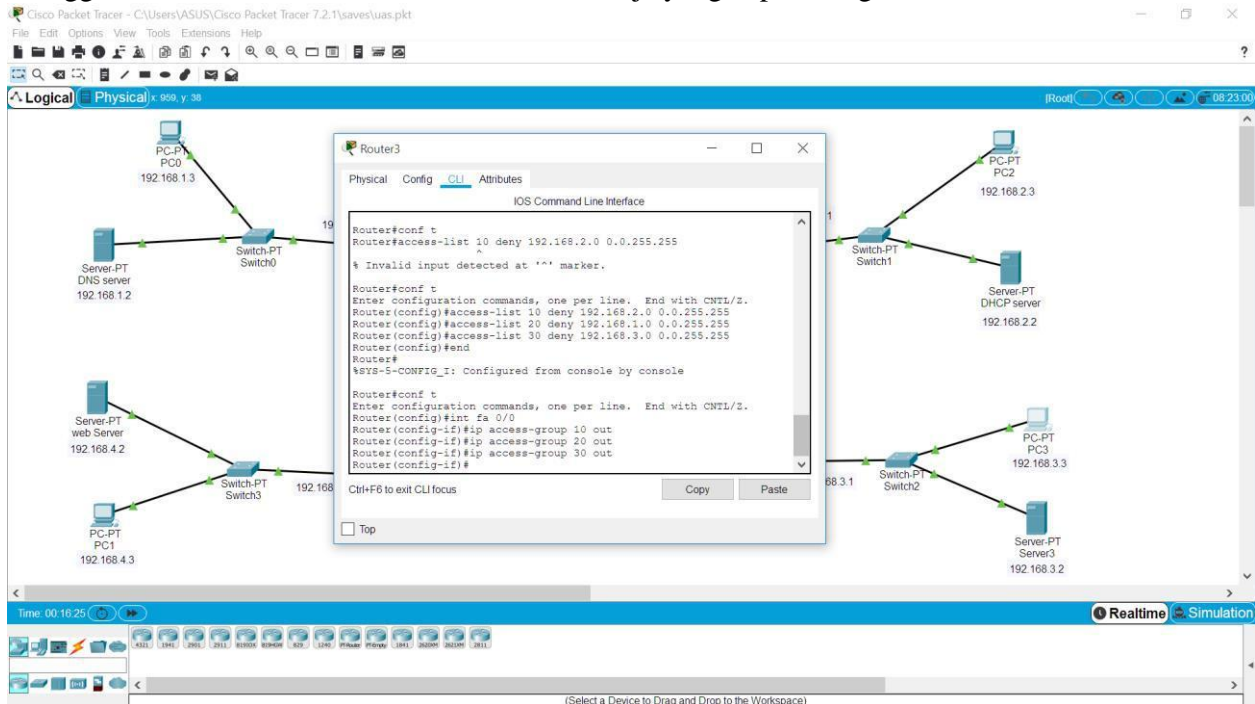
Test no.4 router statis (uji konektivitas PC ke server antar router)

The screenshot shows a Cisco Packet Tracer workspace with a network topology. On the left, a PC (PC0) with IP 192.168.1.3 is connected to a switch (Switch0) with IP 192.168.1.2. On the right, a PC (PC1) with IP 192.168.2.3 is connected to a switch (Switch3) with IP 192.168.2.2. A Command Prompt window is open on PC1, showing the following output:

