

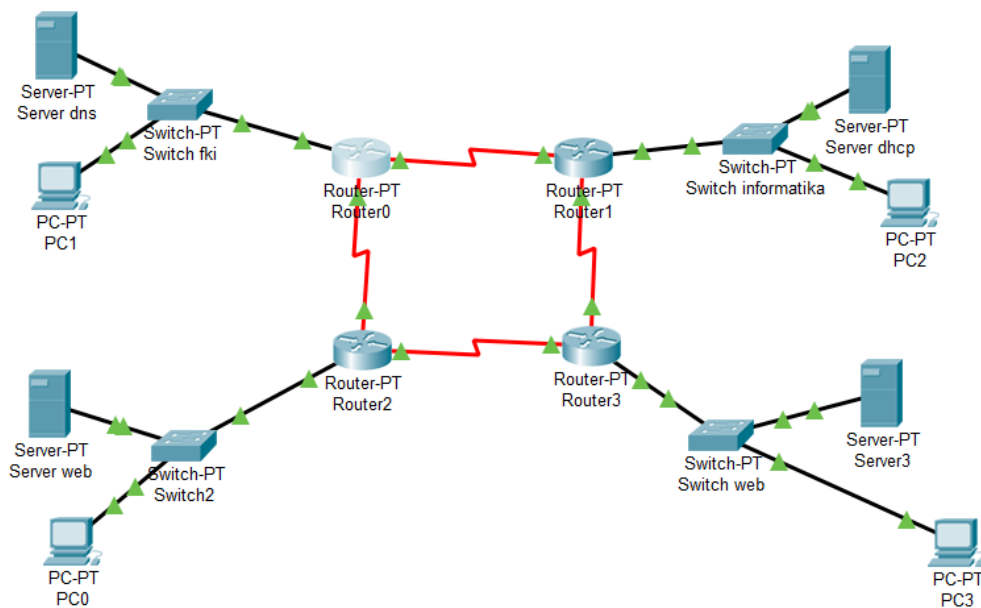
**Laporan Praktikum
Jaringan Komputer
UAS**



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NIM : L200170006
Kelas : A

No.1

Membuat topologi jaringan sebagai berikut:



No.2

Konfigurasi pengalaman 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)

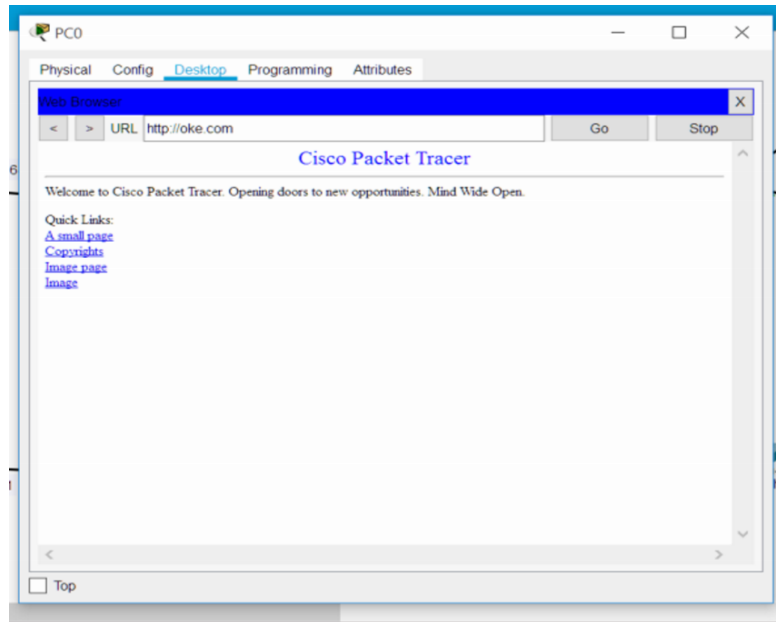
Router 2	Server3	PC 3
SE 2/0 (ip add 192.168.7.1)	Ip add 192.168.3.2	Ip add 192.168.3.3
SE 3/0 (ip add 192.168.6.2)		
Fa 0/0 (ip add 192.168.3.1)		

d)

