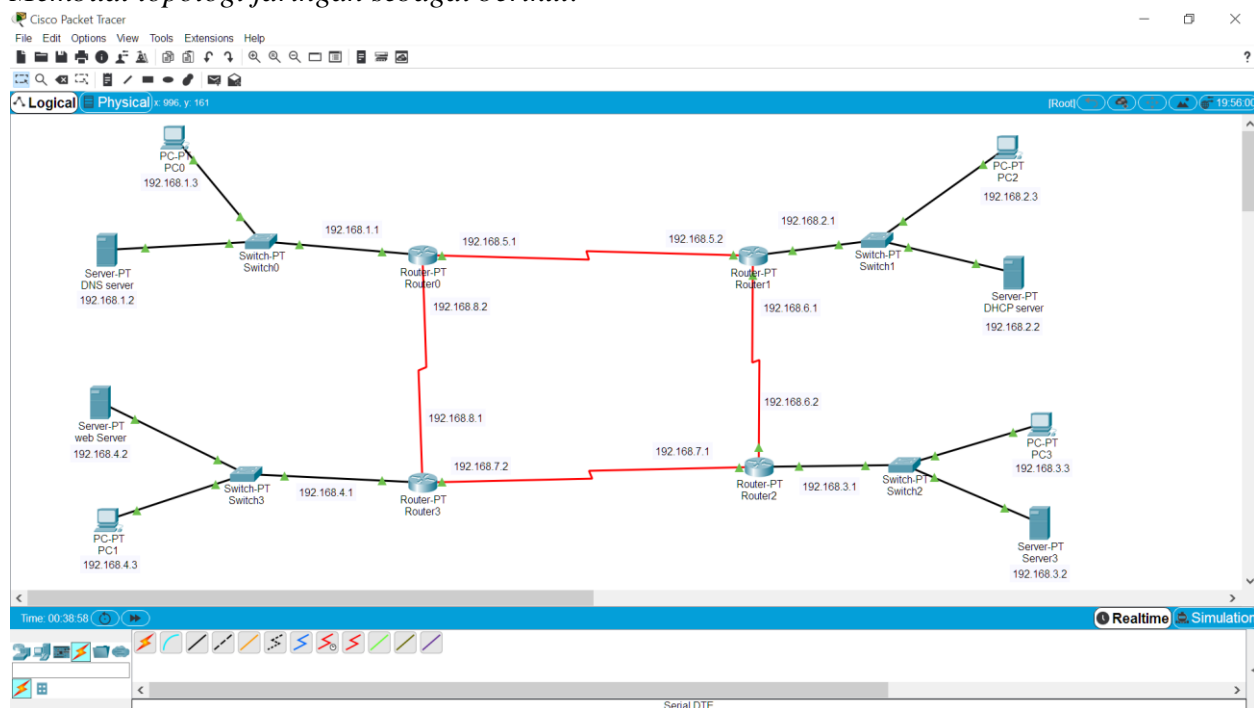


No.1

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)

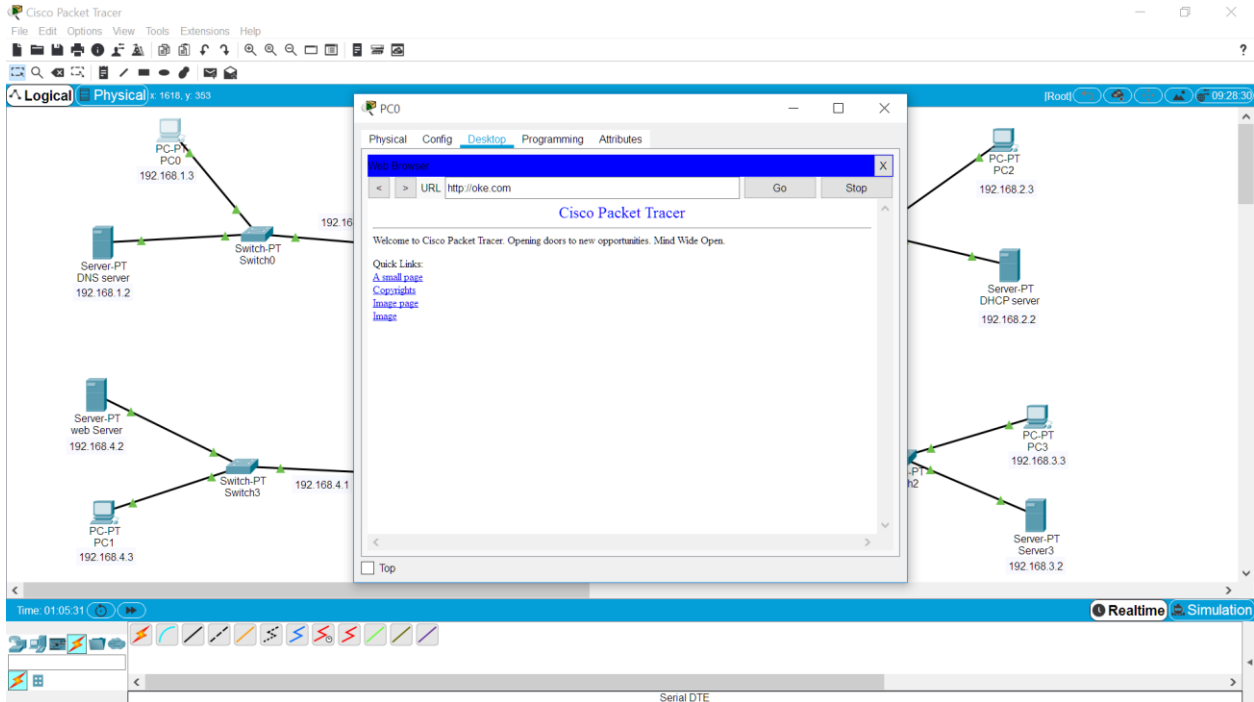
Router 2	Server3	PC 3
SE 2/0 (ip add 192.168.7.1)	Ip add 192.168.3.2	Ip add 192.168.3.3
SE 3/0 (ip add 192.168.6.2)		
Fa 0/0 (ip add 192.168.3.1)		

d)

