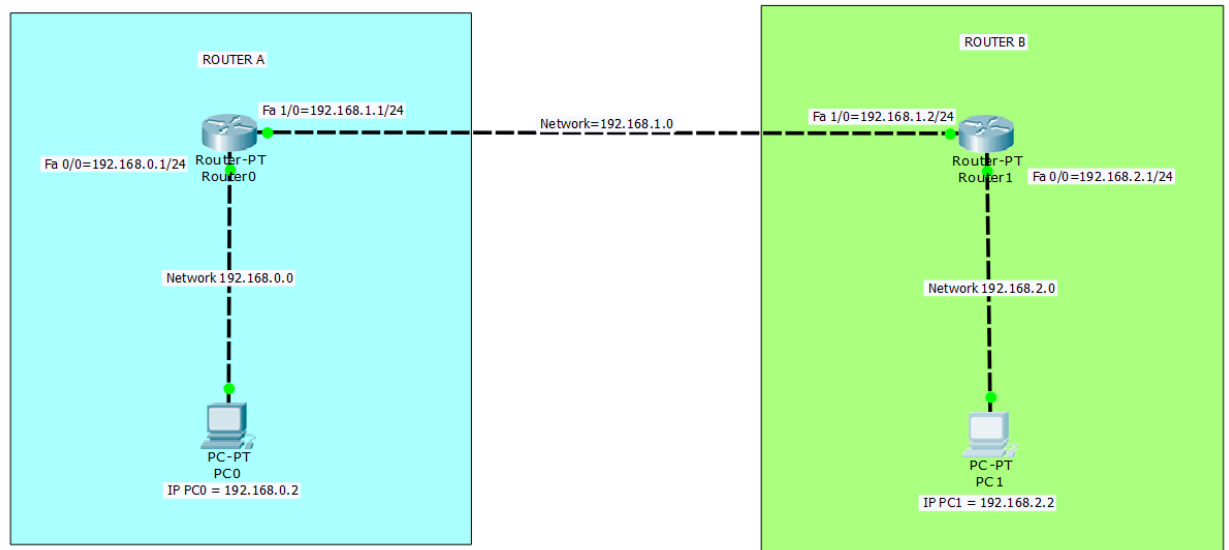


PERTEMUAN KE -9

ROUTING STATIK

1. Buat seperti gambar 1.1, dengan menggunakan packet tracer dengan ketentuan sebagai berikut :

ROUTER A	Network		ROUTER B
Fa 0/0 = 192.168.0.1/24	192.168.0.0	192.168.2.0	Fa 0/0 = 192.168.2.1/24
Fa 1/0 = 192.168.1.1/24	192.168.1.0		Fa 1/0 = 192.168.1.2/24
IP PC0 = 192.168.0.2/24	192.168.0.0	192.168.2.0	IP PC1 = 192.168.2.2/24