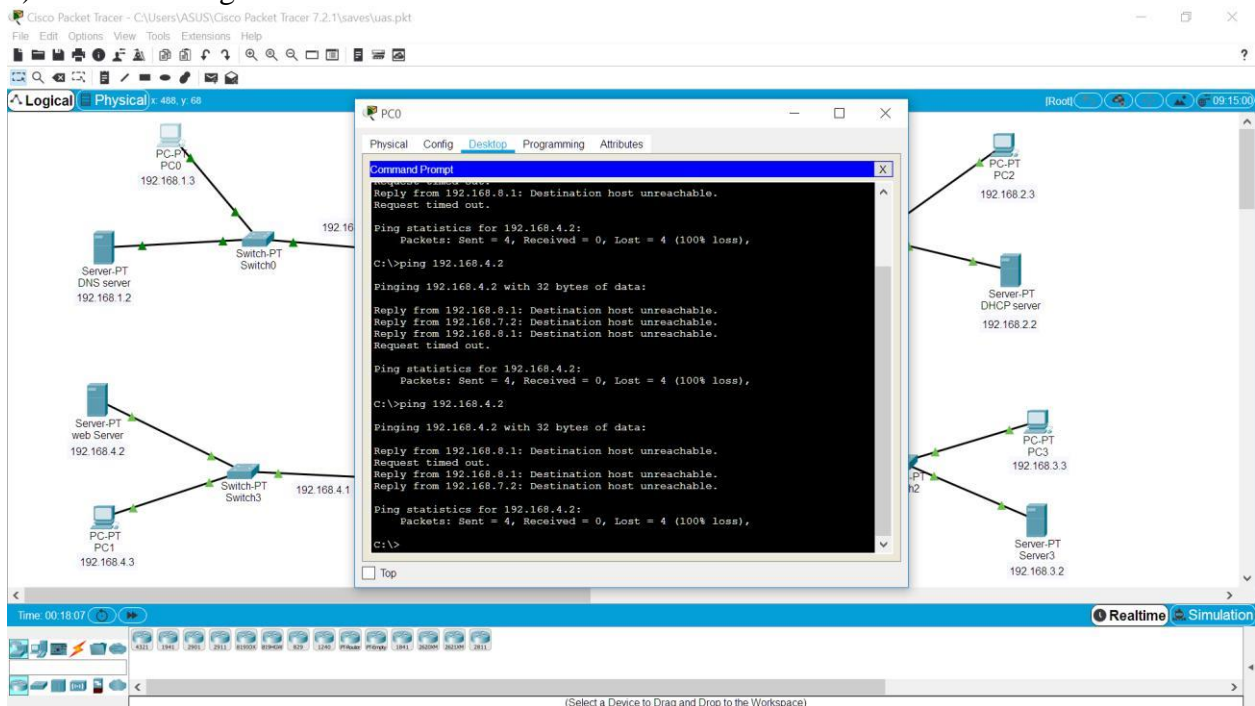
```
Command Prompt
Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time=4ms TTL=122
Reply from 192.168.1.2: bytes=32 time=13ms TTL=124
Reply from 192.168.1.2: bytes=32 time=13ms TTL=126
Reply from 192.168.1.2: bytes=32 time=3ms TTL=124
Ping statistics for 192.168.1.2:
    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
```

No.5

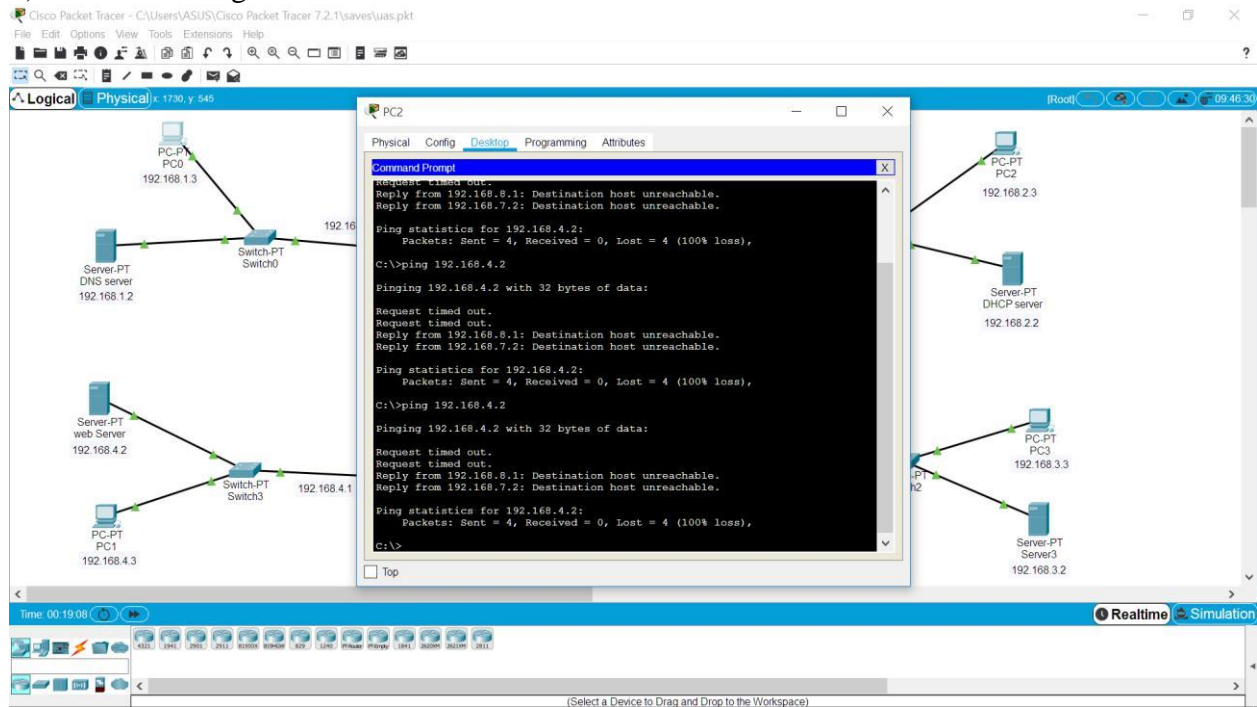
Menggunakan access list untuk membatasi 1 PC saja yang dapat mengakses server web