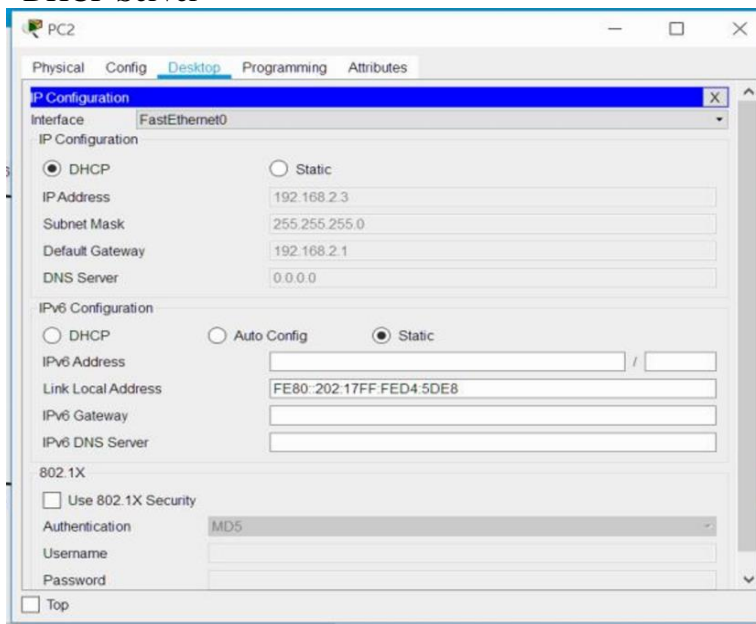
Router 3	Server Web	PC 1
SE 2/0 (ip add 192.168.8.1)	Ip add 192.168.4.2	Ip add 192.168.4.3
SE 3/0 (ip add 192.168.7.2)		
Fa 0/0 (ip add 192.168.4.1)		