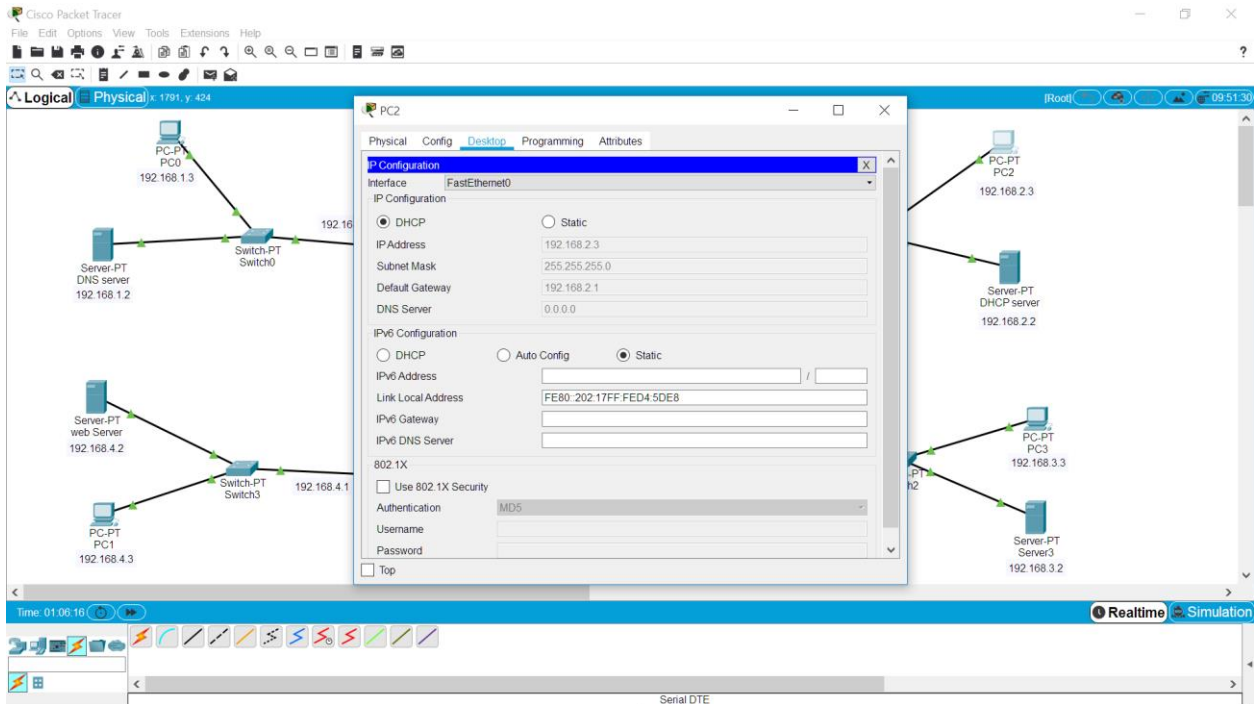
Router 3	Server Web	PC 1
SE 2/0 (ip add 192.168.8.1)	Ip add 192.168.4.2	Ip add 192.168.4.3
SE 3/0 (ip add 192.168.7.2)		
Fa 0/0 (ip add 192.168.4.1)		