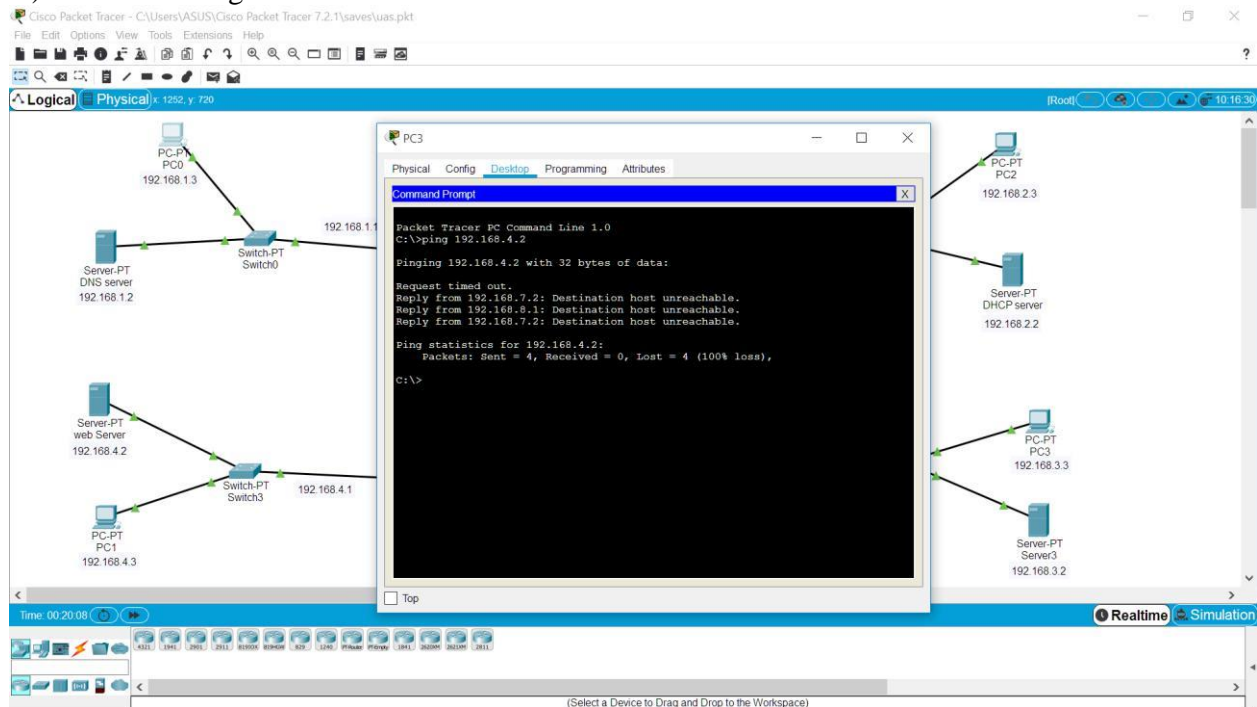
a) Test akses dengan PC 0



b) Test akses dengan PC 2



c) Test akses dengan PC 3



d) Test akses dengan PC 1

