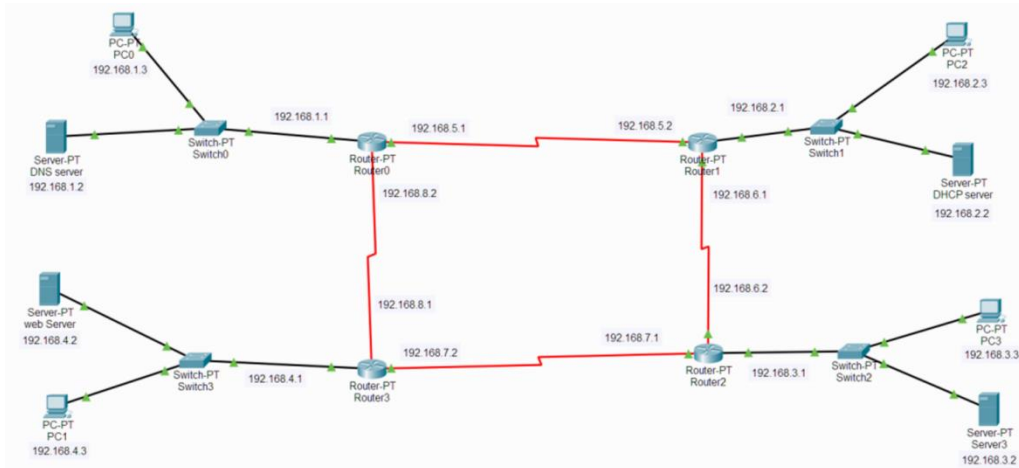


Nama : Prihadina Ayunia Wardhani
NIM : L200170007
Kelas : A

1. Membuat topologi jaringan sebagai berikut:



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

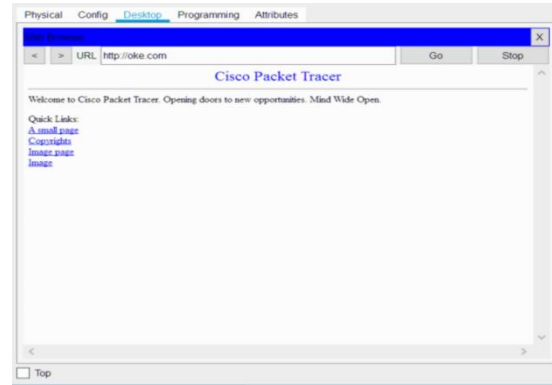
Router 0	Server DNS	PC 0
SE 2/0 (192.168.5.1)	192.168.1.2	192.168.1.3
SE 3/0 (192.168.8.2)		
Fa 0/0 (192.168.1.1)		

Router 1	Server DHCP	PC 2
SE 2/0 (92.168.6.1)	192.168.2.2	Otomatis sesuai pengaturan DHCP yang dibuat (192.168.2.3)
SE 3/0 (192.168.5.2)		
Fa 0/0 (192.168.2.1)		

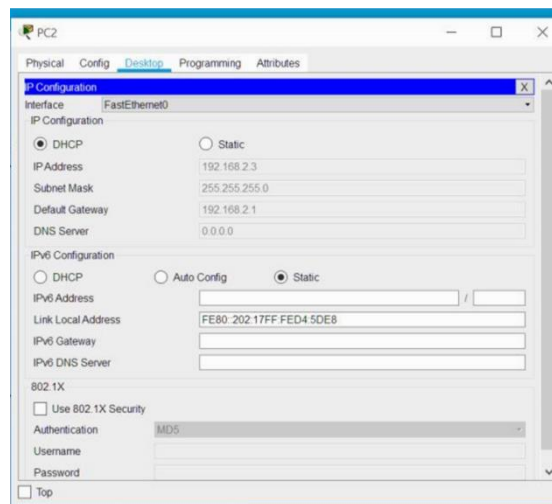
Router 2	Server3	PC 3
SE 2/0 (192.168.7.1)	192.168.3.2	192.168.3.3
SE 3/0 (192.168.6.2)		
Fa 0/0 (192.168.3.1)		