Test no.2

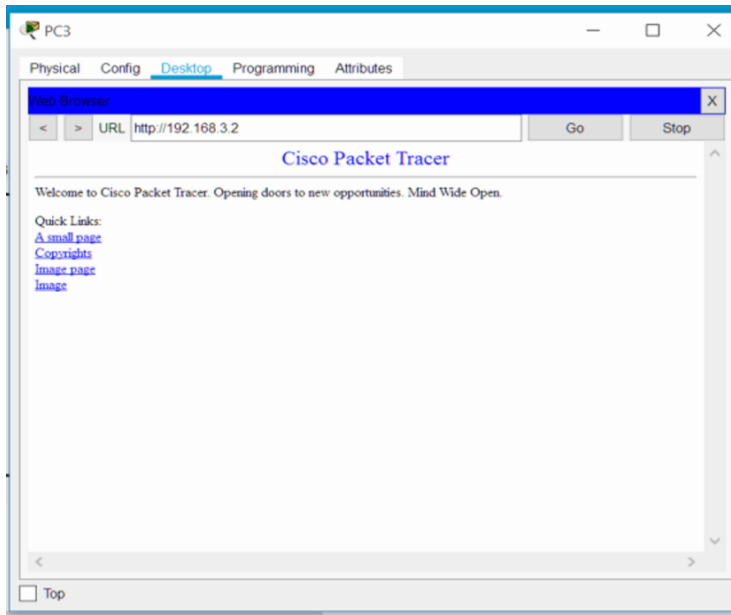
- DNS server



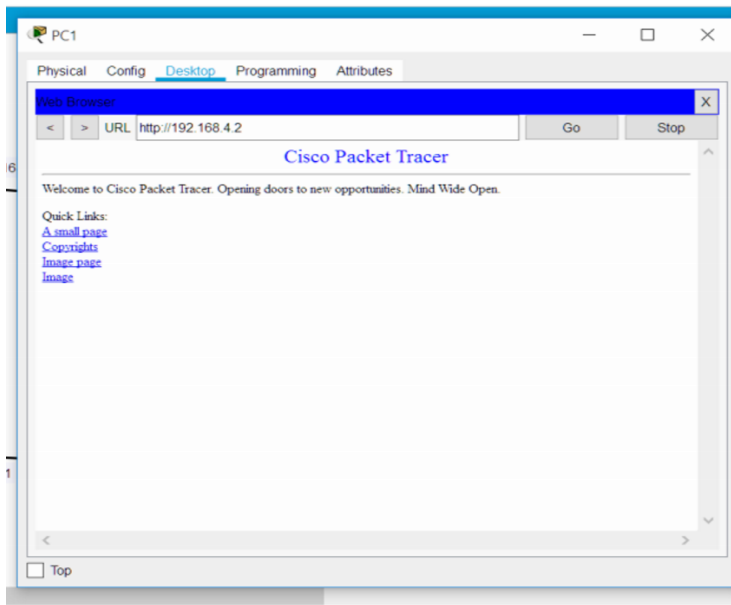
- DHCP Server



- Server3



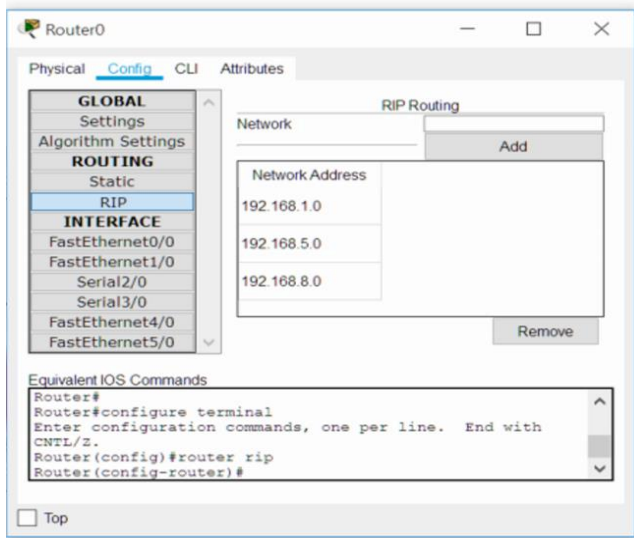
- Server Web



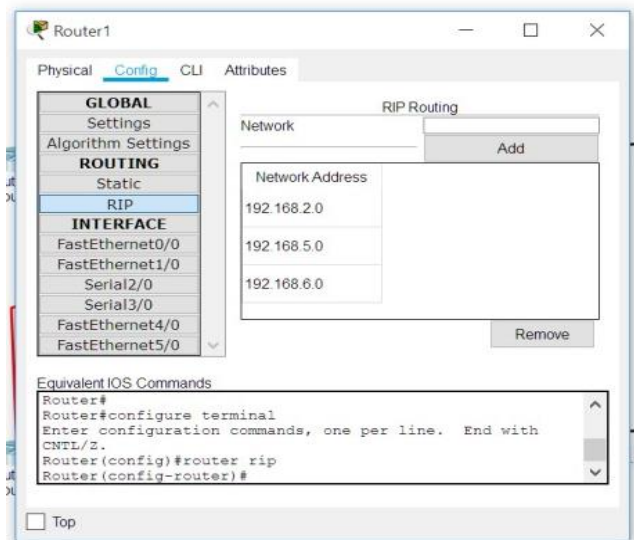
No.3

Konfigurasi routing dinamis

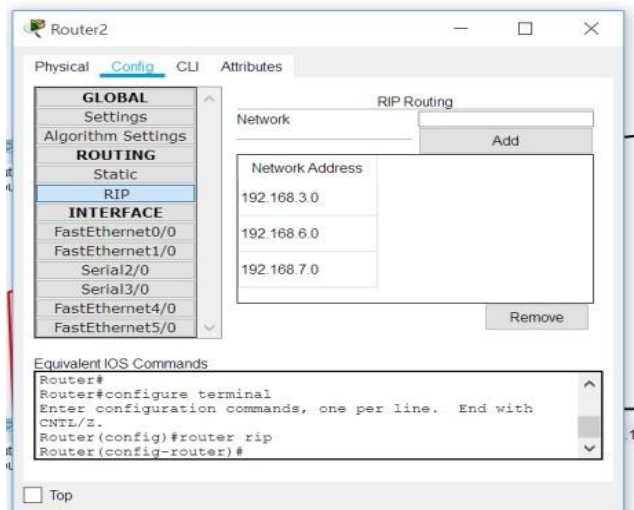
a)router 0



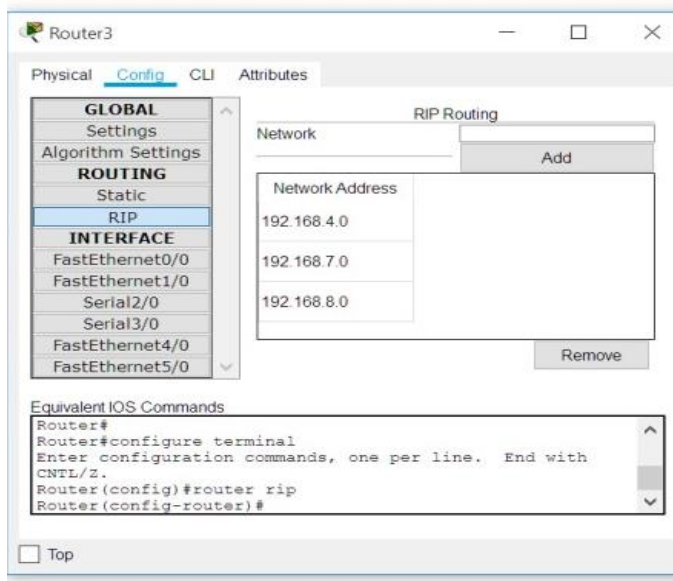
b)router 1



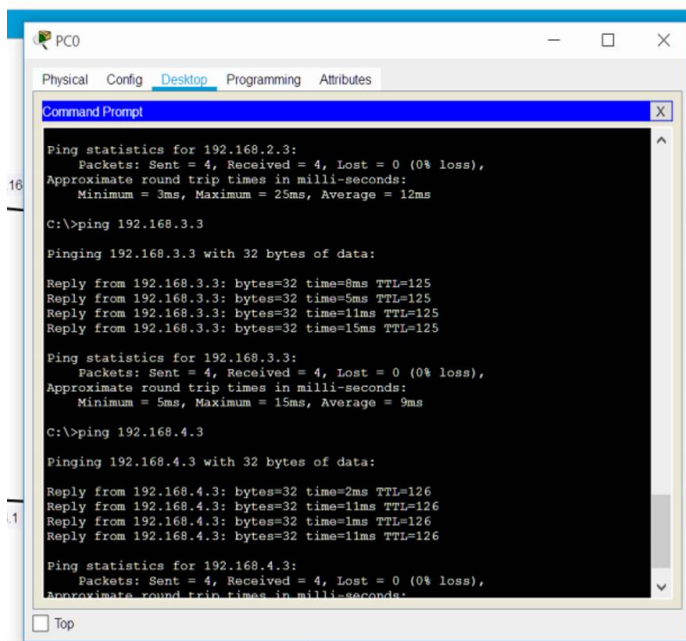
c)router 2