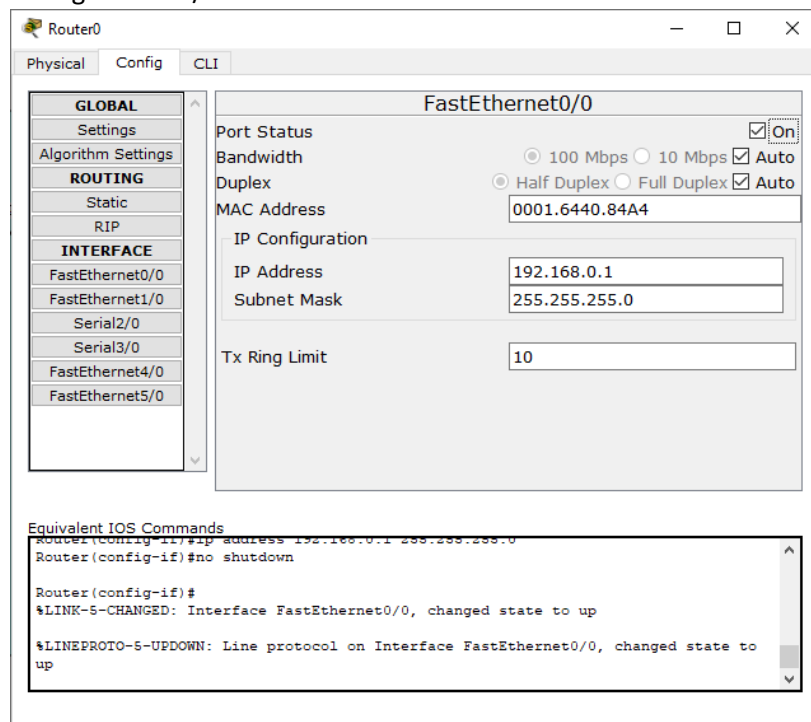


gambar 1.1

2. ROUTER A

Hasilnya sebagai berikut :

Konfigurasi Fa0/0 Router A



Konfigurasi Fa1/0 Router A

Router0

Physical Config CLI

GLOBAL

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

FastEthernet1/0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☐ Full Duplex ☒ Auto

MAC Address 000A.F3A3.BB0B

IP Configuration

IP Address 192.168.1.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up
```

Konfigurasi PC0 Router A

PC0

Physical Config Desktop Custom Interface

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.0.2

Subnet Mask 255.255.255.0

Default Gateway 192.168.0.1

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::2D0:BCFF:FED0:A8A1

IPv6 Gateway

IPv6 DNS Server

3. ROUTER B

Konfigurasi Fa0/0 Router B

The screenshot shows the configuration window for the FastEthernet0/0 interface on Router1. The left sidebar has tabs for GLOBAL, Settings, Algorithm Settings, ROUTING, Static, RIP, and INTERFACE. Under the INTERFACE tab, FastEthernet0/0 is selected. The main area shows the following configuration:

- Port Status: ☒ On
- Bandwidth: ☐ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 0001.9654.4245
- IP Configuration:
 - IP Address: 192.168.2.1
 - Subnet Mask: 255.255.255.0
- Tx Ring Limit: 10

Below the configuration fields, the 'Equivalent IOS Commands' section shows the following commands:

```
Router(config-if)#ip address 192.168.2.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up
```

Konfigurasi Fa1/0 Router B

The screenshot shows the configuration window for the FastEthernet1/0 interface on Router1. The left sidebar has tabs for GLOBAL, Settings, Algorithm Settings, ROUTING, Static, RIP, and INTERFACE. Under the INTERFACE tab, FastEthernet1/0 is selected. The main area shows the following configuration:

- Port Status: ☒ On
- Bandwidth: ☐ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 00D0.58A2.8D0E
- IP Configuration:
 - IP Address: 192.168.1.2
 - Subnet Mask: 255.255.255.0
- Tx Ring Limit: 10

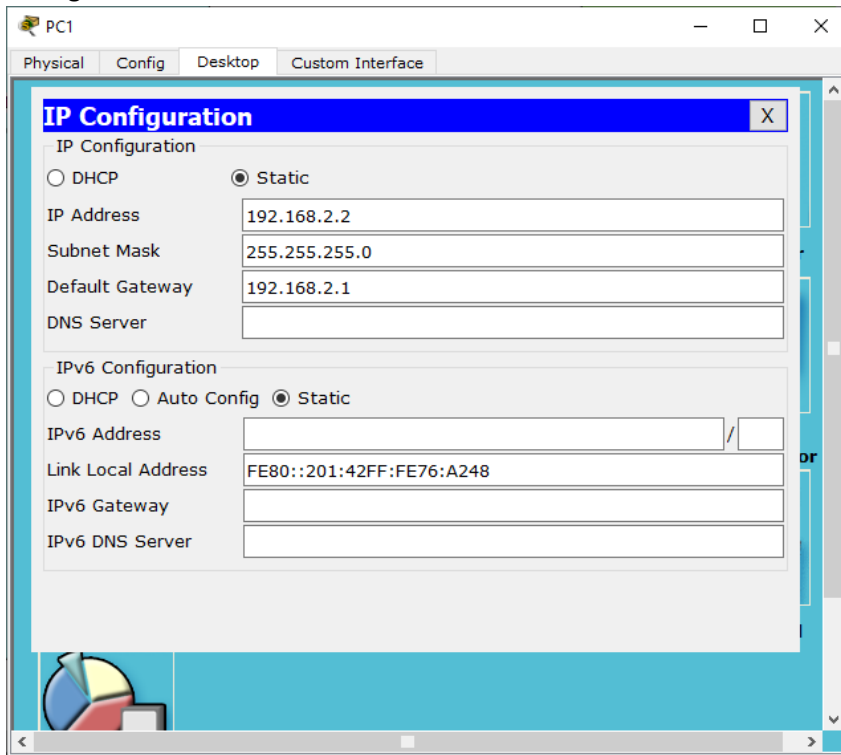
Below the configuration fields, the 'Equivalent IOS Commands' section shows the following commands:

```
Router(config-if)#ip address 192.168.1.2 255.255.255.0
Router(config-if)#no shutdown

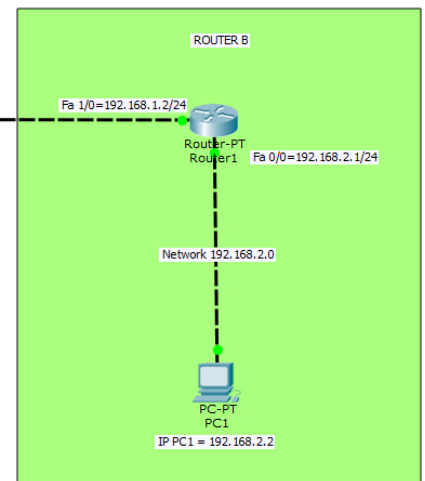
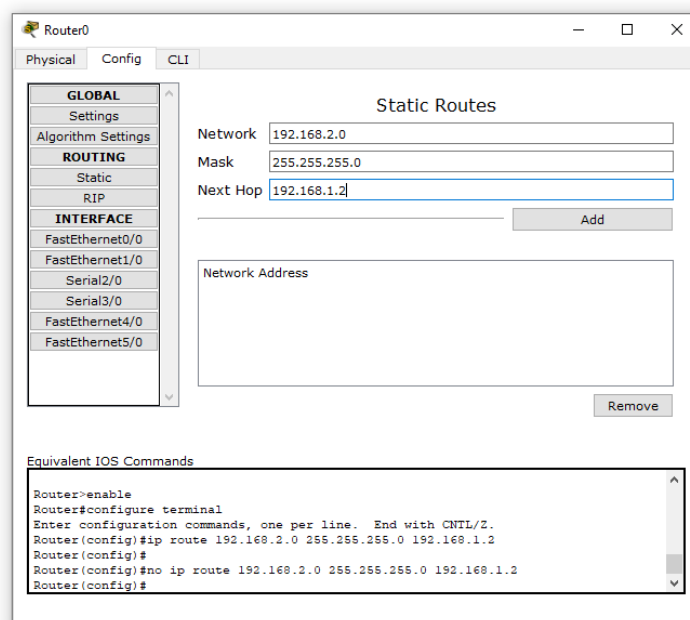
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/0, changed state to up
```

Konfigurasi PC1 Router B



- Setelah semuanya terkonfigurasi dengan benar, pastikan tidak ada titik yang berwarna merah, pastikan semua titik berwarna hijau.
- Buka Router A, masuk ke config, pilih routing, pilih static,



Isi kan sesuai yang ada pada Router B, kemudian klik Add

The screenshot shows the configuration window for Router0. The 'Static Routes' tab is active, displaying the following fields: Network (192.168.2.0), Mask (255.255.255.0), and Next Hop (192.168.1.2). Below these fields is a table for 'Network Address' with one entry: 192.168.2.0/24 via 192.168.1.2. To the right of the table is an 'Add' button. Below the table is a 'Remove' button. At the bottom, there is a section for 'Equivalent IOS Commands' with the following text:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#
Router(config)#no ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#ip route 192.168.2.0 255.255.255.0 192.168.1.2
Router(config)#
```

To the right of the configuration window is a network diagram for Router B. It shows a green background with a router icon labeled 'ROUTER B' and a PC icon labeled 'PC-PT PC1'. The router has two interfaces: Fa 1/0=192.168.1.2/24 and Fa 0/0=192.168.2.1/24. A dashed line connects the router to the PC, labeled 'Network 192.168.2.0'. The PC has an IP address of 192.168.2.2.