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

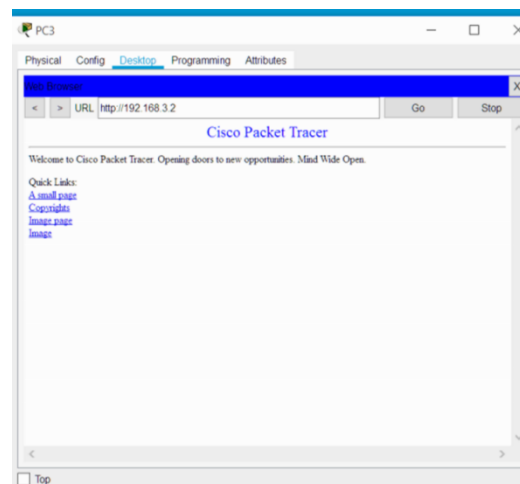
- DNS server



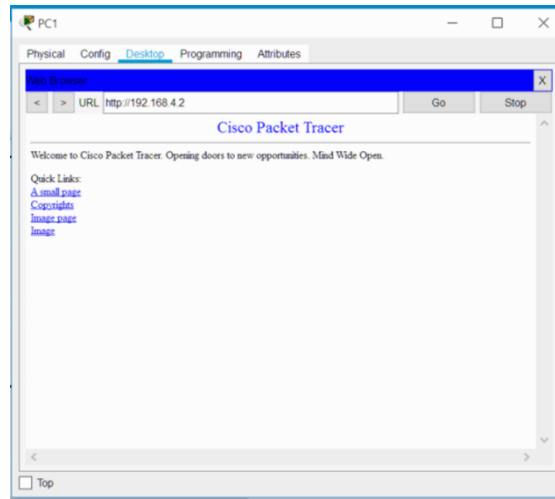
- DHCP Server



- Server3

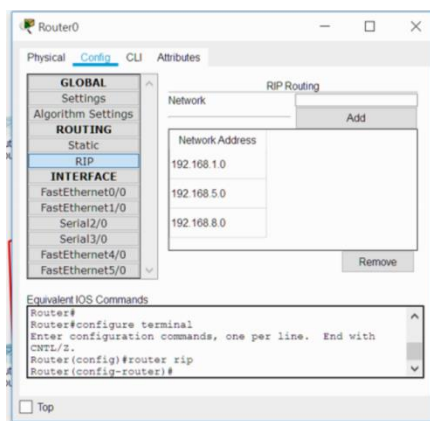


- Server Web

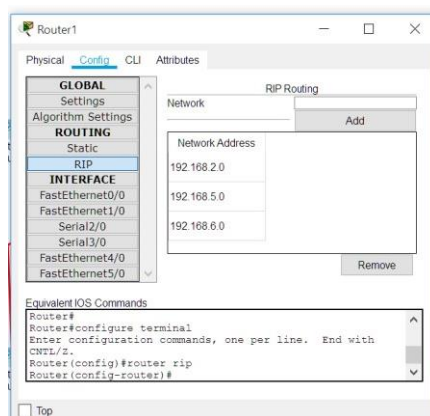


3. Konfigurasi routing dinamis

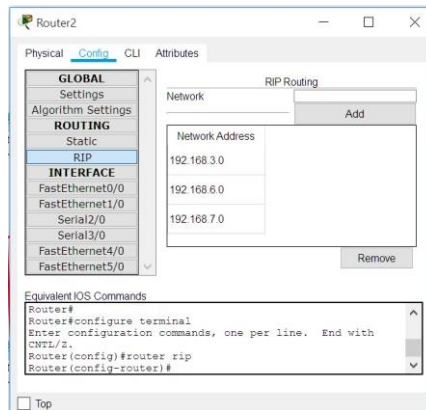
A. Router 0



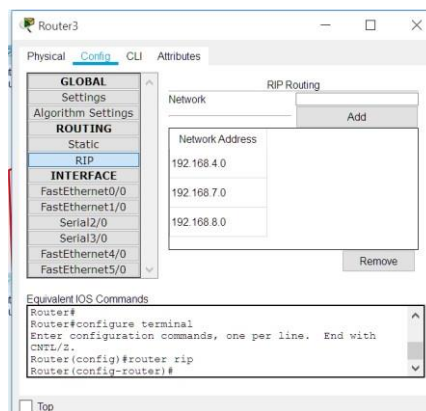
B. Router 1



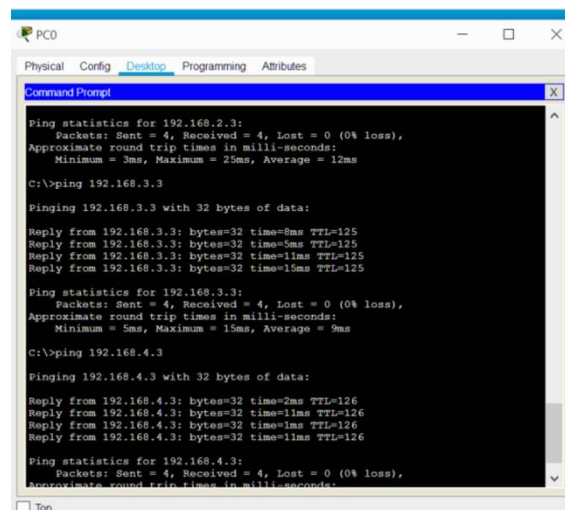
C. Router 2



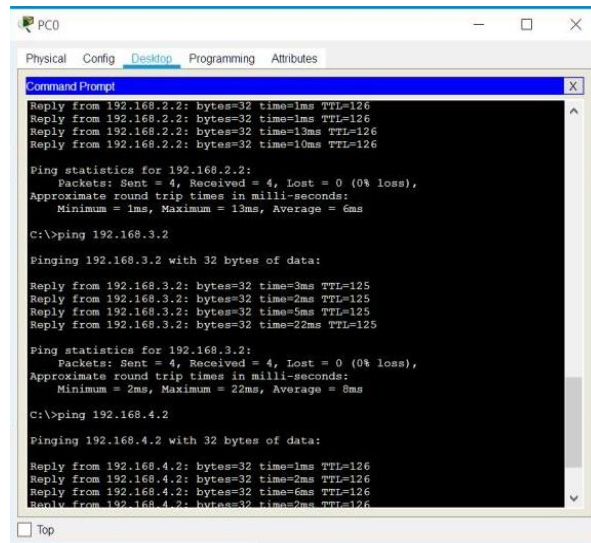
D. Router 3



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



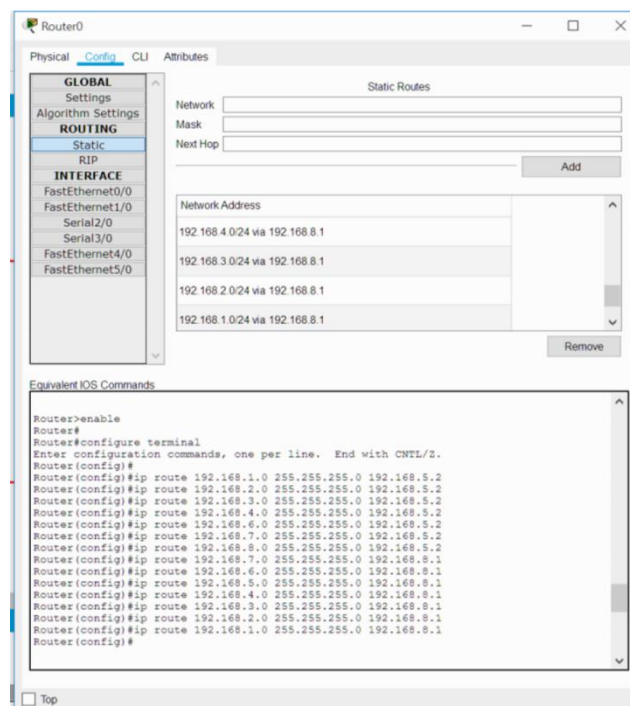
Test no.3 router dinamis (uji konektivitas PC ke server antar router)



```
PC0
Physical Config Desktop Programming Attributes
Command Prompt
Reply from 192.168.2.2: bytes=32 time=1ms TTL=126
Reply from 192.168.2.2: bytes=32 time=1ms TTL=126
Reply from 192.168.2.2: bytes=32 time=13ms TTL=126
Reply from 192.168.2.2: bytes=32 time=10ms TTL=126
Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 13ms, 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=3ms TTL=125
Reply from 192.168.3.2: bytes=32 time=2ms TTL=125
Reply from 192.168.3.2: bytes=32 time=5ms TTL=125
Reply from 192.168.3.2: bytes=32 time=22ms TTL=125
Ping statistics for 192.168.3.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 22ms, Average = 6ms
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=126
Reply from 192.168.4.2: bytes=32 time=2ms TTL=126
Reply from 192.168.4.2: bytes=32 time=6ms TTL=126
Reply from 192.168.4.2: bytes=32 time=2ms TTL=126
```