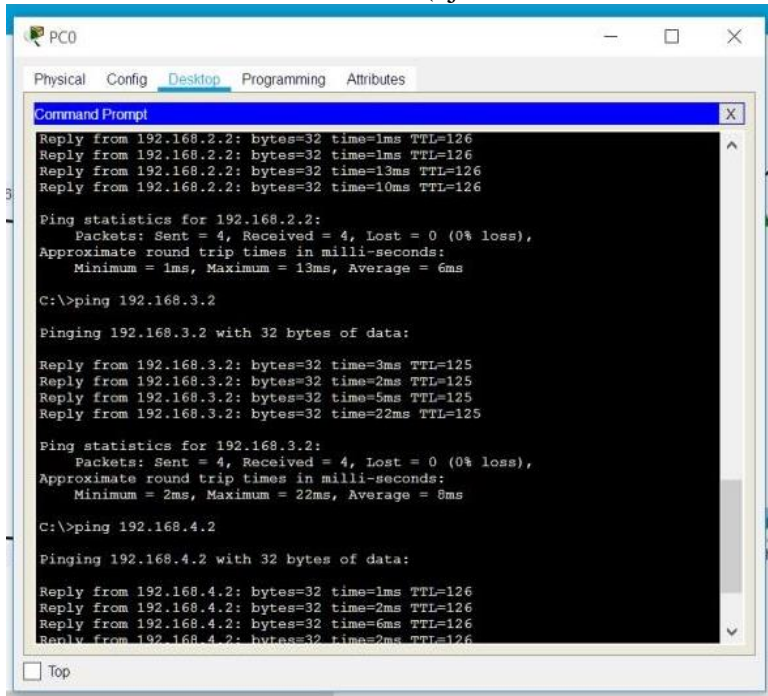
d)router 3



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



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



The screenshot shows a Packet Tracer window for PC0. The 'Desktop' tab is active, displaying a 'Command Prompt' window. The command prompt shows the results of three ping tests performed from PC0 to different IP addresses. The first test is to 192.168.2.2, the second to 