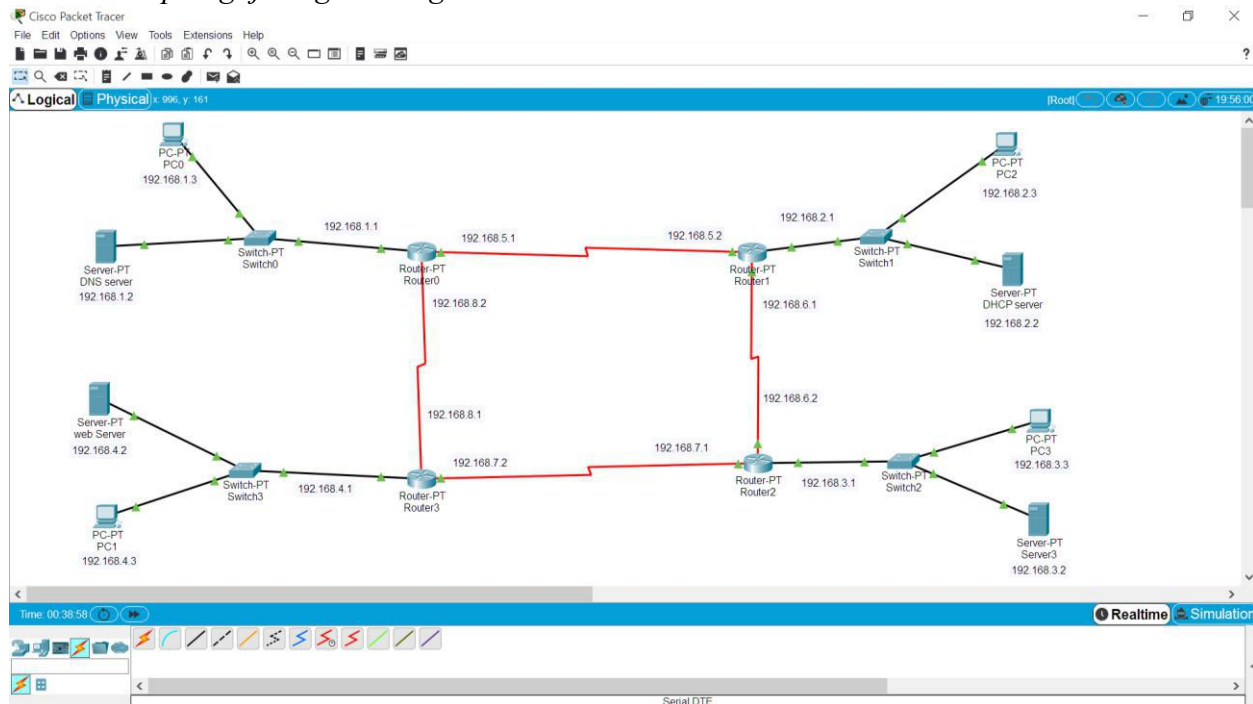


Nama : Eko Budi Setiyawan
 NIM : L200170015
 Kelas A

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)

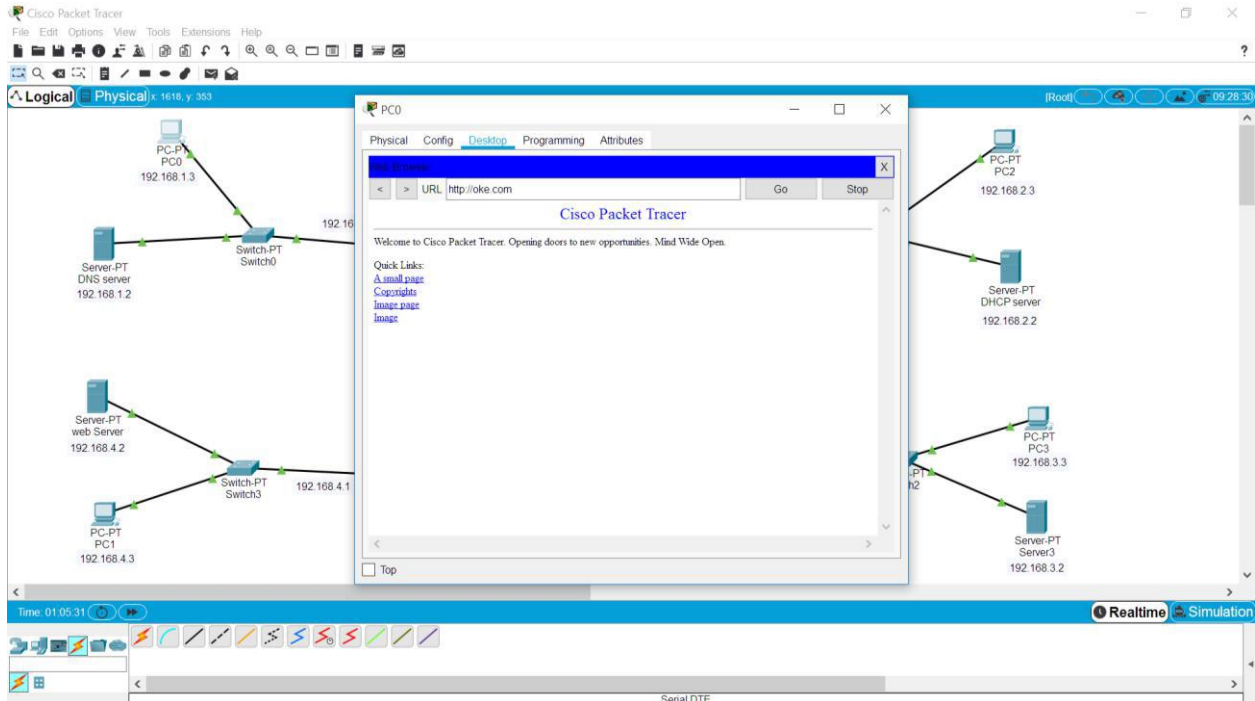
Router 2	Server3	PC 3
SE 2/0 (ip add 192.168.7.1)	Ip add 192.168.3.2	Ip add 192.168.3.3
SE 3/0 (ip add 192.168.6.2)		
Fa 0/0 (ip add 192.168.3.1)		

d)