4. Konfigurasi router statis

A. Router 0



Router0

Physical Config CLI Attributes

GLOBAL Settings Algorithm Settings ROUTING Static RIP INTERFACE FastEthernet0/0 FastEthernet1/0 Serial2/0 Serial3/0 FastEthernet4/0 FastEthernet5/0

Static Routes

Network: Mask: Next Hop: Add

Network Address

192.168.4.0/24 via 192.168.8.1
192.168.3.0/24 via 192.168.8.1
192.168.2.0/24 via 192.168.8.1
192.168.1.0/24 via 192.168.8.1

Remove

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 192.168.1.0 255.255.255.0 192.168.8.1
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 192.168.6.0 255.255.255.0 192.168.8.1
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 192.168.5.0 255.255.255.0 192.168.8.1
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

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.1.0/24 via 192.168.6.2

192.168.2.0/24 via 192.168.6.2

192.168.3.0/24 via 192.168.6.2

192.168.4.0/24 via 192.168.6.2

Remove

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 192.168.1.0 255.255.255.0 192.168.6.2

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)#

Top

SHR101-127

C. Router 2

Router2

PhysicalConfigCLIAttributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

Static Routes

Network

Mask

Next Hop

Add

Network Address

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

Remove

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 192.168.8.0 255.255.255.0 192.168.6.1

