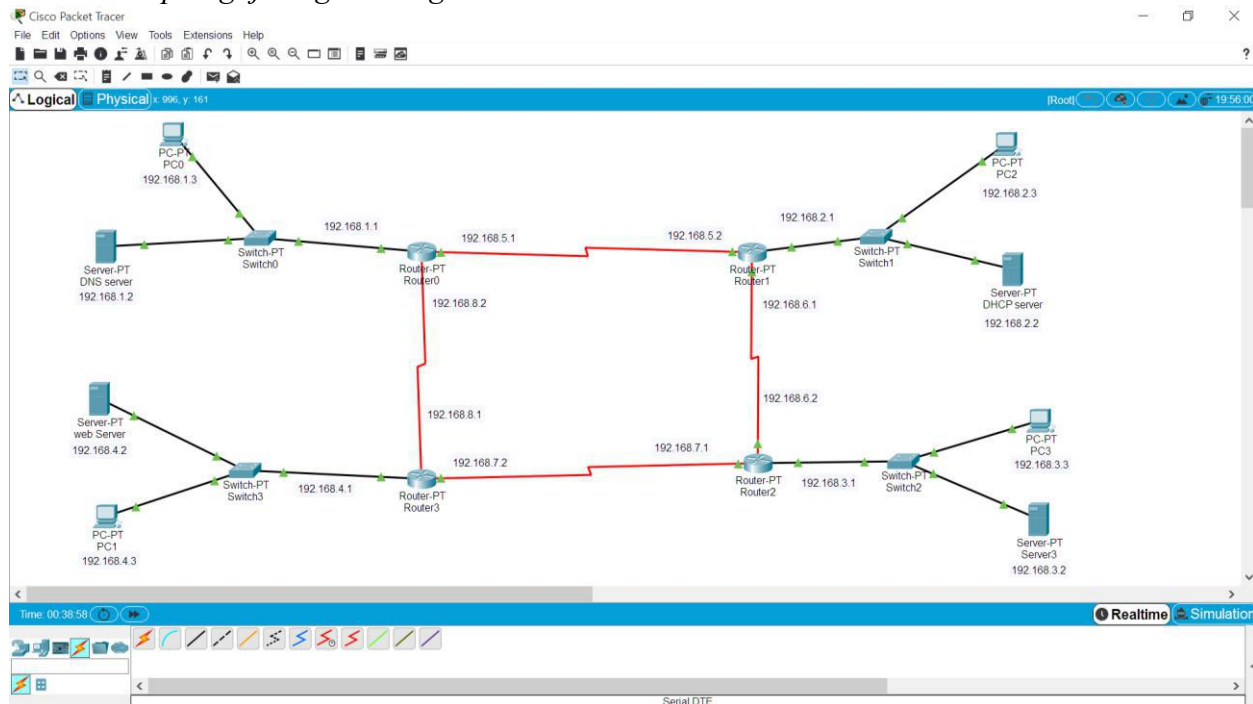


Nama : IVAN AMAR F
 NIM : L200170040
 Kelas A

No.1

Membuat topologi jaringan sebagai berikut:



No.2

Konfigurasi pengalamatan ip(sesuai gambar diatas(no.1))

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)

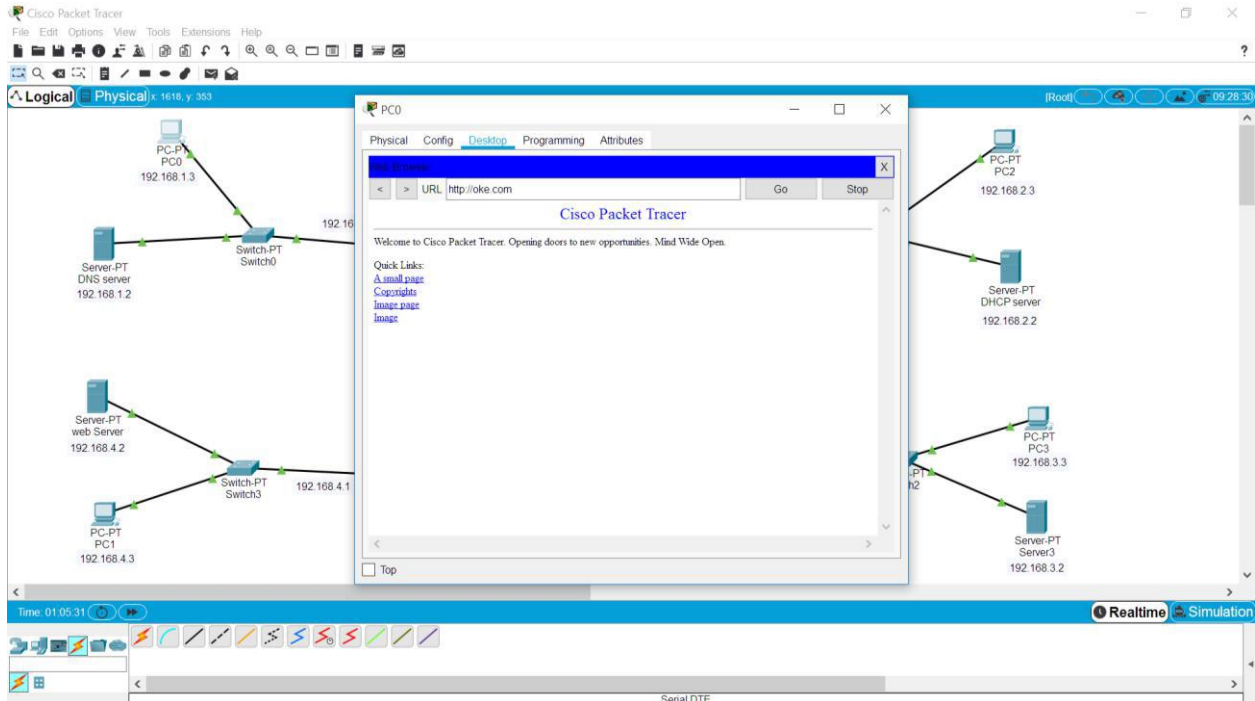
Router 2	Server3	PC 3
SE 2/0 (ip add 192.168.7.1)	Ip add 192.168.3.2	Ip add 192.168.3.3
SE 3/0 (ip add 192.168.6.2)		
Fa 0/0 (ip add 192.168.3.1)		

d)