Test no.2

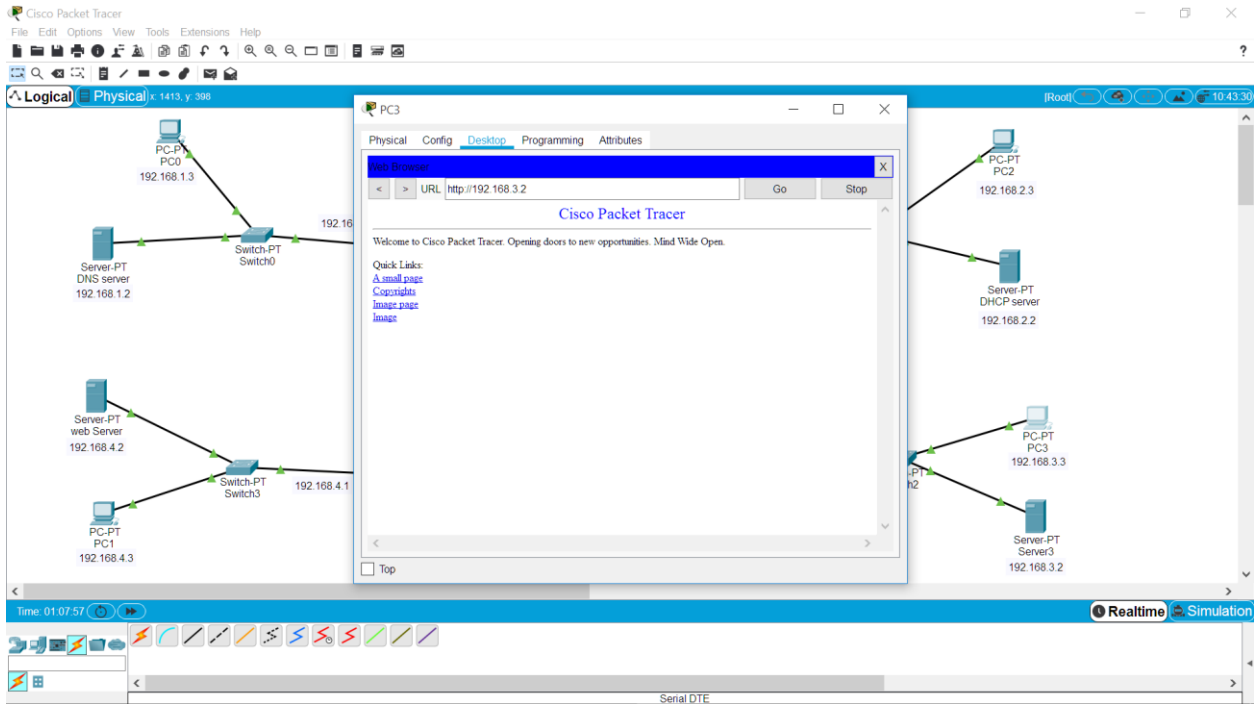
- DNS server



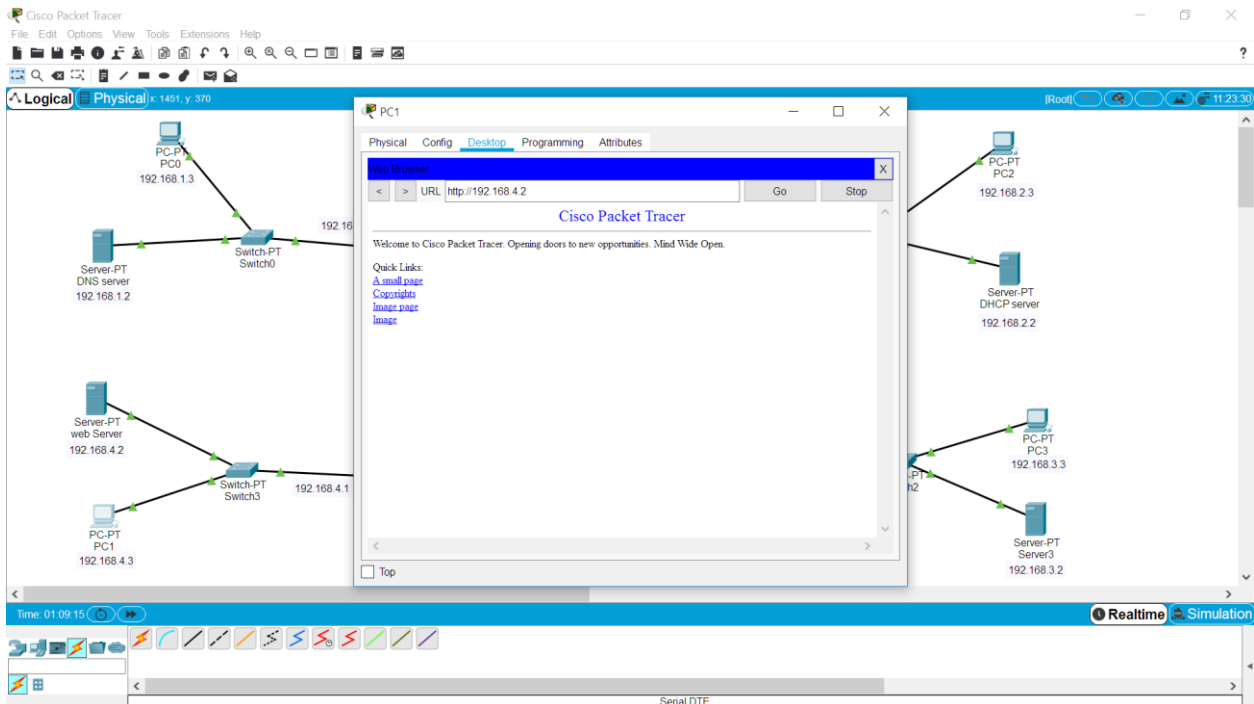
- DHCP Server



- Server3



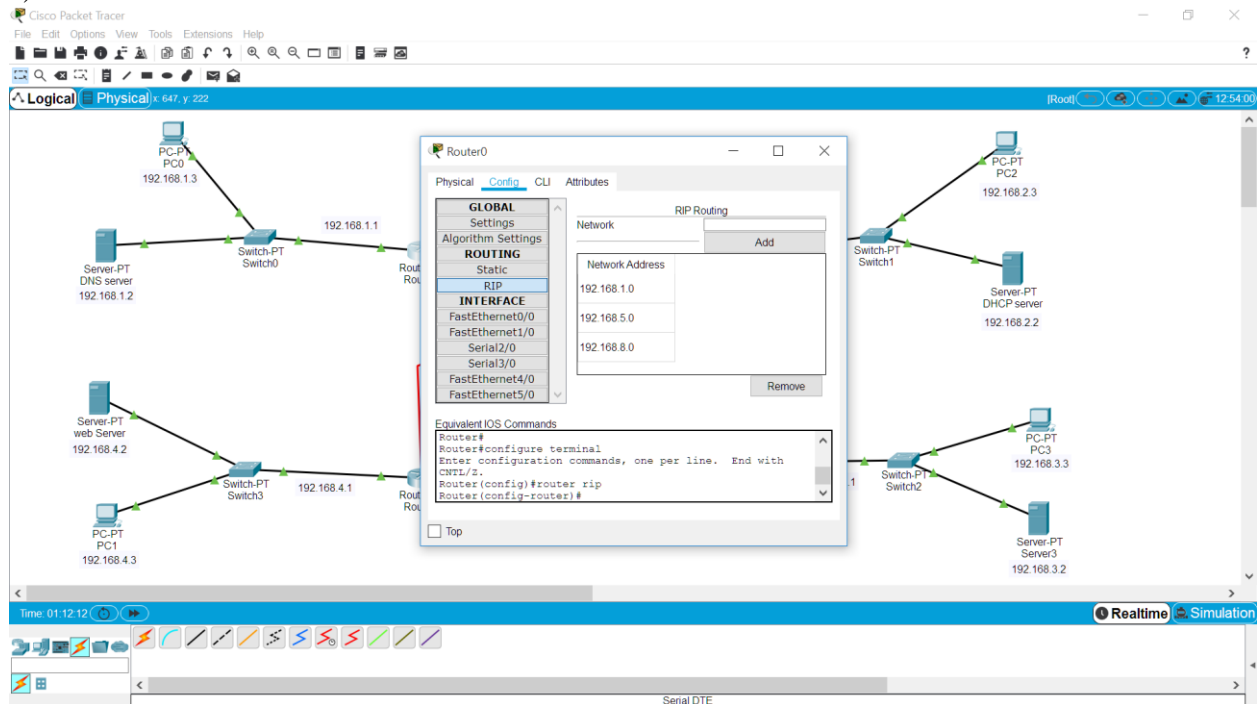
- Server Web



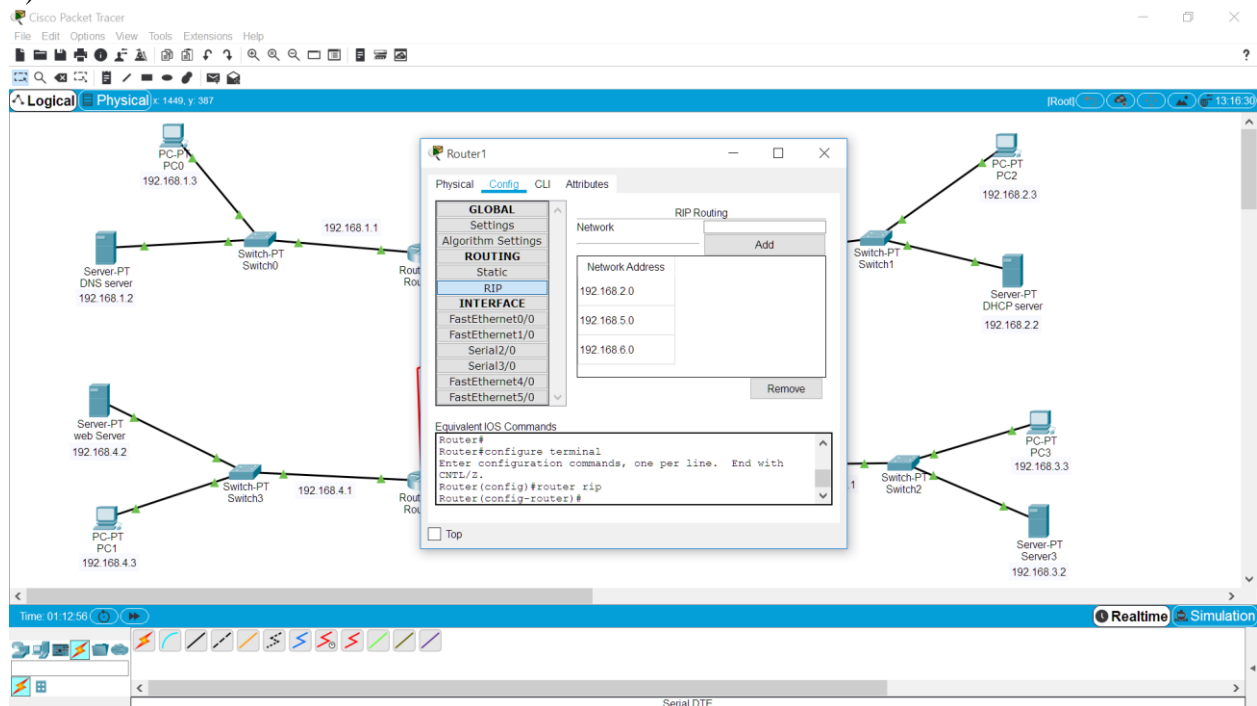
No.3

Konfigurasi routing dinamis

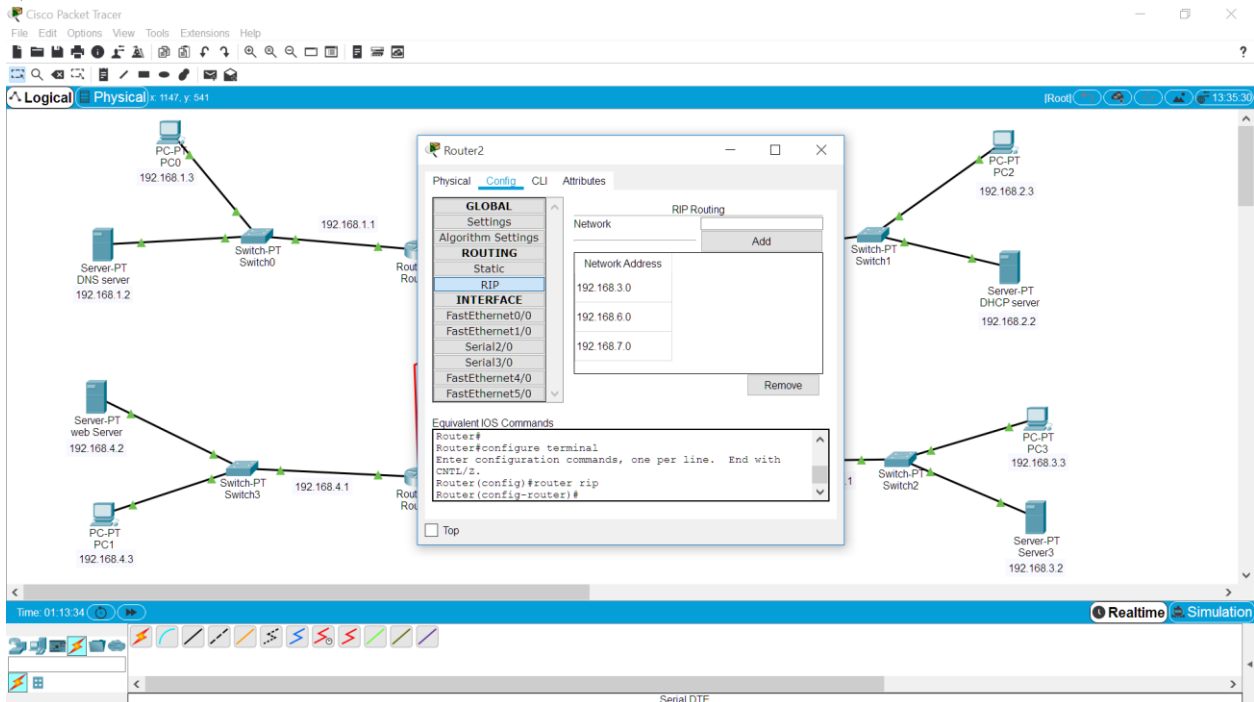
a)router 0



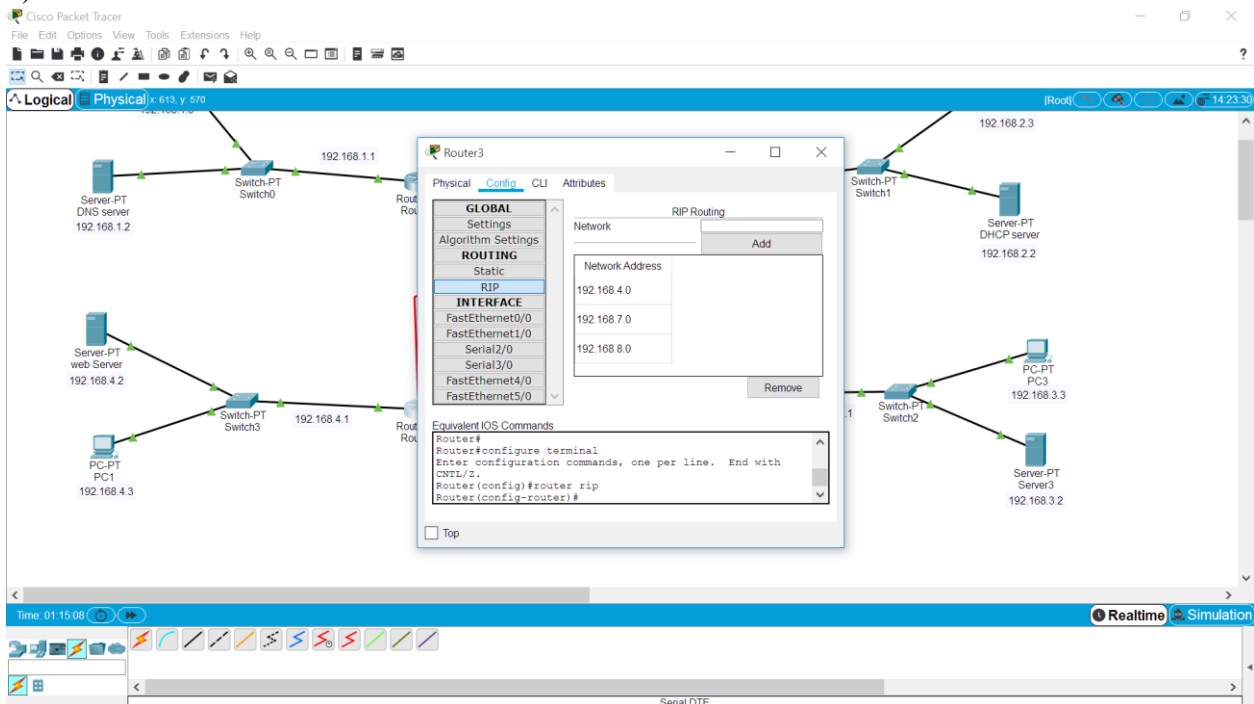