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)#

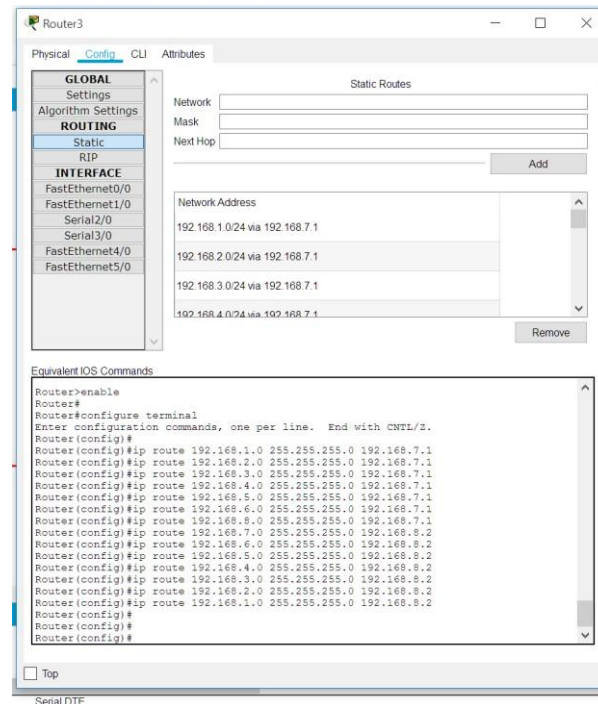
Router(config)#

Router(config)#

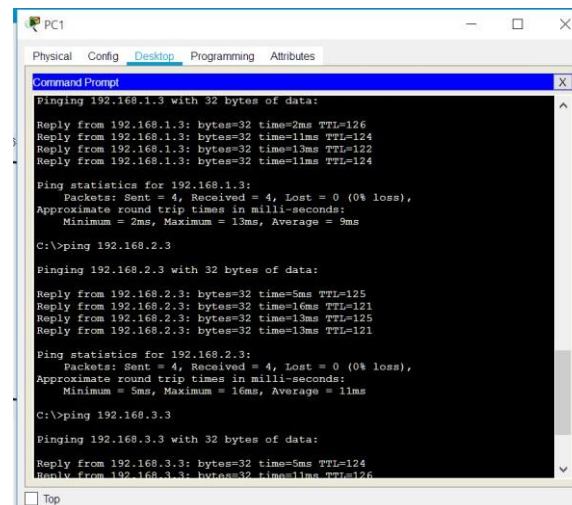
Top

SHR101-127

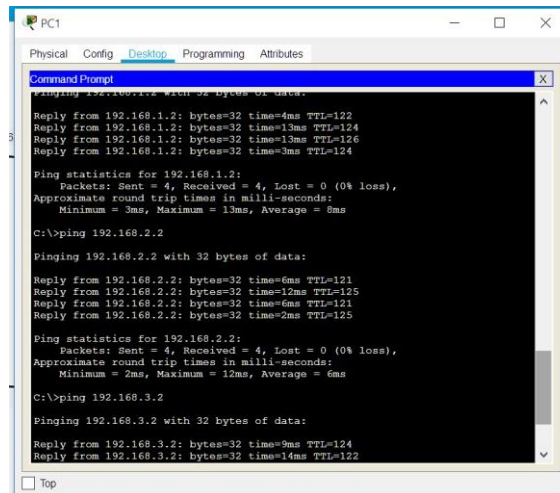
D. Router 3



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



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



```
PC1
Physical Config Desktop Programming Attributes
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

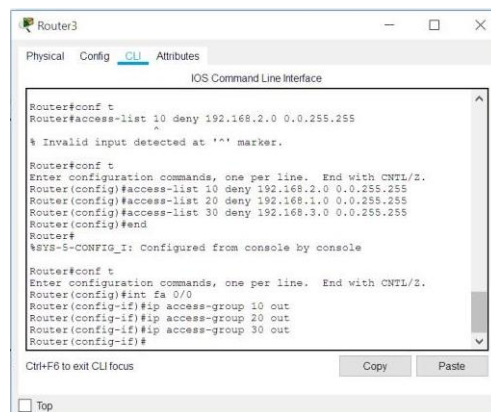
Pinging 192.168.2.2 with 32 bytes of data:
Reply from 192.168.2.2: bytes=32 time=6ms TTL=121
Reply from 192.168.2.2: bytes=32 time=12ms TTL=125
Reply from 192.168.2.2: bytes=32 time=6ms TTL=121
Reply from 192.168.2.2: bytes=32 time=2ms TTL=125

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
```

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

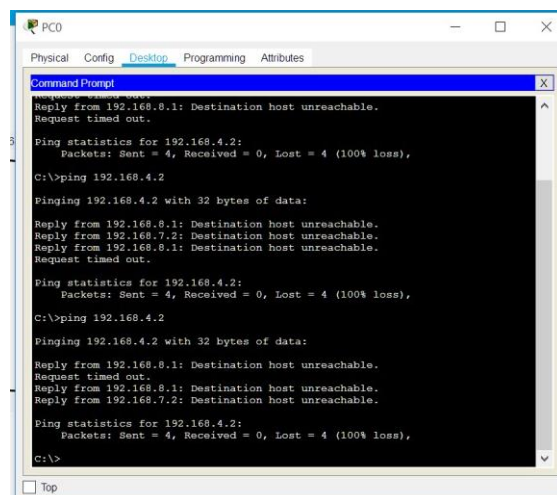


```
Router3
Physical Config CLI Attributes
IOS Command Line Interface
Router#conf t
Router(config)#access-list 10 deny 192.168.2.0 0.0.255.255
% Invalid input detected at '^' marker.

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#access-list 10 deny 192.168.2.0 0.0.255.255
Router(config)#access-list 20 deny 192.168.1.0 0.0.255.255
Router(config)#access-list 30 deny 192.168.3.0 0.0.255.255
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip access-group 10 out
Router(config-if)#ip access-group 20 out
Router(config-if)#ip access-group 30 out
Router(config-if)#
```