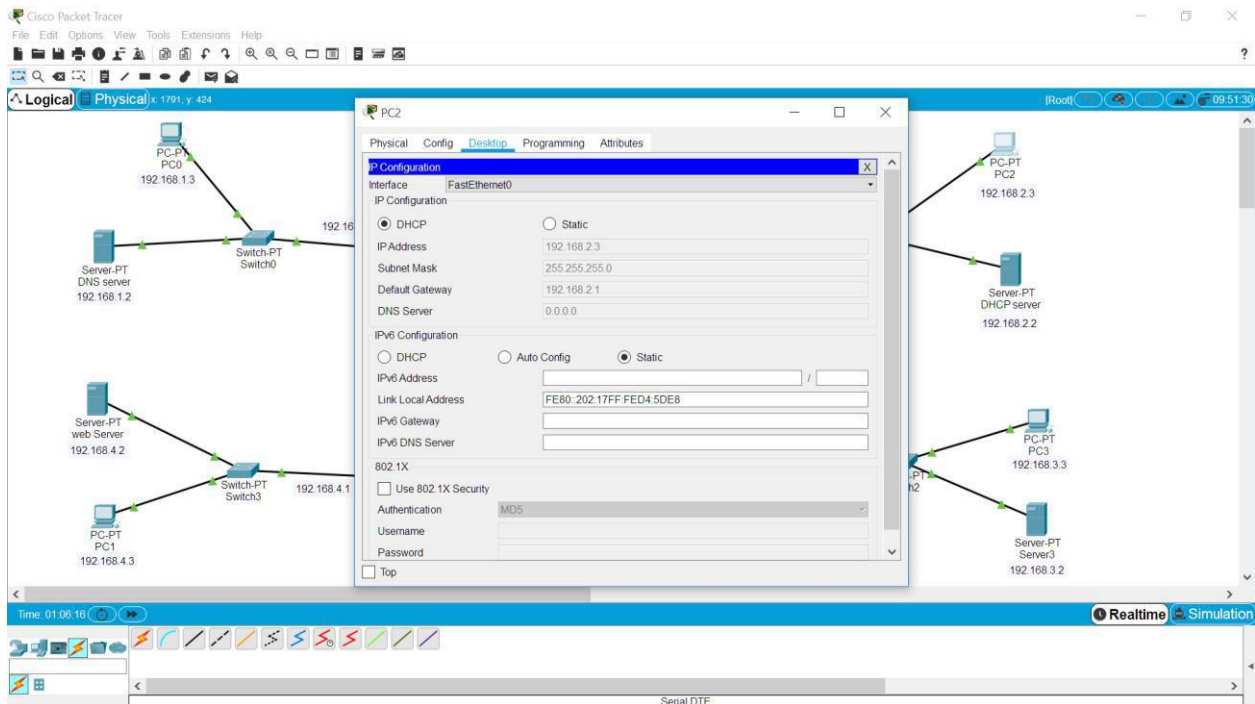
Router 3	Server Web	PC 1
SE 2/0 (ip add 192.168.8.1)	Ip add 192.168.4.2	Ip add 192.168.4.3
SE 3/0 (ip add 192.168.7.2)		
Fa 0/0 (ip add 192.168.4.1)		