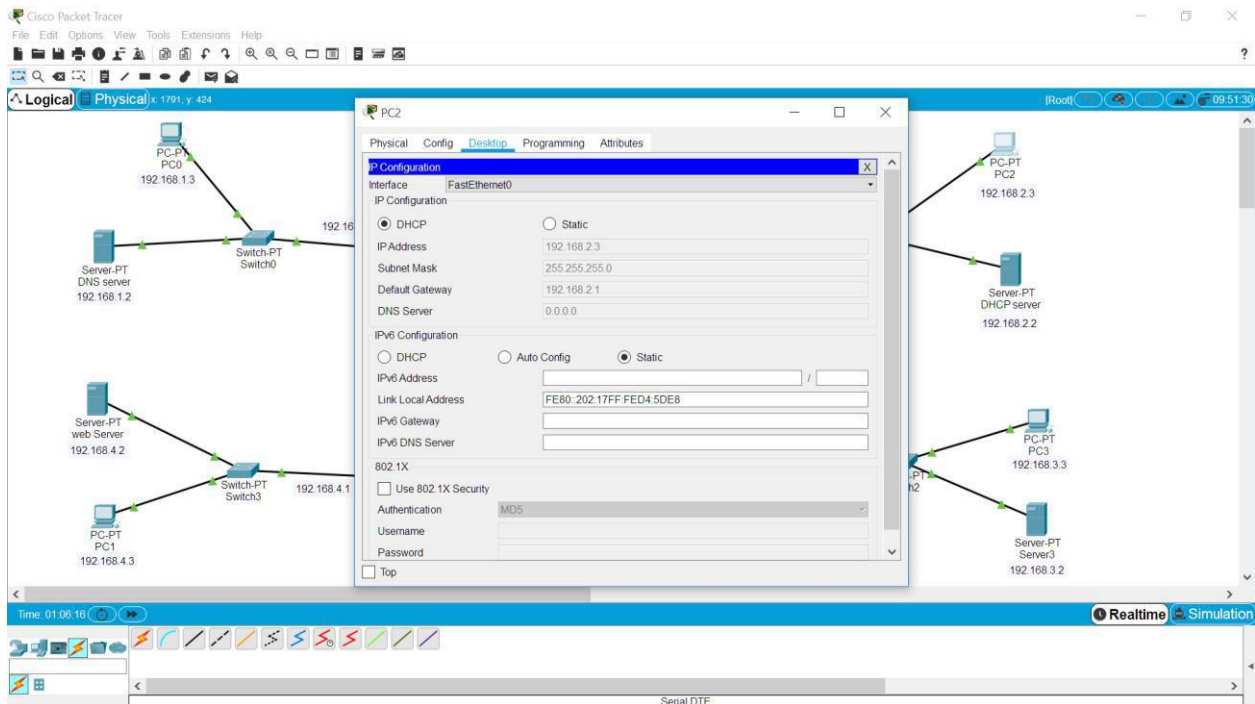
Router 3	Server Web	PC 1
SE 2/0 (ip add 192.168.8.1)	Ip add 192.168.4.2	Ip add 192.168.4.3
SE 3/0 (ip add 192.168.7.2)		
Fa 0/0 (ip add 192.168.4.1)		