b)router 1



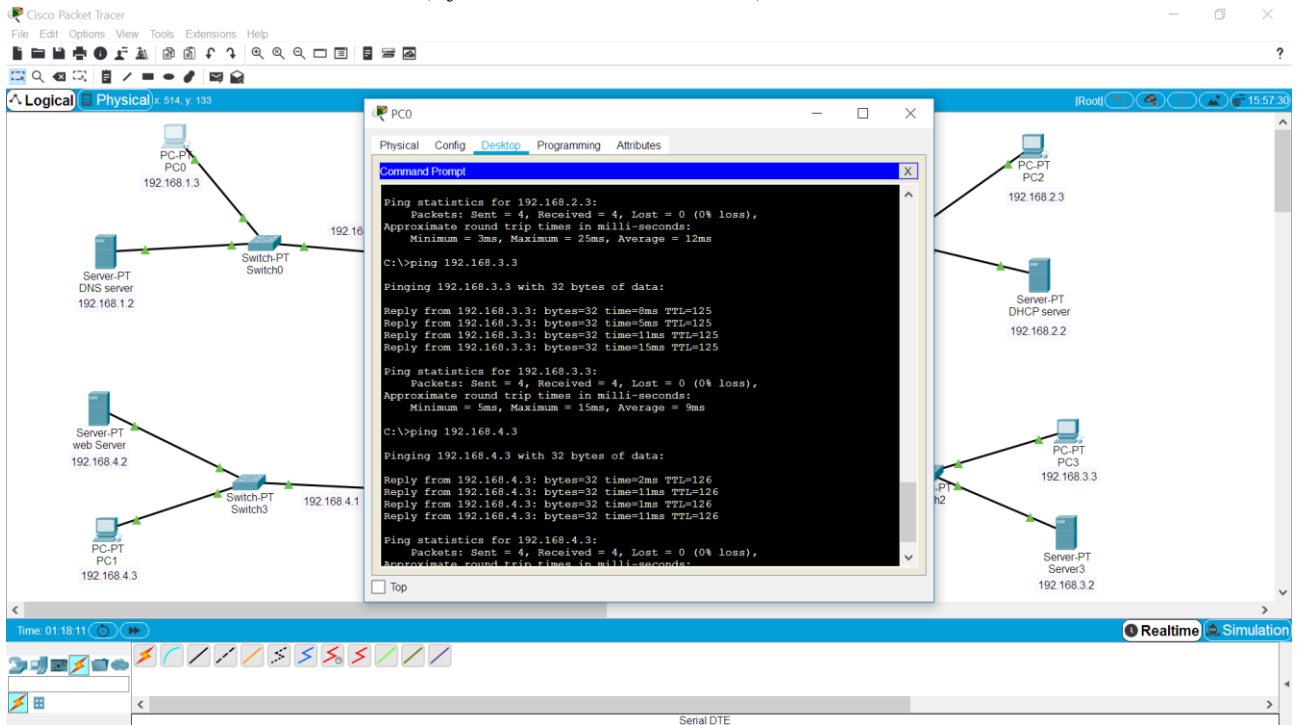
c)router 2



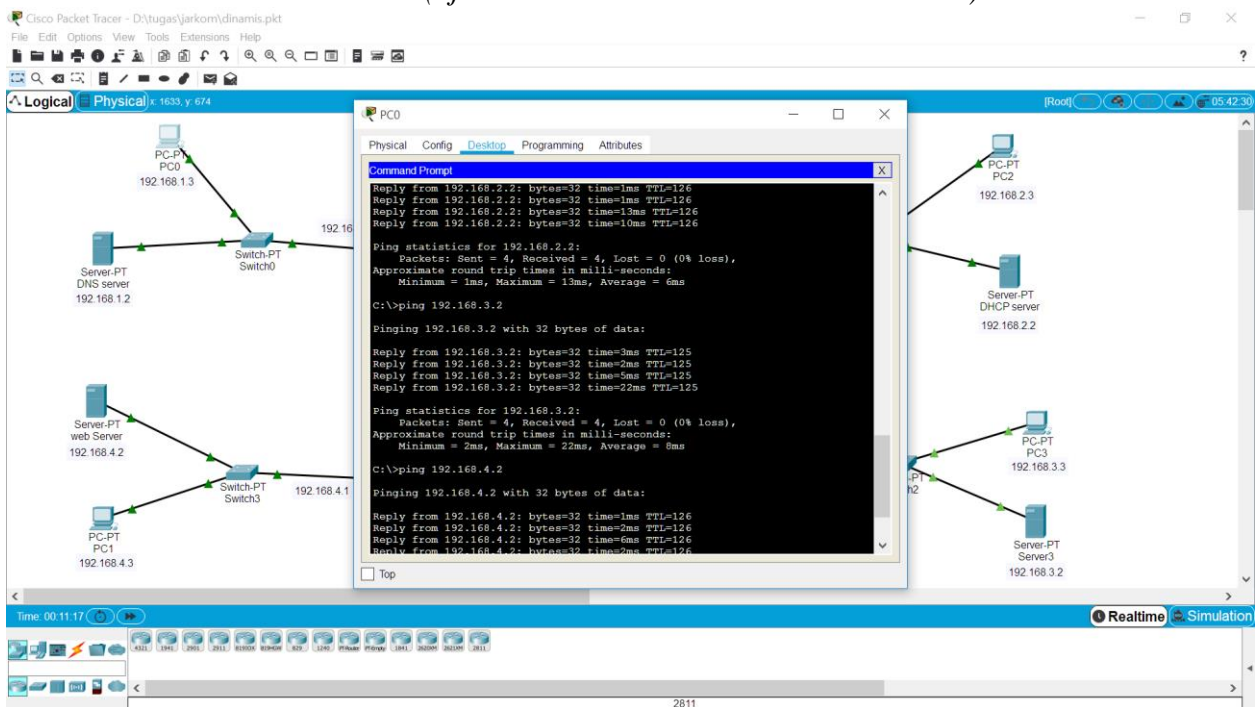
d)router 3



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

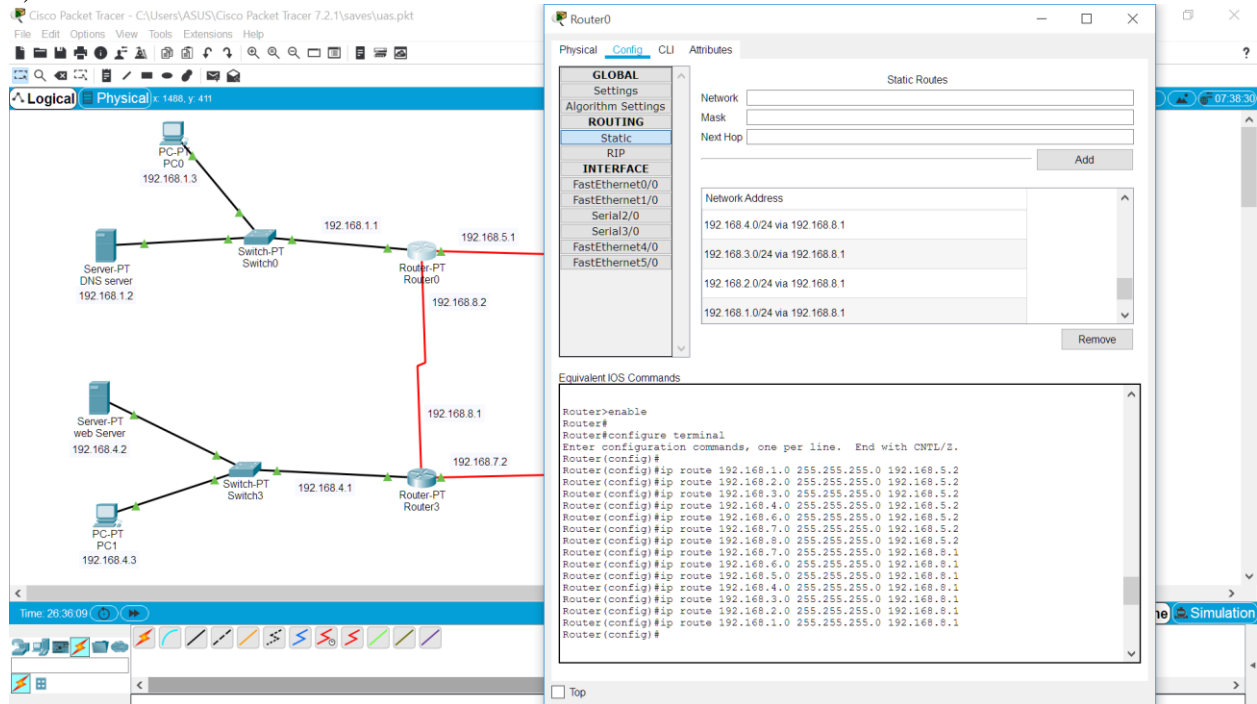


➤ Test no.3 router dinamis (uji konektivitas PC ke server antar router)

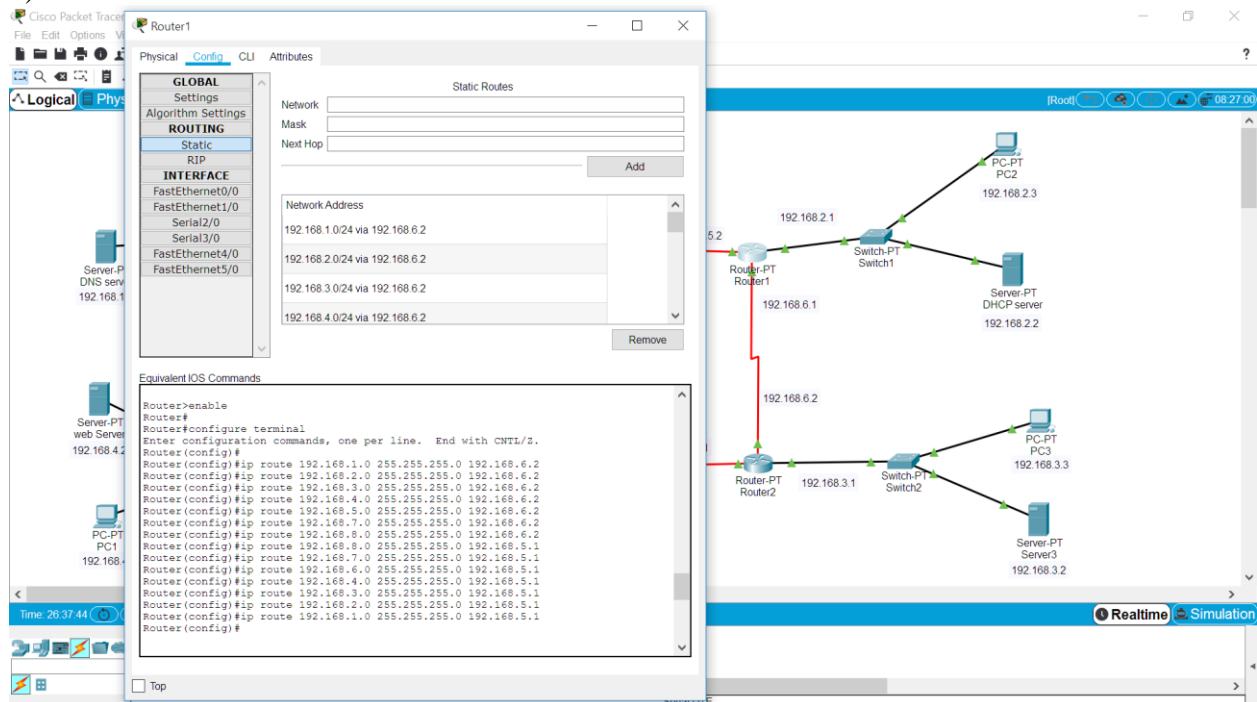


Konfigurasi router statis

a)router 0



b)router 1



c)router 2

Static Routes

Network Address	Next Hop
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)#ip route 192.168.13.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.14.0 255.255.255.0 192.168.6.1
Router(config)#ip route 192.168.15.0 255.255.255.0 192.168.6.1
Router(config)#
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

c)router 3

Static Routes

Network Address	Next Hop
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)#ip route 192.168.13.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.14.0 255.255.255.0 192.168.7.1
Router(config)#ip route 192.168.15.0 255.255.255.0 192.168.7.1
Router(config)#
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```