Test no.2

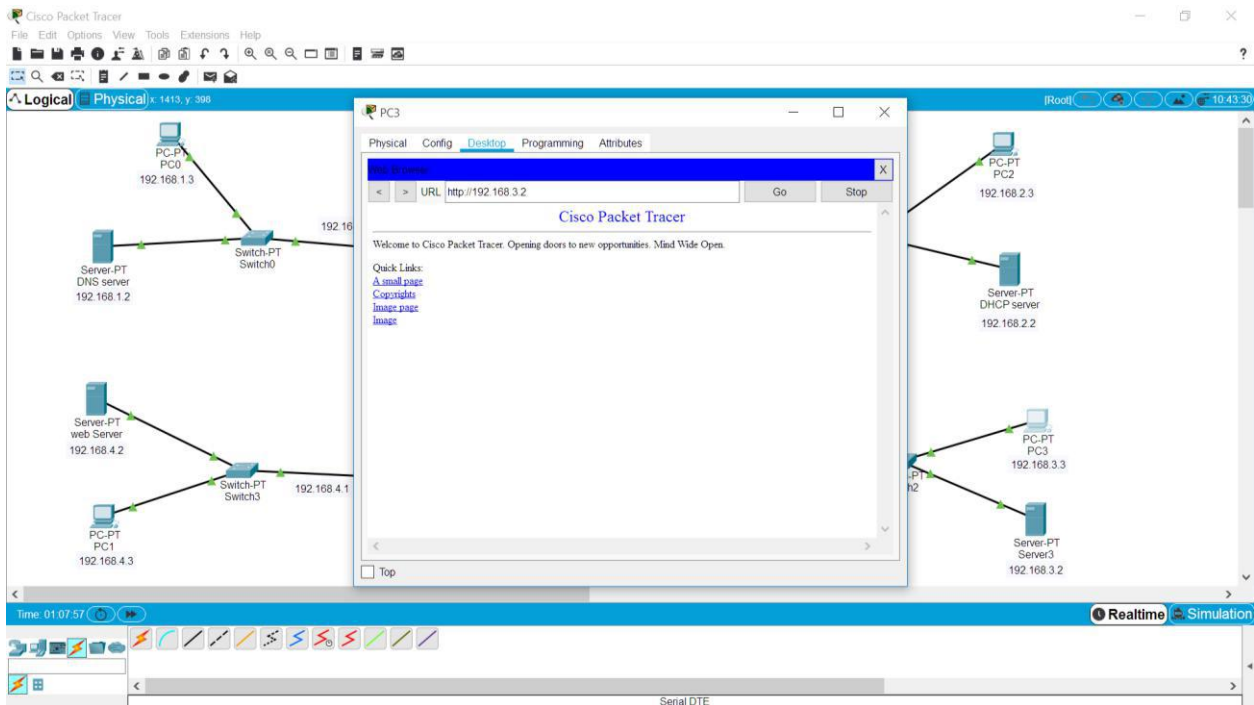
- DNS server



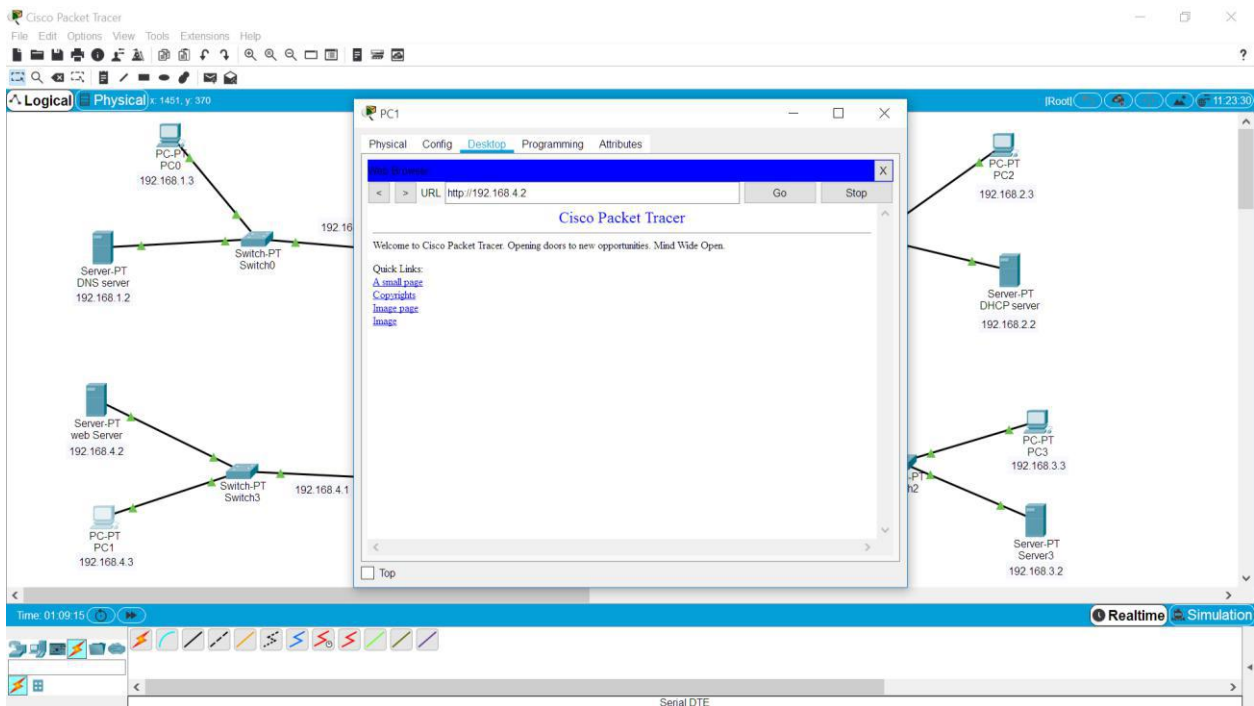
- DHCP Server



- Server3



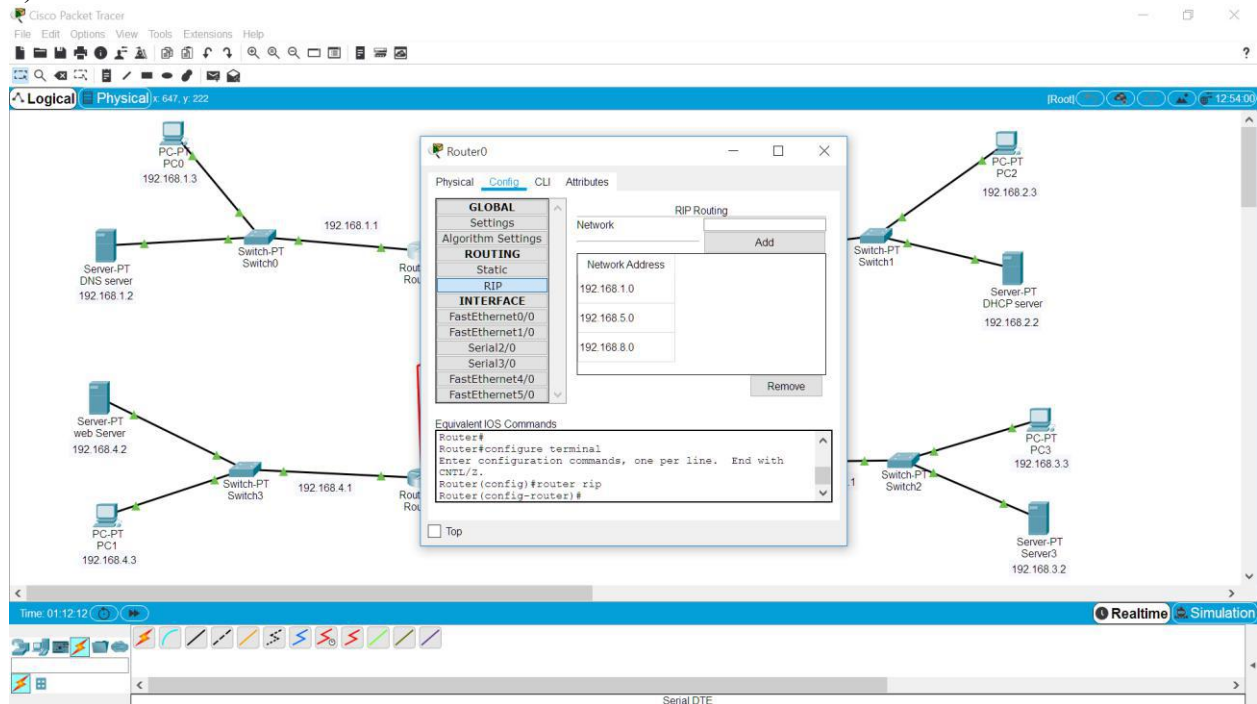
- Server Web