Test no.2

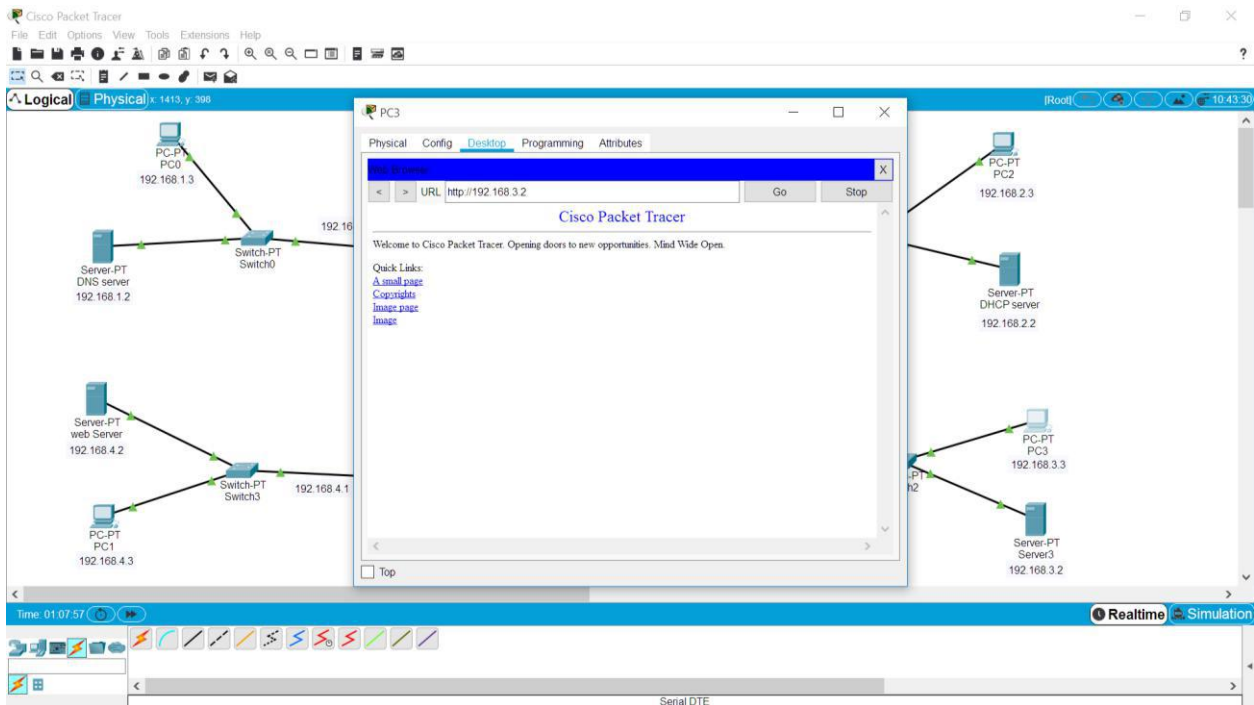
- DNS server



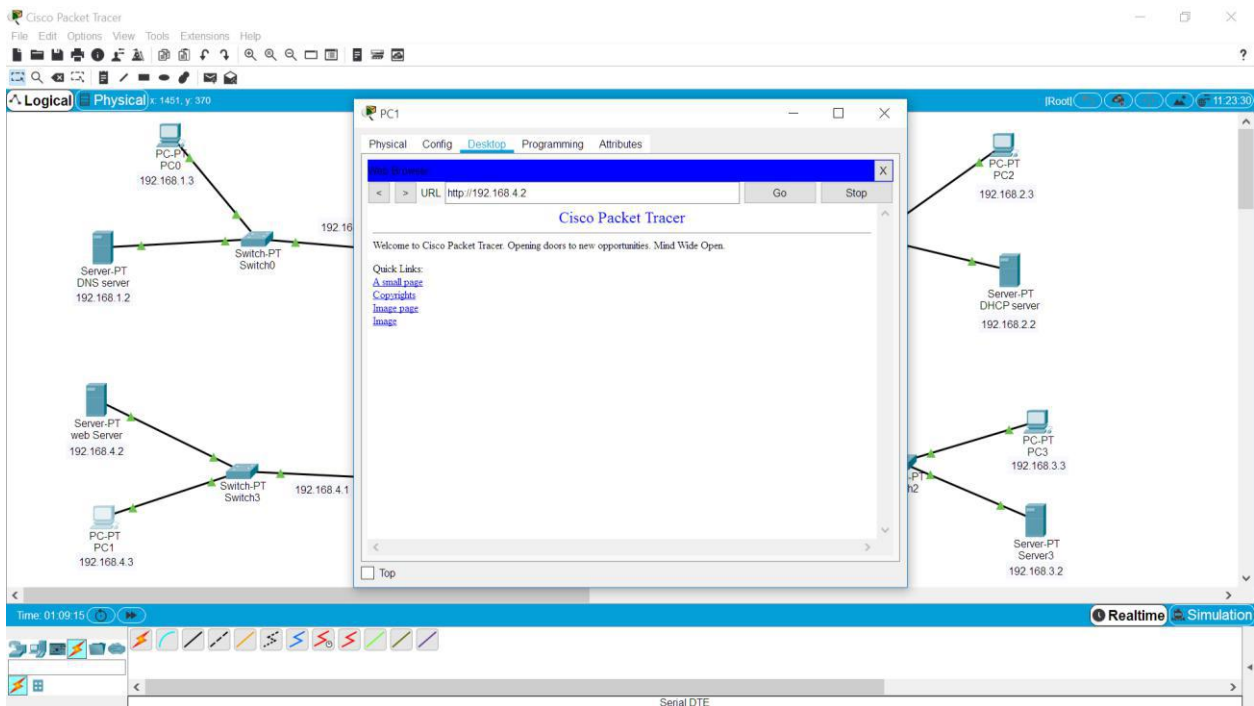
- DHCP Server



- Server3



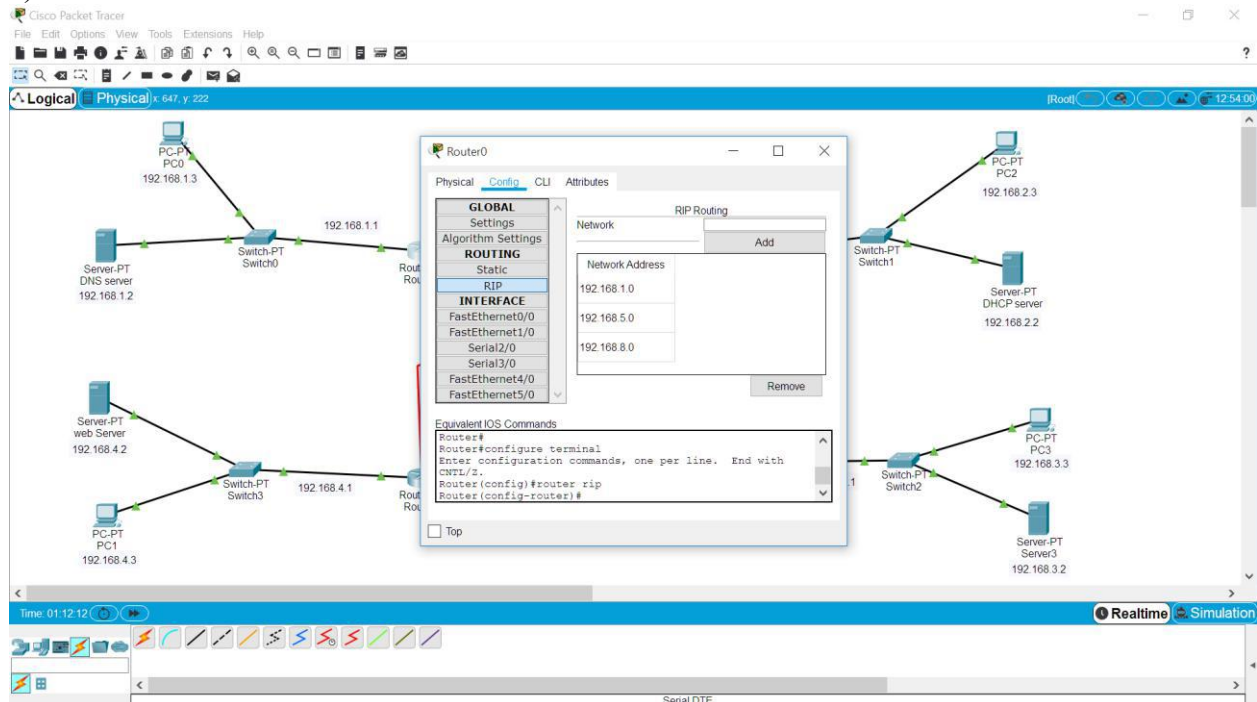
- Server Web



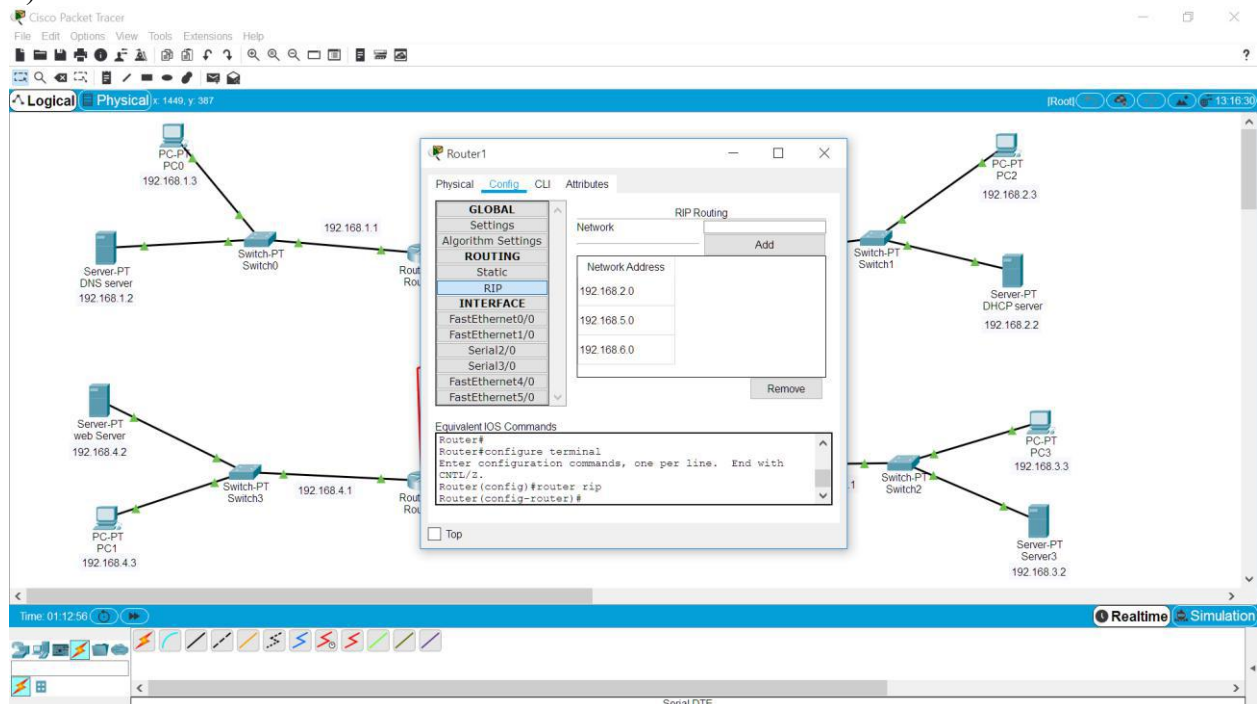
No.3

Konfigurasi routing dinamis

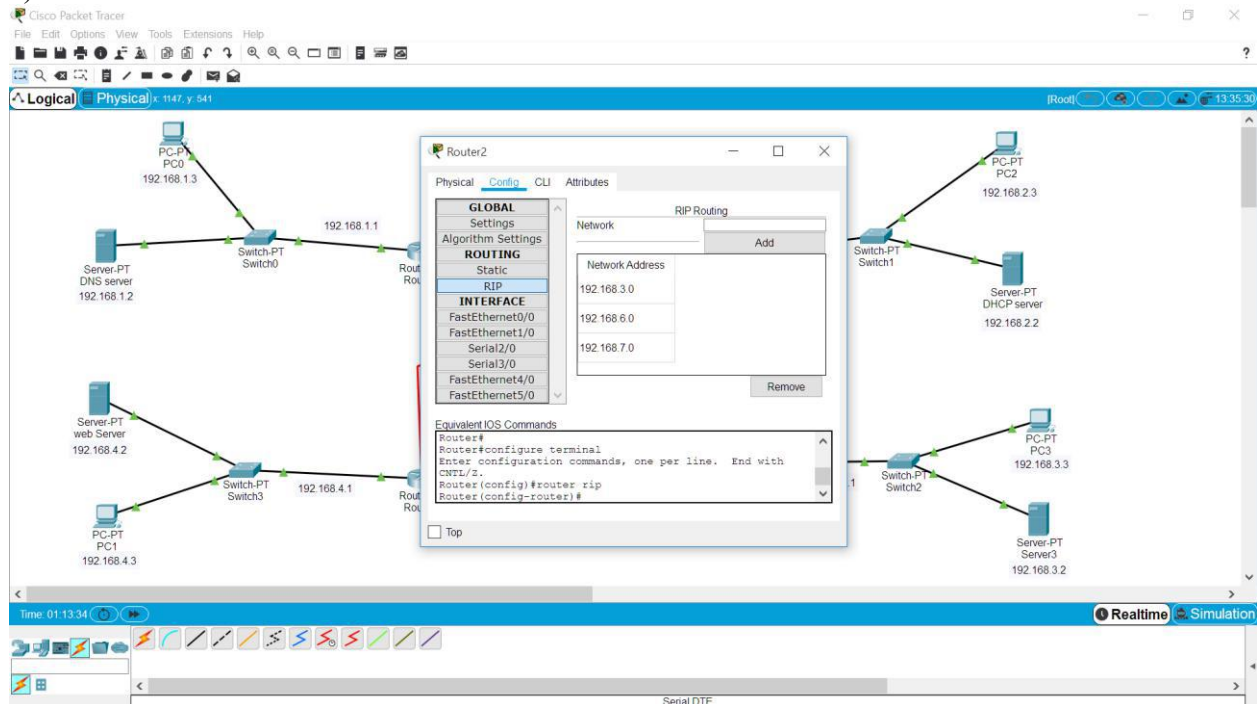
a)router 0



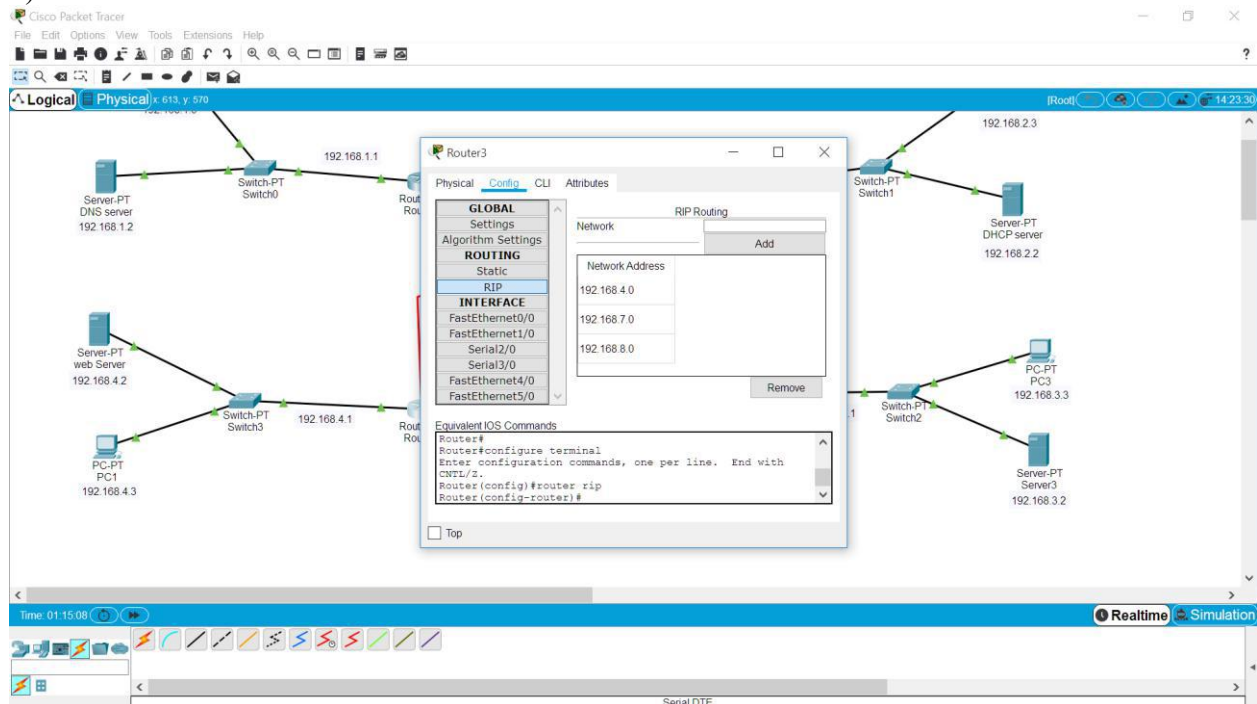
b)router 1



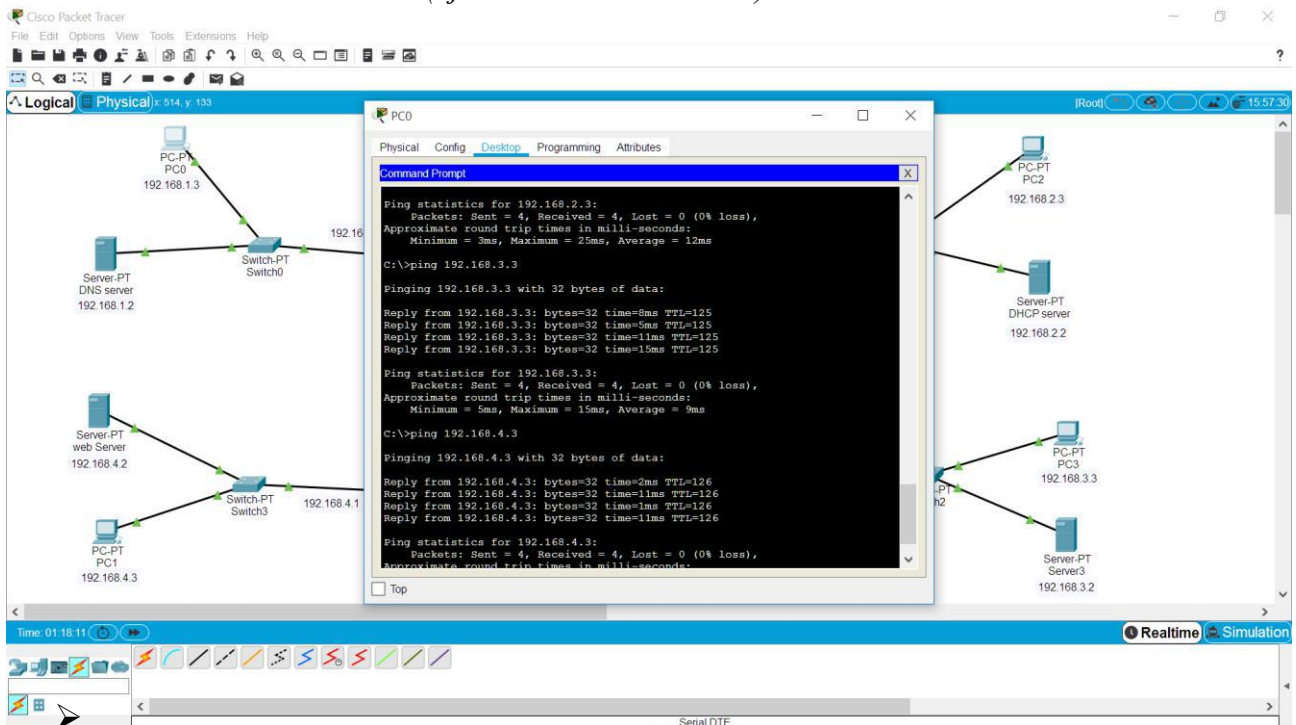
c)router 2



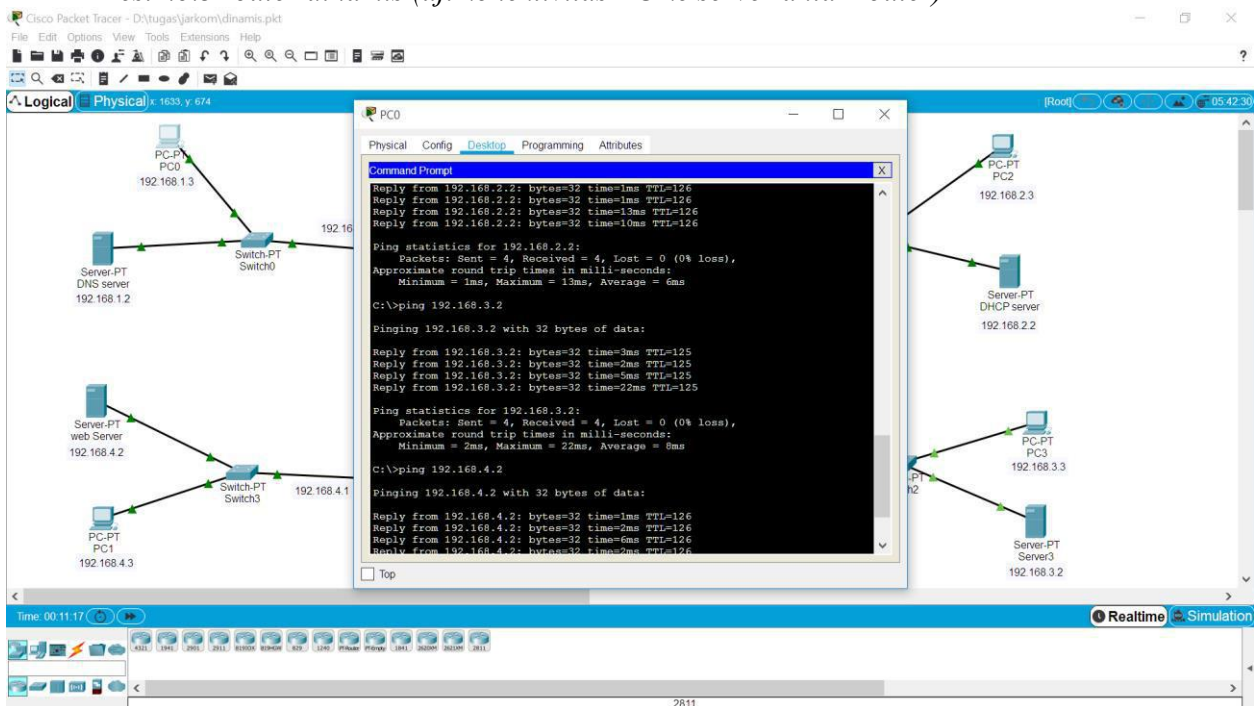
d)router 3



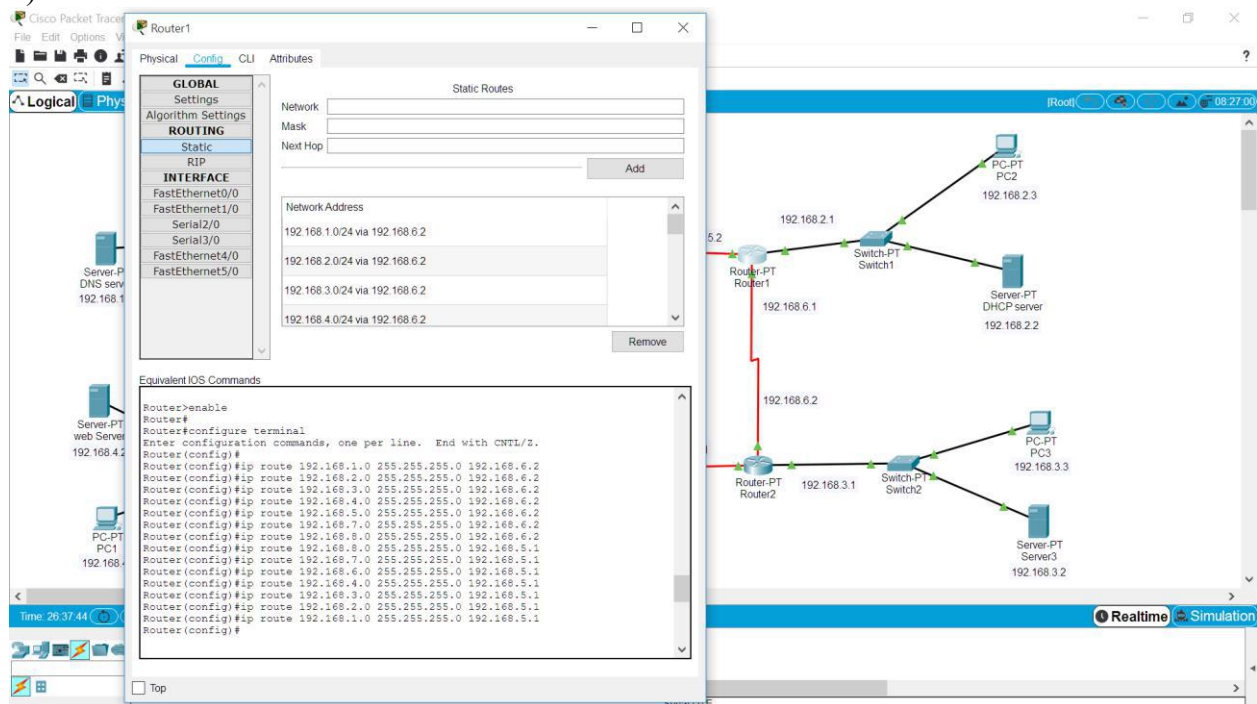