A. Test akses dengan PC 0



```
PC0
Physical Config Desktop Programming Attributes
Command Prompt
Request timed out.
Reply from 192.168.8.1: Destination host unreachable.
Request timed out.

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:
Reply from 192.168.8.1: Destination host unreachable.
Reply from 192.168.7.2: Destination host unreachable.
Reply from 192.168.8.1: Destination host unreachable.
Request timed out.

Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

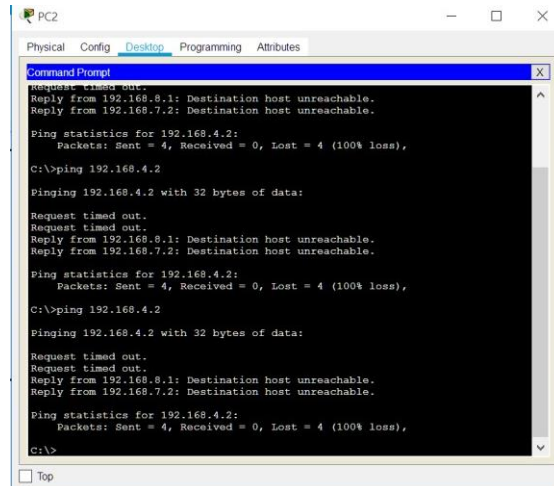
C:\>ping 192.168.4.2

Pinging 192.168.4.2 with 32 bytes of data:
Reply from 192.168.8.1: Destination host unreachable.
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),

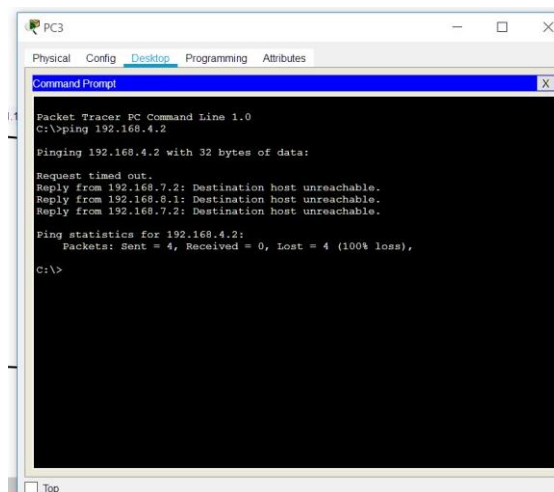
C:\>
```


B. Test akses dengan PC 2



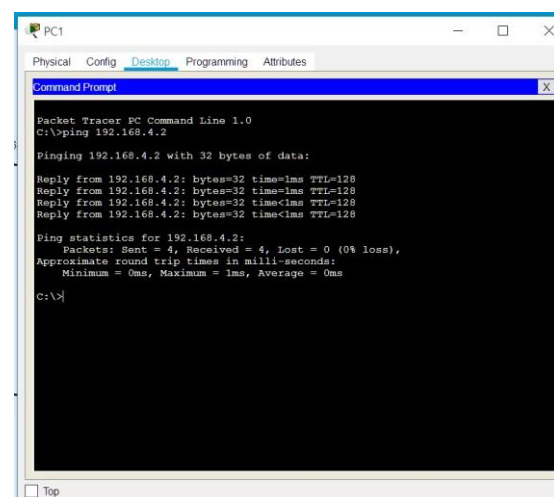
```
PC2
Physical Config Desktop Programming Attributes
Command Prompt
Request timed out.
Reply from 192.168.8.1: Destination host unreachable.
Reply from 192.168.7.2: Destination host unreachable.
Ping statistics for 192.168.4.2:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.4.2
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:\>
```

C. Test akses dengan PC 3



```
PC3
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:\>
```

D. Test akses dengan PC 1



```
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:\>
```

Keterangan : Semua akses dari 192.168.1, 192.168.2, 192.168.3 tidak diijinkan mengakses hanya PC 1 yang dapat mengakses server web