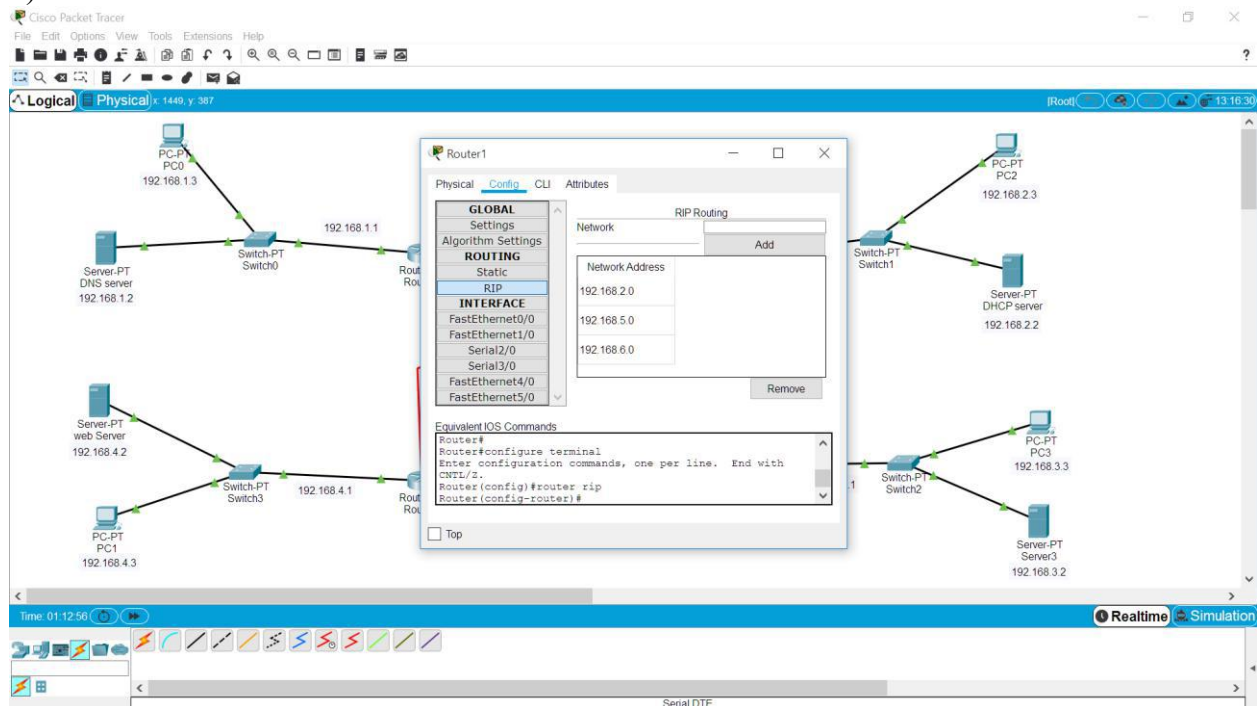
No.3

Konfigurasi routing dinamis

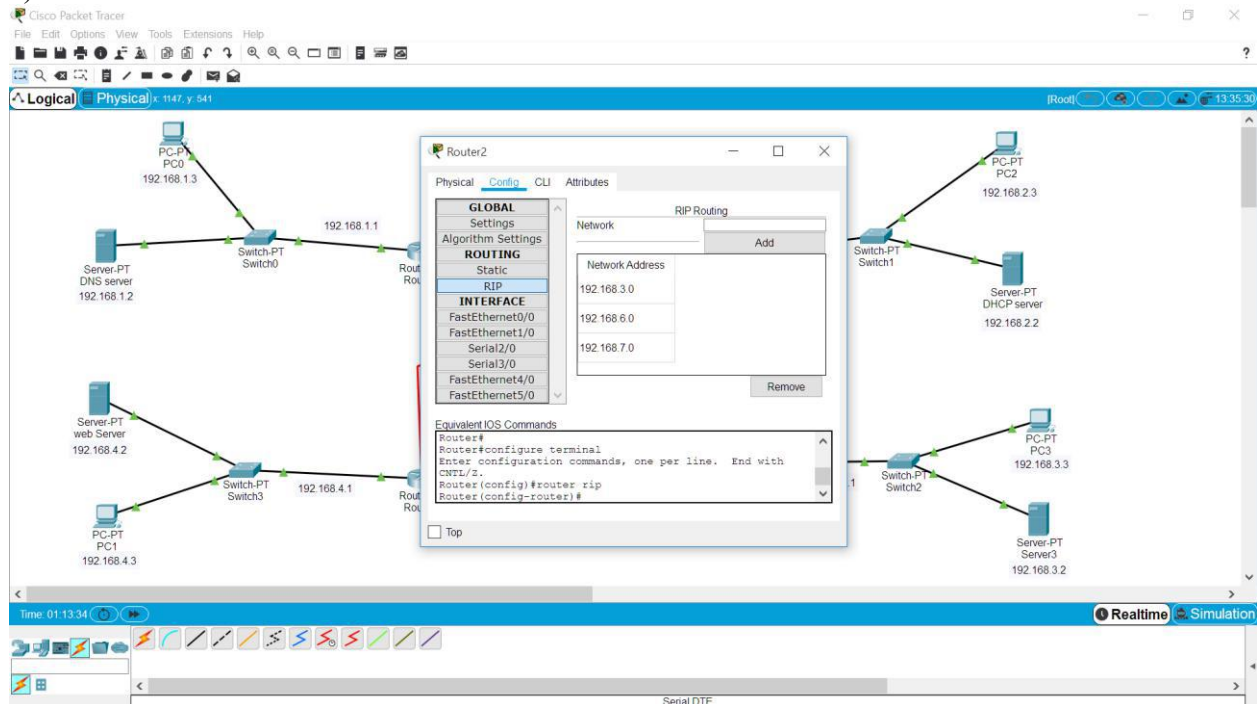
a)router 0



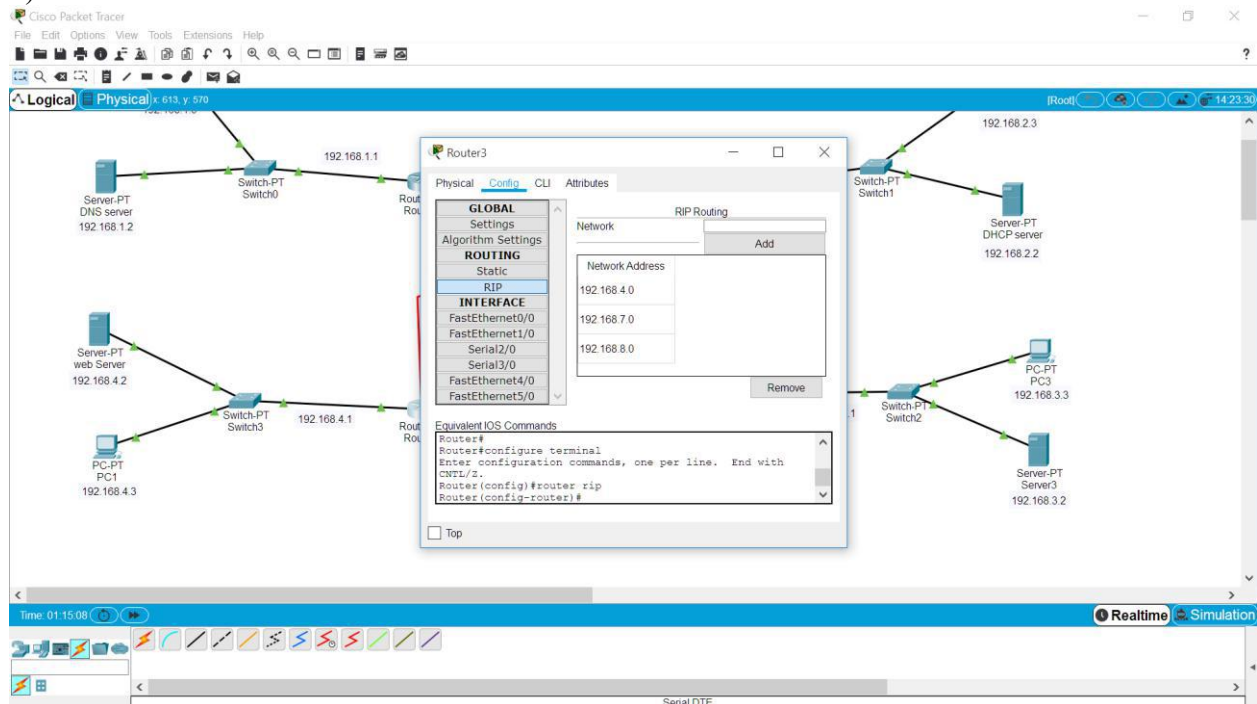
b)router 1



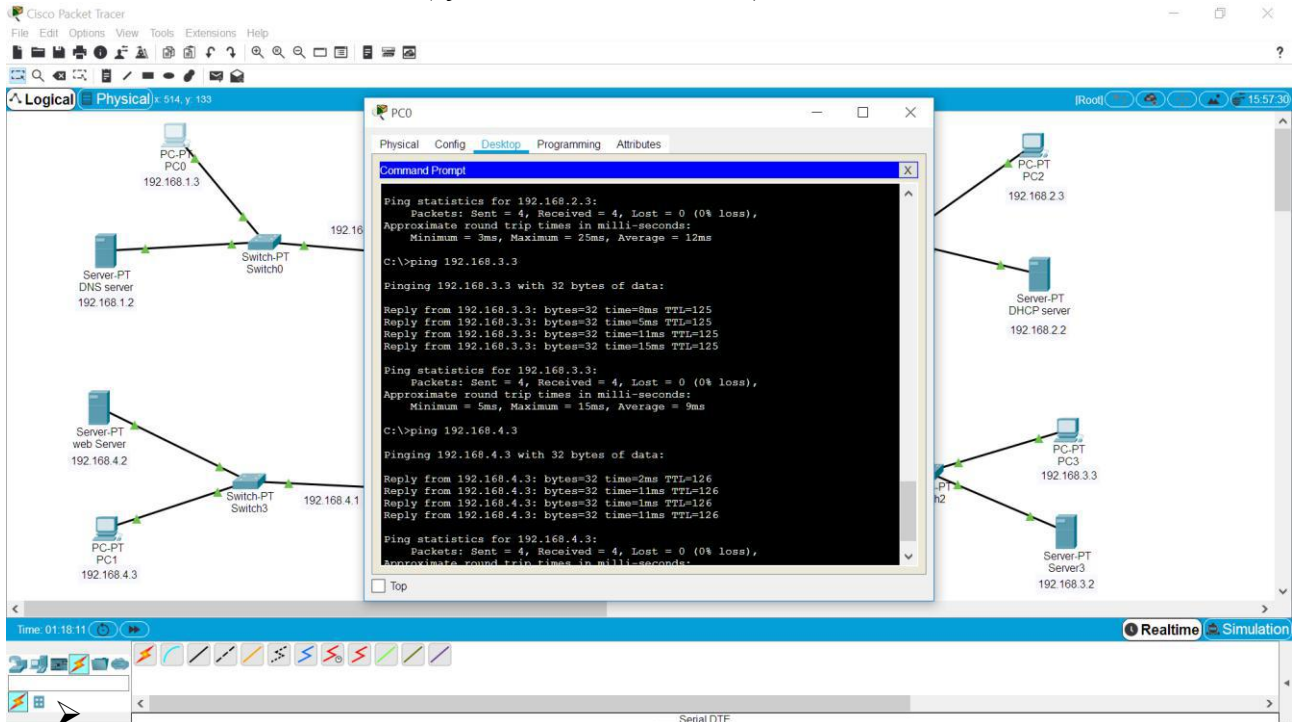