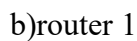
➤ Test no.3 router dinamis (uji konektivitas antar PC)



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



a)router 0



c)router 2

Router2 configuration window showing Static Routes:

Network Address	Next Hop
192.168.1.0/24	192.168.7.2
192.168.2.0/24	192.168.7.2
192.168.3.0/24	192.168.7.2
192.168.4.0/24	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)#

```

Network diagram showing Router2 connected to Router1 and Router3. Router1 is connected to PC1, PC2, and Server1. Router3 is connected to PC3, PC4, and Server2.

c)router 3

Router3 configuration window showing Static Routes:

Network Address	Next Hop
192.168.1.0/24	192.168.7.1
192.168.2.0/24	192.168.7.1
192.168.3.0/24	192.168.7.1
192.168.4.0/24	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 192.168.7.0 255.255.255.0 192.168.8.1
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)#ip route 192.168.11.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.12.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.13.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.14.0 255.255.255.0 192.168.8.1
Router(config)#ip route 192.168.15.0 255.255.255.0 192.168.8.1
Router(config)#
Router(config)#
Router(config)#
Router(config)#
Router(config)#

```

Network diagram showing Router3 connected to Router1 and Router2. Router1 is connected to PC1, PC2, and Server1. Router2 is connected to PC3, PC4, and Server2.

➤ 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 (PC2) with IP 192.168.2.3 is connected to a switch (Switch1) with IP 192.168.2.2. In the center, a PC (PC1) with IP 192.168.3.3 is connected to a switch (Switch3) with IP 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 (PC0) with IP 192.168.1.3 is connected to a switch (Switch0) with IP 192.168.1.2. On the right, a PC (PC2) with IP 192.168.2.3 is connected to a switch (Switch1) with IP 192.168.2.2. In the center, a PC (PC1) with IP 192.168.3.3 is connected to a switch (Switch3) with IP 192.168.3.2. A Command Prompt window is open on PC1, showing the following output:

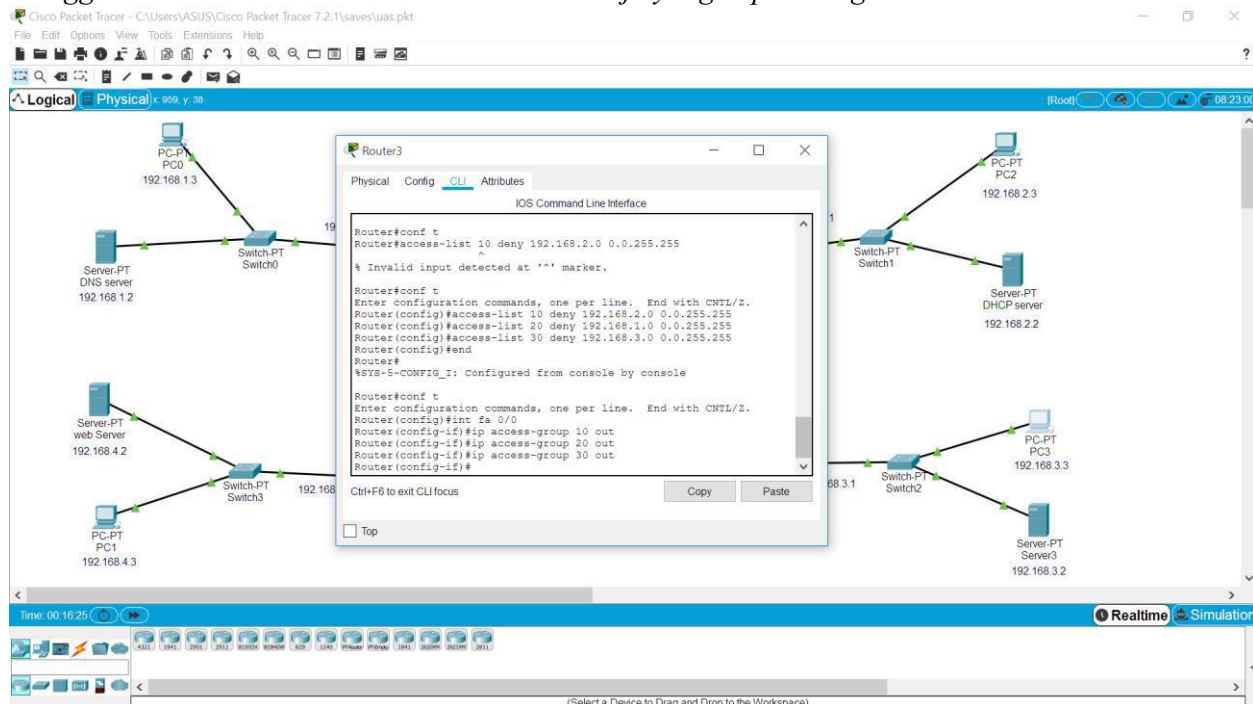
```

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

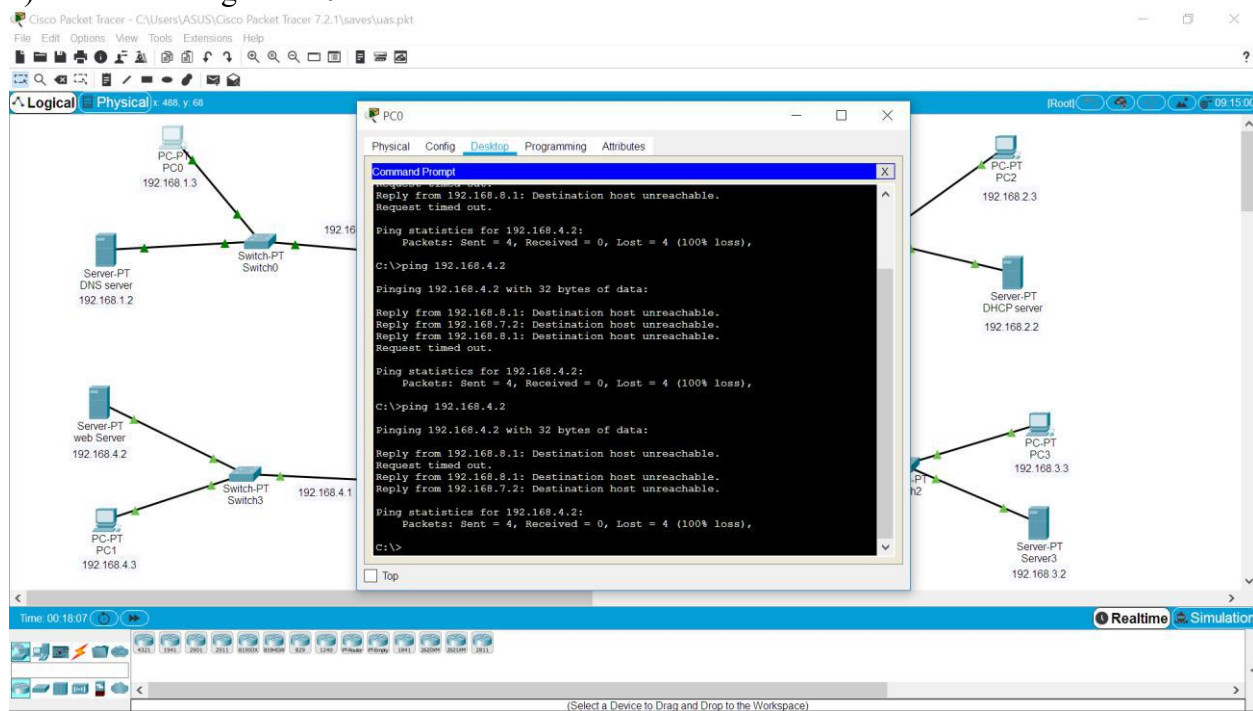
```

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

The screenshot shows the Cisco Packet Tracer interface with a network topology. A central window displays the configuration for PC2 (192.168.2.3). The Command Prompt window shows the results of a ping test to 192.168.4.2, indicating 100% loss.

```
Physical Config Desktop Programming Attributes
Command Prompt
Request timed out.
Reply from 192.168.8.1: Destination host unreachable.
Reply from 192.168.7.2: Destination host unreachable.
Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.4.2
Pinging 192.168.4.2 with 32 bytes of data:
Request timed out.
Request timed out.
Reply from 192.168.8.1: Destination host unreachable.
Reply from 192.168.7.2: Destination host unreachable.
Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.4.2
Pinging 192.168.4.2 with 32 bytes of data:
Request timed out.
Request timed out.
Reply from 192.168.8.1: Destination host unreachable.
Reply from 192.168.7.2: Destination host unreachable.
Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

The network topology includes PC0 (192.168.1.3), PC1 (192.168.4.3), PC2 (192.168.2.3), PC3 (192.168.3.3), Server-PT DNS server (192.168.1.2), Server-PT web Server (192.168.4.2), Server-PT DHCP server (192.168.2.2), and Server-PT Server3 (192.168.3.2). The switches are labeled 192.168.1.1, 192.168.4.1, and 192.168.2.1.

c) Test akses dengan PC 3

The screenshot shows the Cisco Packet Tracer interface with the same network topology as in the previous image. A central window displays the configuration for PC3 (192.168.3.3). The Command Prompt window shows the results of a ping test to 192.168.4.2, indicating 100% loss.

```
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:
Request timed out.
Reply from 192.168.7.2: Destination host unreachable.
Reply from 192.168.8.1: Destination host unreachable.
Reply from 192.168.7.2: Destination host unreachable.
Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

The network topology is identical to the previous image, showing PC0, PC1, PC2, PC3, and various servers connected through switches.

d) Test akses dengan PC 1