192.168.3.2, and the third to 192.168.4.2. Each test shows four successful replies with varying round trip times and TTL values. Ping statistics are also displayed for each test, indicating 0% packet loss.

```
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 = 8ms

C:\>ping 192.168.4.2

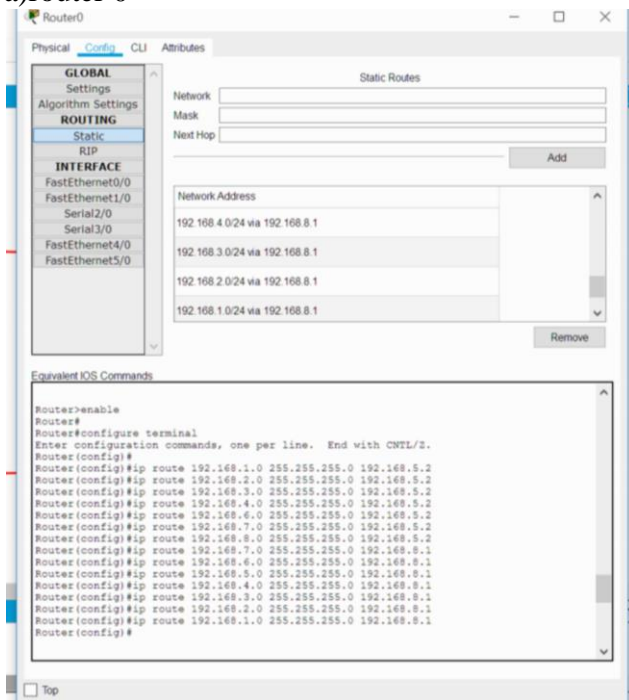
Pinging 192.168.4.2 with 32 bytes of data:

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
```