c)router 2



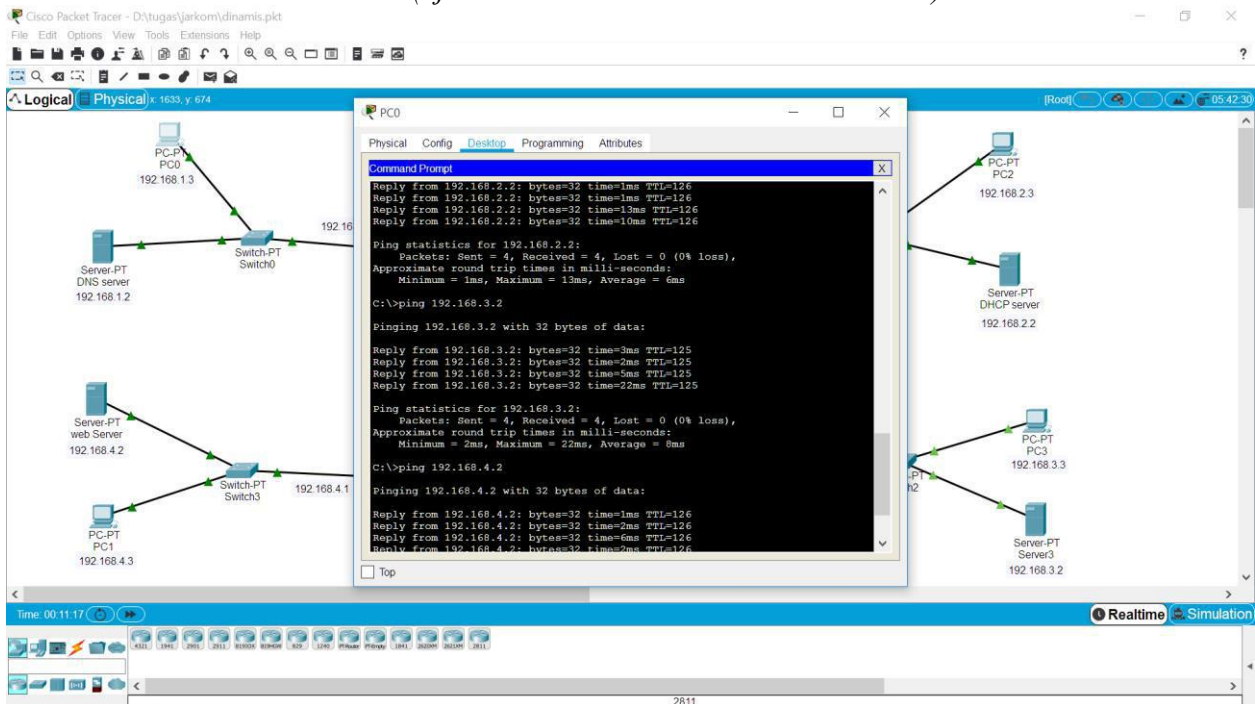
d)router 3



➤ 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

Router0 Configuration:

```

Router>enable
Router#
Router#configure terminal
Router(config)#
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.5.2
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.5.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.8.1
Router(config)#
  