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

The screenshot shows a Cisco Packet Tracer workspace with a network topology. The topology includes a central router (Switch-PT Switch0) connected to two switches (Switch-PT Switch3 and Switch-PT Switch2). Switch0 is connected to PC0 (192.168.1.3) and a DNS server (192.168.1.2). Switch3 is connected to a web server (192.168.4.2) and PC1 (192.168.4.3). Switch2 is connected to PC2 (192.168.2.3) and a DHCP server (192.168.2.2). PC3 (192.168.3.3) is connected to a server (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 = 5ms

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 a central router (Switch-PT Switch0) connected to two switches (Switch-PT Switch3 and Switch-PT Switch2). Switch0 is connected to PC0 (192.168.1.3) and a DNS server (192.168.1.2). Switch3 is connected to a web server (192.168.4.2) and PC1 (192.168.4.3). Switch2 is connected to PC2 (192.168.2.3) and a DHCP server (192.168.2.2). PC3 (192.168.3.3) is connected to a server (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

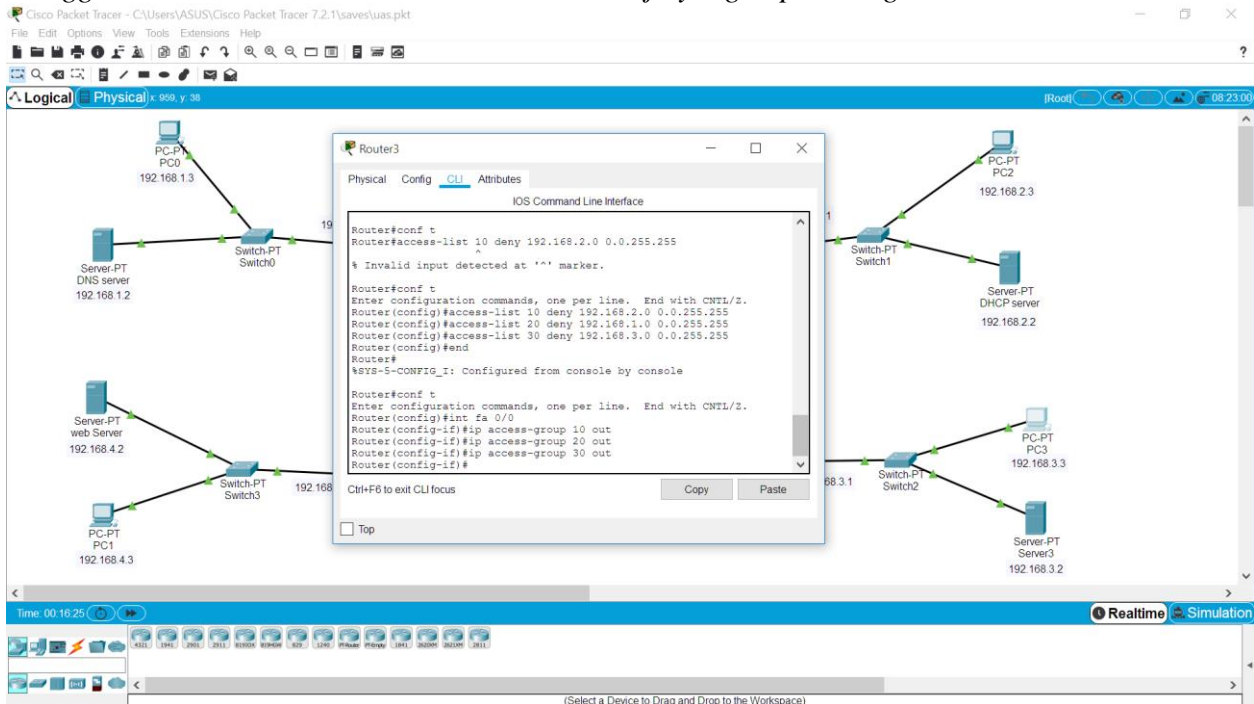
Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 12ms, Average = 6ms