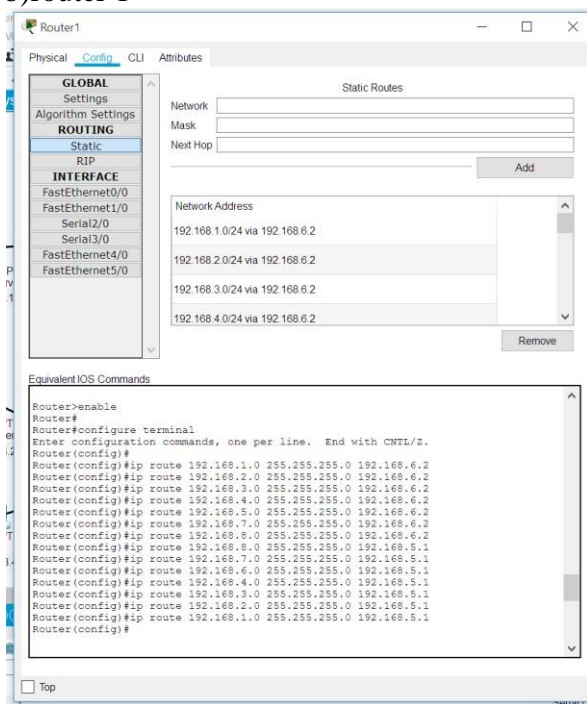
No.4

Konfigurasi router statis

a)router 0



b)router 1



c)router 2

The screenshot shows the configuration window for Router2. The 'Config' tab is active, and the 'ROUTING' section is expanded, with 'Static' selected. The 'Static Routes' section is visible, showing a list of configured routes. The 'Equivalent IOS Commands' section displays the following 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)#

```

c)router 3

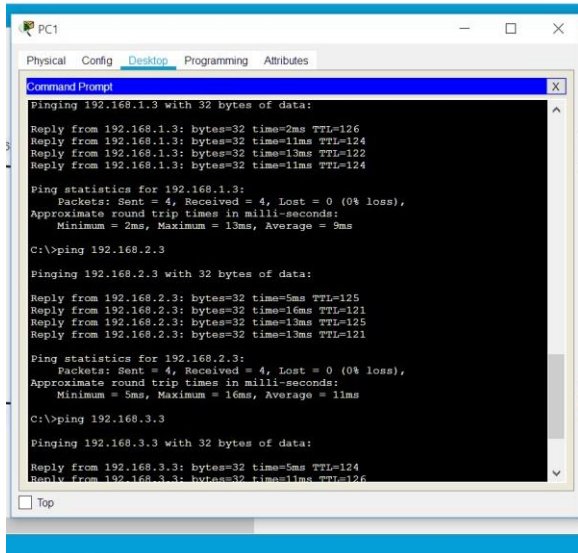
The screenshot shows the configuration window for Router3. The 'Config' tab is active, and the 'ROUTING' section is expanded, with 'Static' selected. The 'Static Routes' section is visible, showing a list of configured routes. The 'Equivalent IOS Commands' section displays the following commands:

```

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 192.168.7.0 255.255.255.0 192.168.8.2
Router(config)#ip route 192.168.6.0 255.255.255.0 192.168.8.2
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)#

```

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



The screenshot shows a Windows Command Prompt window titled 'PC1'. The window has tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes', with 'Desktop' selected. The command prompt displays the following text:

```
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

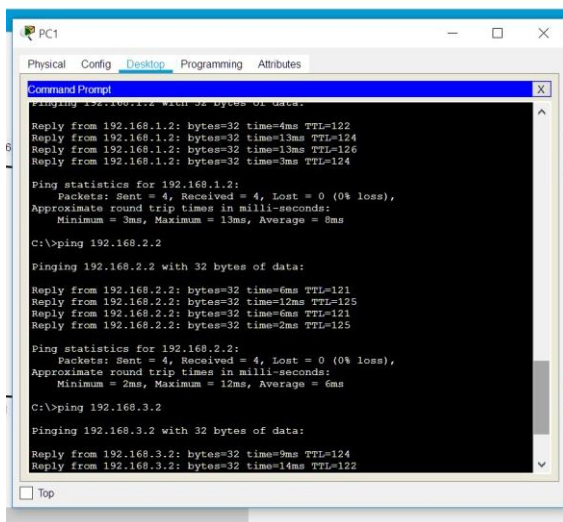
Pinging 192.168.2.3 with 32 bytes of data:
Reply from 192.168.2.3: bytes=32 time=5ms TTL=125
Reply from 192.168.2.3: bytes=32 time=16ms TTL=121
Reply from 192.168.2.3: bytes=32 time=13ms TTL=125
Reply from 192.168.2.3: bytes=32 time=13ms TTL=121