```

b)router 1

Router1 Configuration:

```

Router>enable
Router#
Router#configure terminal
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 192.168.7.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.6.2
Router(config)#ip route 192.168.8.0 255.255.255.0 192.168.5.1
Router(config)#ip route 192.168.7.0 255.255.255.0 192.168.5.1
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.5.1
Router(config)#ip route 192.168.4.0 255.255.255.0 192.168.5.1
Router(config)#ip route 192.168.3.0 255.255.255.0 192.168.5.1
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.5.1
Router(config)#ip route 192.168.1.0 255.255.255.0 192.168.5.1
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:**
 - 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
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 192.168.7.0 255.255.255.0 192.168.6.1
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)#ip route 192.168.12.0 255.255.255.0 192.168.6.1
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 (192.168.8.1). Router1 is connected to Switch1 (192.168.2.1), which is connected to PC2 (192.168.2.3) and Server-PT DHCP server (192.168.2.2). Router3 is connected to Switch2 (192.168.3.1), which is connected to PC3 (192.168.3.3) and Server-PT Server3 (192.168.3.2).

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
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 192.168.7.0 255.255.255.0 192.168.7.1
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 192.168.10.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.11.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.12.0 255.255.255.0 192.168.7.1
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

The right pane shows the network topology. Router3 (192.168.8.1) is connected to Router1 (192.168.5.1) and Router2 (192.168.7.2). Router1 is connected to Switch0 (192.168.1.1), which is connected to PC0 (192.168.1.3) and Server-PT DNS server (192.168.1.2). Router2 is connected to Switch3 (192.168.4.1), which is connected to PC1 (192.168.4.3) and Server-PT web Server (192.168.4.2).

➤ 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-PT PC0 (192.168.1.3) is connected to a Switch-PT Switch0 (192.168.1.2). Switch0 is connected to a Server-PT DNS server (192.168.1.2) and a Server-PT web server (192.168.4.2). Switch0 is also connected to a Switch-PT Switch3 (192.168.4.1). Switch3 is connected to a PC-PT PC1 (192.168.4.3) and a Server-PT DHCP server (192.168.2.2). On the right, a PC-PT PC2 (192.168.2.3) is connected to a Server-PT DHCP server (192.168.2.2). A PC-PT PC3 (192.168.3.3) is connected to a Server-PT Server3 (192.168.3.2). A Command Prompt window is open on PC1, showing 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. On the left, a PC-PT PC0 (192.168.1.3) is connected to a Switch-PT Switch0 (192.168.1.2). Switch0 is connected to a Server-PT DNS server (192.168.1.2) and a Server-PT web server (192.168.4.2). Switch0 is also connected to a Switch-PT Switch3 (192.168.4.1). Switch3 is connected to a PC-PT PC1 (192.168.4.3) and a Server-PT DHCP server (192.168.2.2). On the right, a PC-PT PC2 (192.168.2.3) is connected to a Server-PT DHCP server (192.168.2.2). A PC-PT PC3 (192.168.3.3) is connected to a Server-PT Server3 (192.168.3.2). A Command Prompt window is open on PC1, showing the following output:

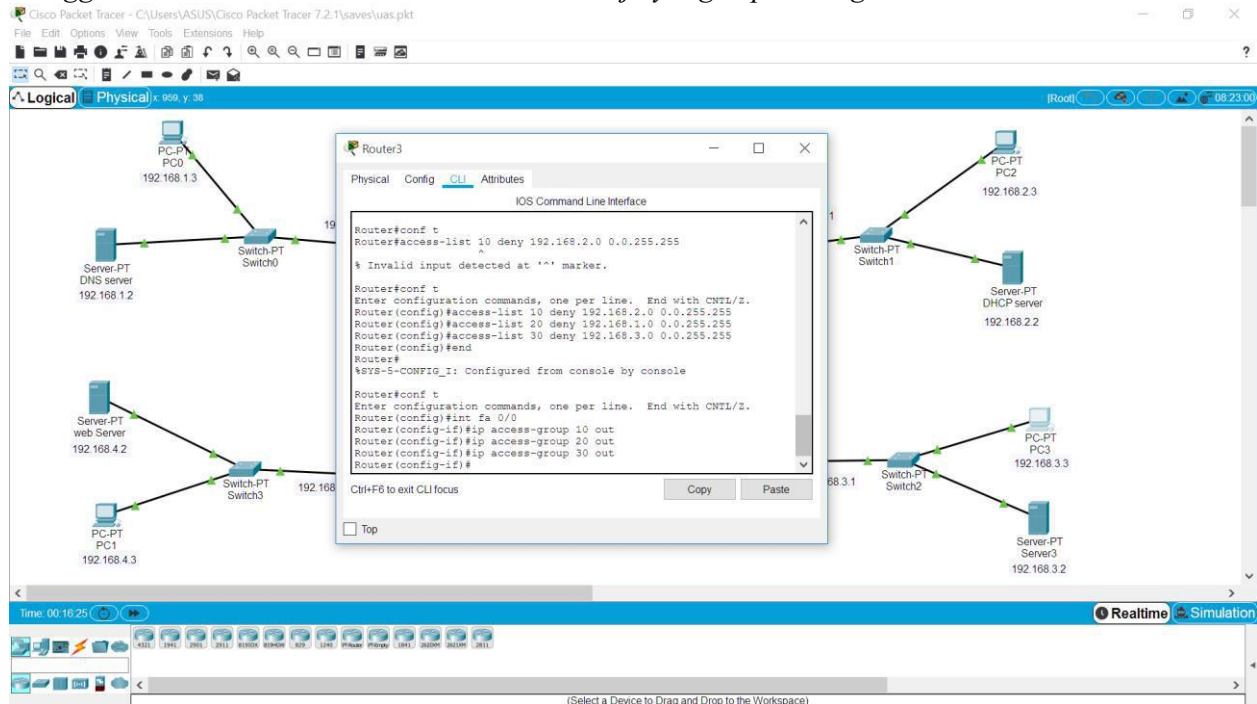
```