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

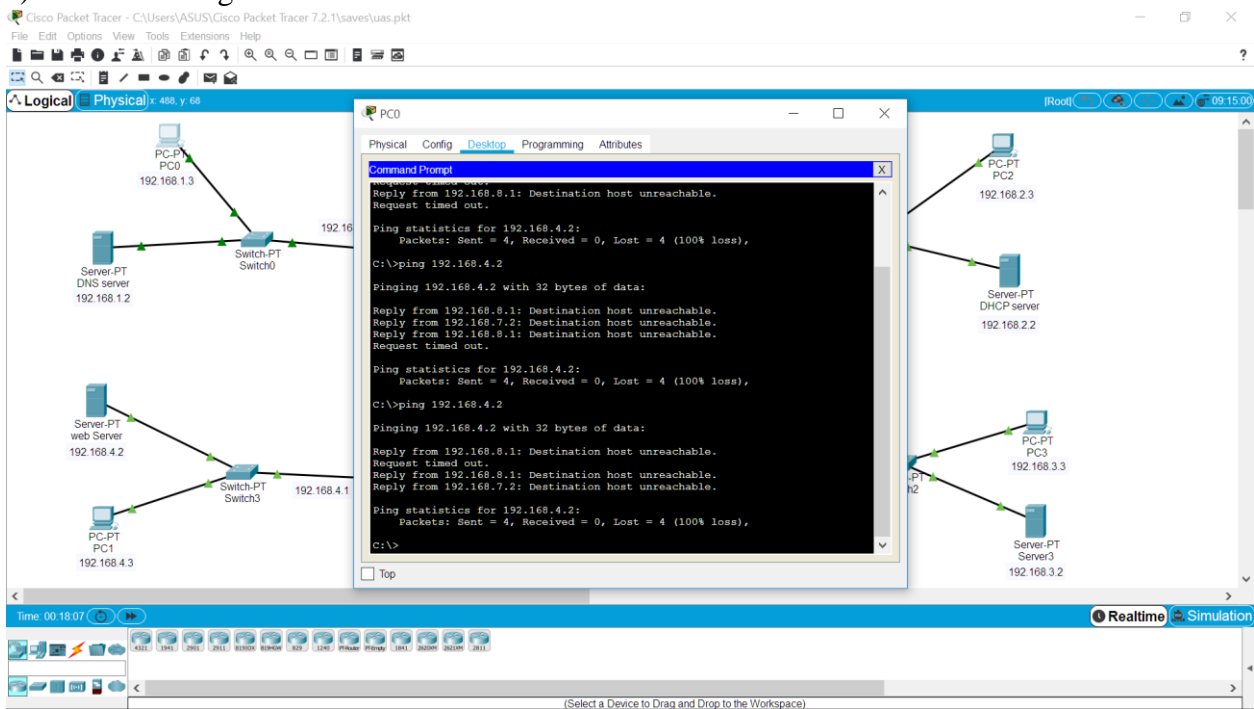
```

No.5

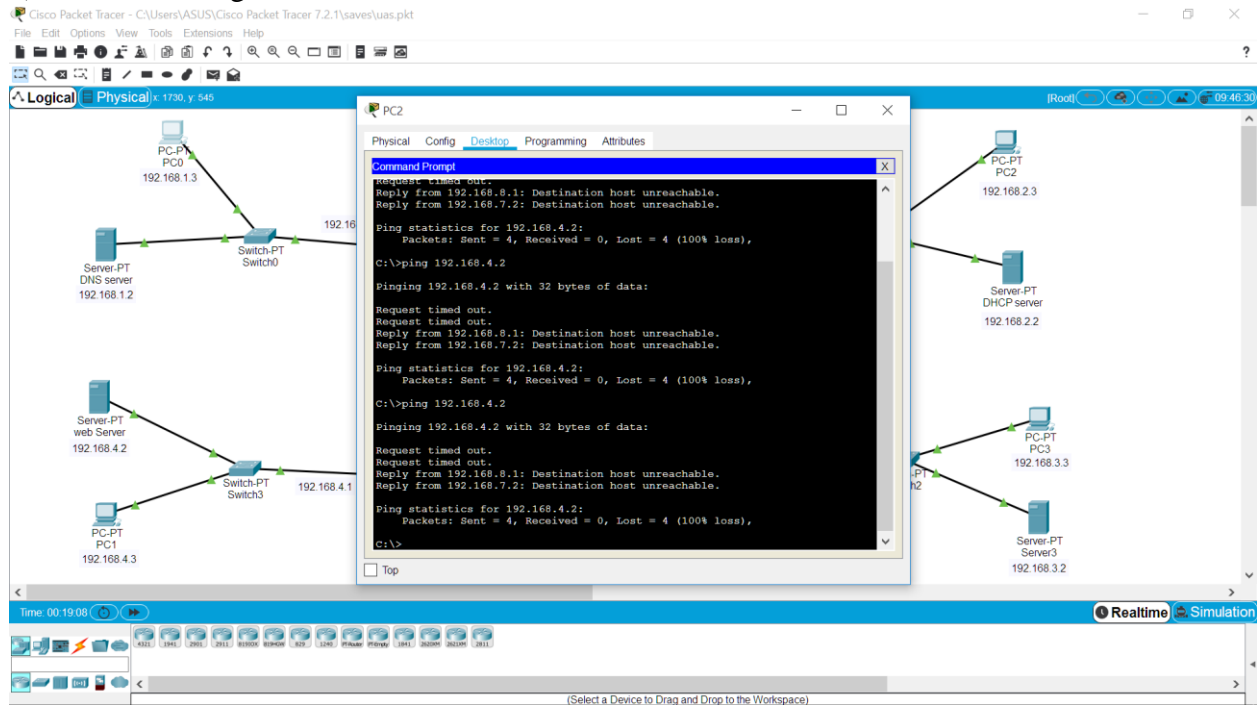
Menggunakan access list untuk membatasi 1 PC saja yang dapat mengakses server web



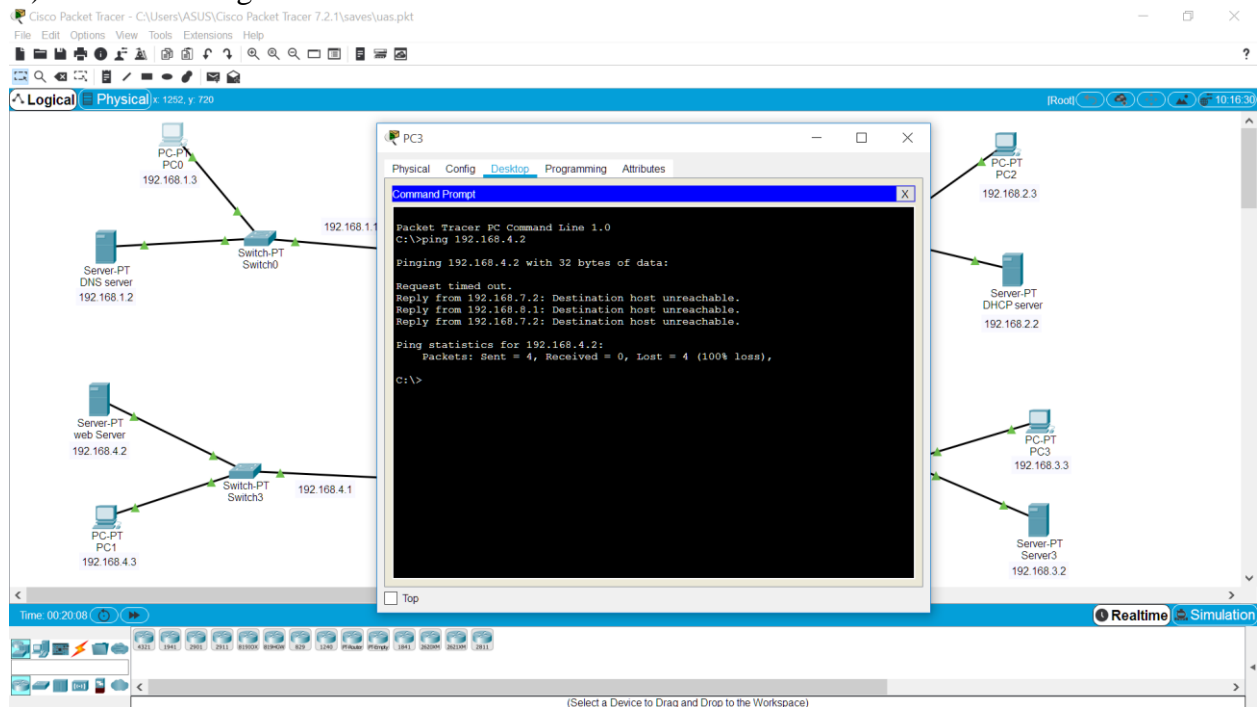
a) Test akses dengan PC 0



b) Test akses dengan PC 2



c) Test akses dengan PC 3



d) Test akses dengan PC 1