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 Windows Command Prompt window titled 'PC1'. The window has tabs for 'Physical', 'Config', 'Desktop', 'Programming', and 'Attributes', with 'Desktop' selected. The command prompt displays the following text:

```
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

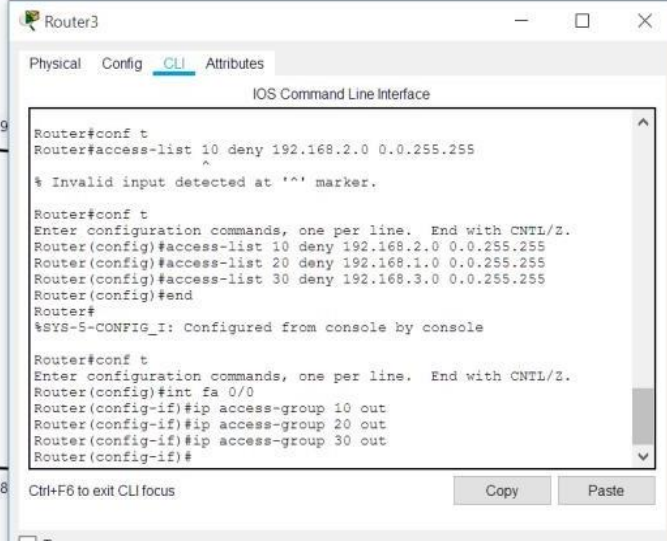
Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 12ms, Average = 6ms

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
```