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

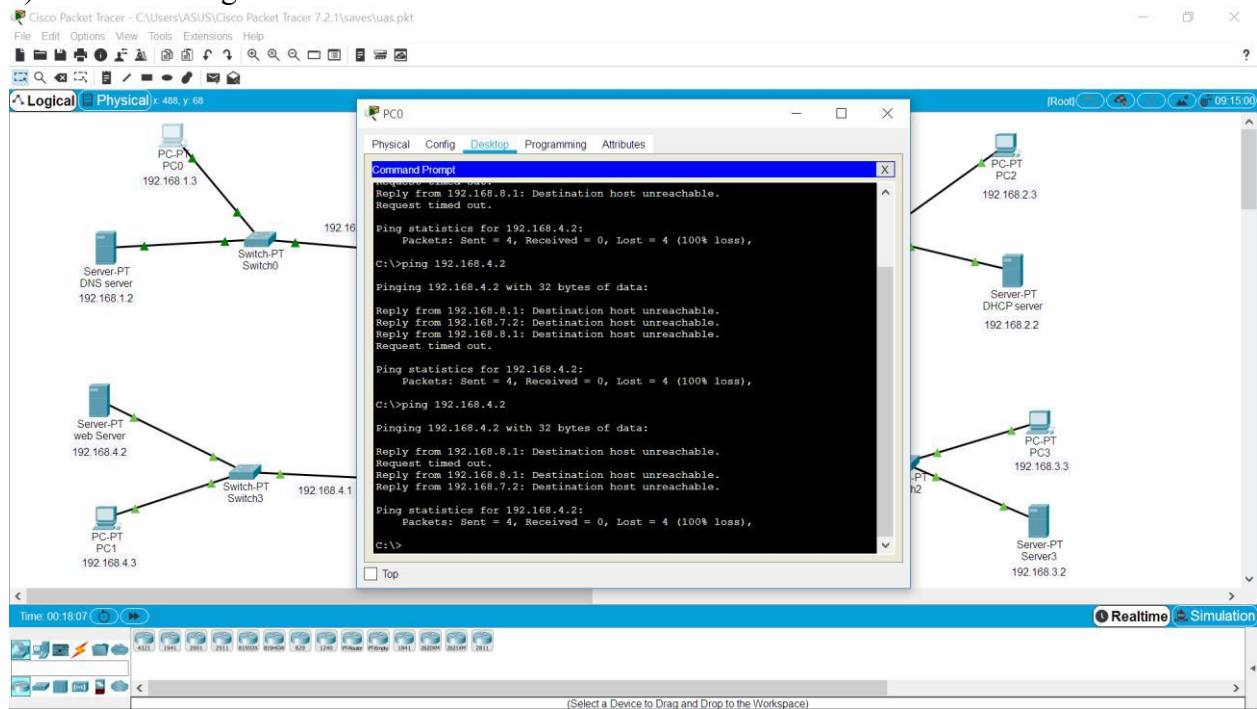
```

No.5

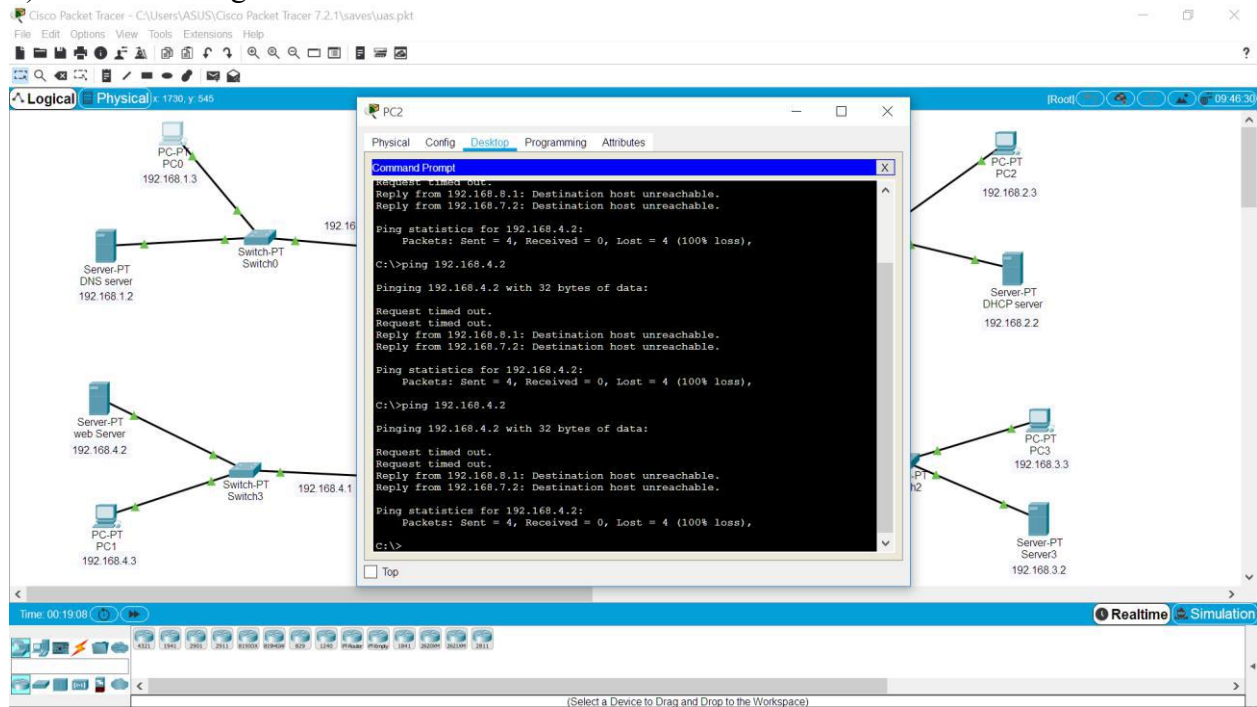
Menggunakan access list untuk membatasi 1 PC saja yang dapat mengakses server web



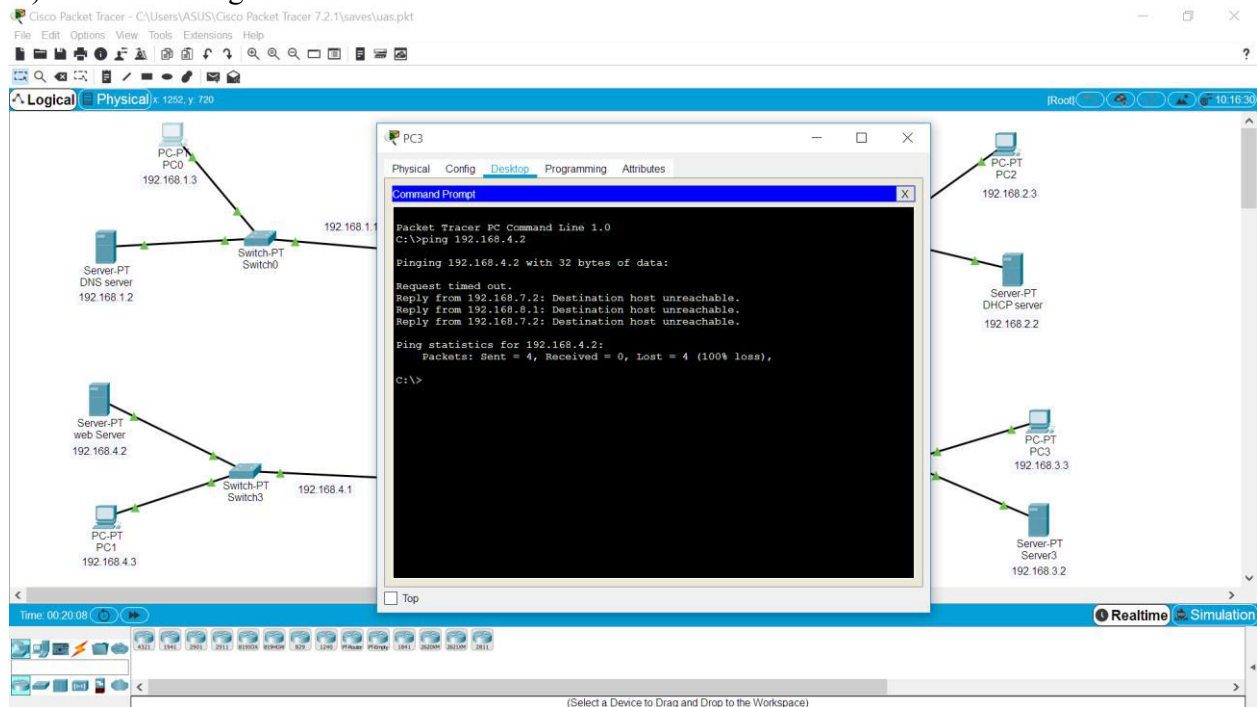
a) Test akses dengan PC 0



b) Test akses dengan PC 2



c) Test akses dengan PC 3



d) Test akses dengan PC 1