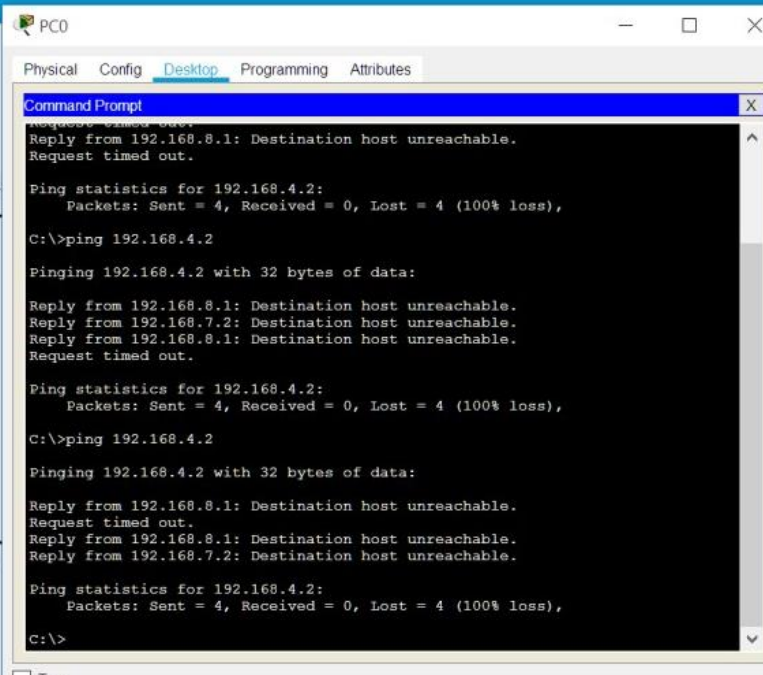
No.5

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



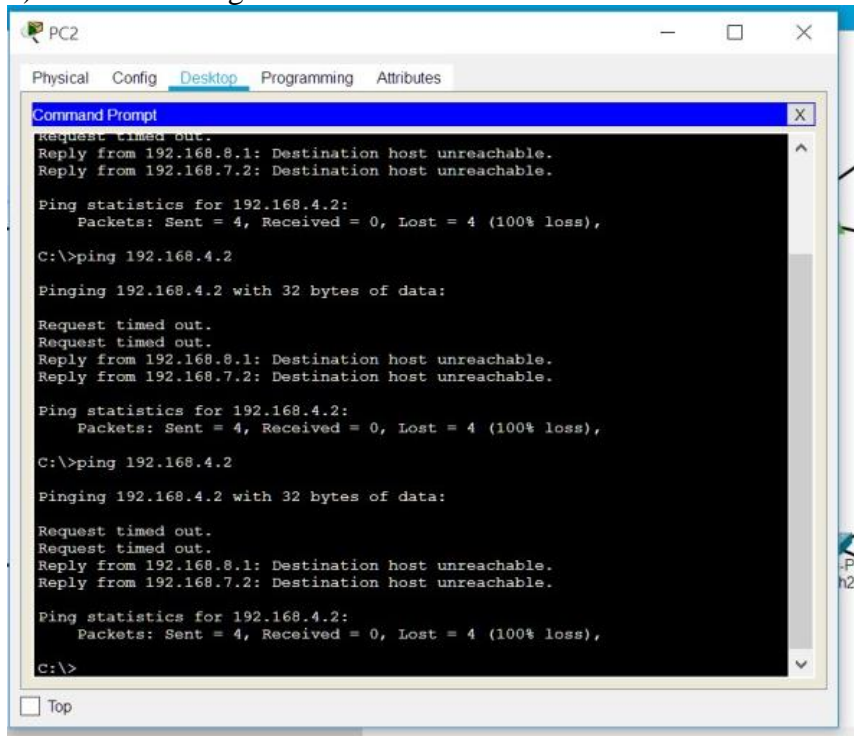
```
Router3
Physical Config CLI Attributes
IOS Command Line Interface
Router#conf t
Router#access-list 10 deny 192.168.2.0 0.0.255.255
% Invalid input detected at '^' marker.
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#access-list 10 deny 192.168.2.0 0.0.255.255
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)#
Ctrl+F6 to exit CLI focus
Copy Paste
Top
```

a)Test akses dengan PC 0



```
PC0
Physical Config Desktop Programming Attributes
Command Prompt
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:\>
Top
```

b) Test akses dengan PC 2



The screenshot shows a Packet Tracer window for PC2. The 'Desktop' tab is active, displaying a Command Prompt window. The Command Prompt shows the results of a ping command to 192.168.4.2. The output indicates that the destination host is unreachable, with a 100% loss of packets.

```
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

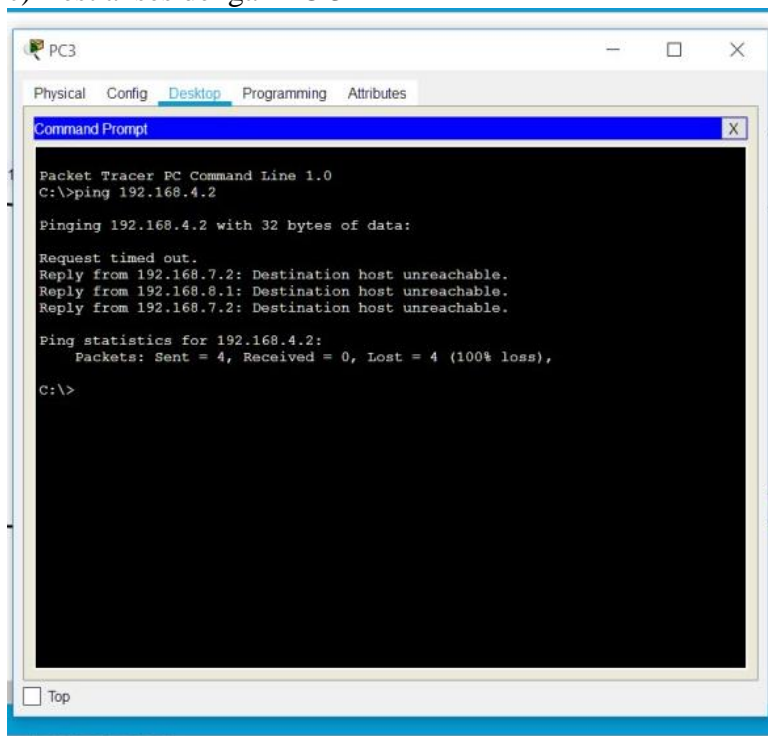
Pinging 192.168.4.2 with 32 bytes of data:

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



The screenshot shows a Packet Tracer window for PC3. The 'Desktop' tab is active, displaying a Command Prompt window. The Command Prompt shows the results of a ping command to 192.168.4.2. The output indicates that the destination host is unreachable, with a 100% loss of packets.

```
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