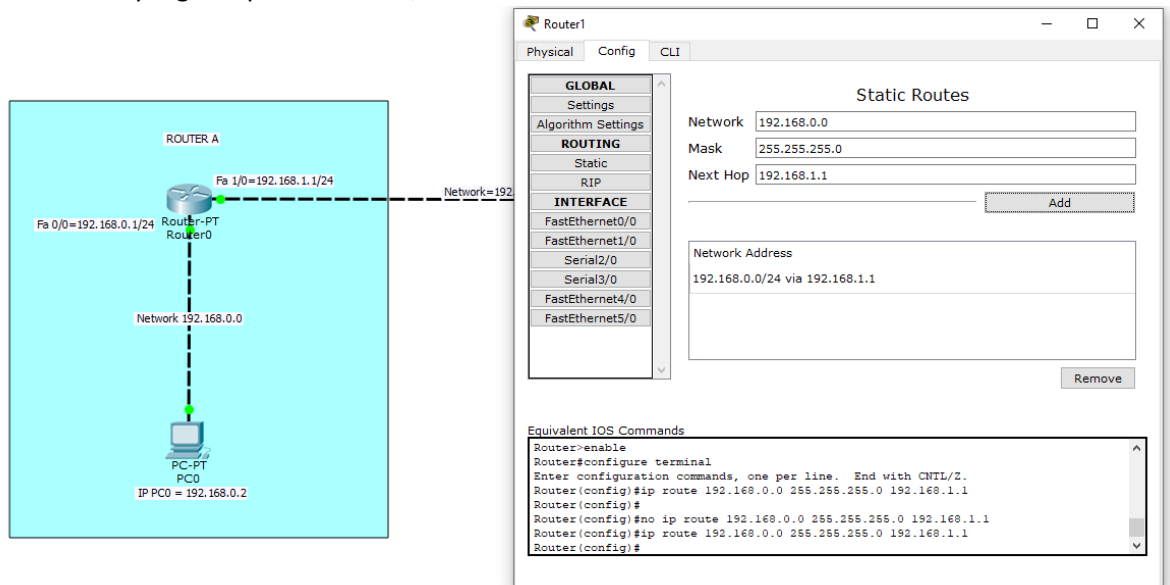
6. Buka Router B, masuk ke config, pilih routing, pilih static

The screenshot shows the configuration window for Router1. The 'Static Routes' tab is active, displaying the following fields: Network (192.168.0.0), Mask (255.255.255.0), and Next Hop (192.168.1.1). Below these fields is a table for 'Network Address' with one entry: 192.168.0.0/24 via 192.168.1.1. To the right of the table is an 'Add' button. Below the table is a 'Remove' button. At the bottom, there is a section for 'Equivalent IOS Commands' with the following text:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 192.168.0.0 255.255.255.0 192.168.1.1
Router(config)#
Router(config)#no ip route 192.168.0.0 255.255.255.0 192.168.1.1
Router(config)#
```

To the left of the configuration window is a network diagram for Router A. It shows a light blue background with a router icon labeled 'ROUTER A' and a PC icon labeled 'PC-PT PC0'. The router has two interfaces: Fa 0/0=192.168.0.1/24 and Fa 1/0=192.168.1.1/24. A dashed line connects the router to the PC, labeled 'Network 192.168.0.0'. The PC has an IP address of 192.168.0.2.

Isikan sesuai yang ada pada router A, kemudian klik Add



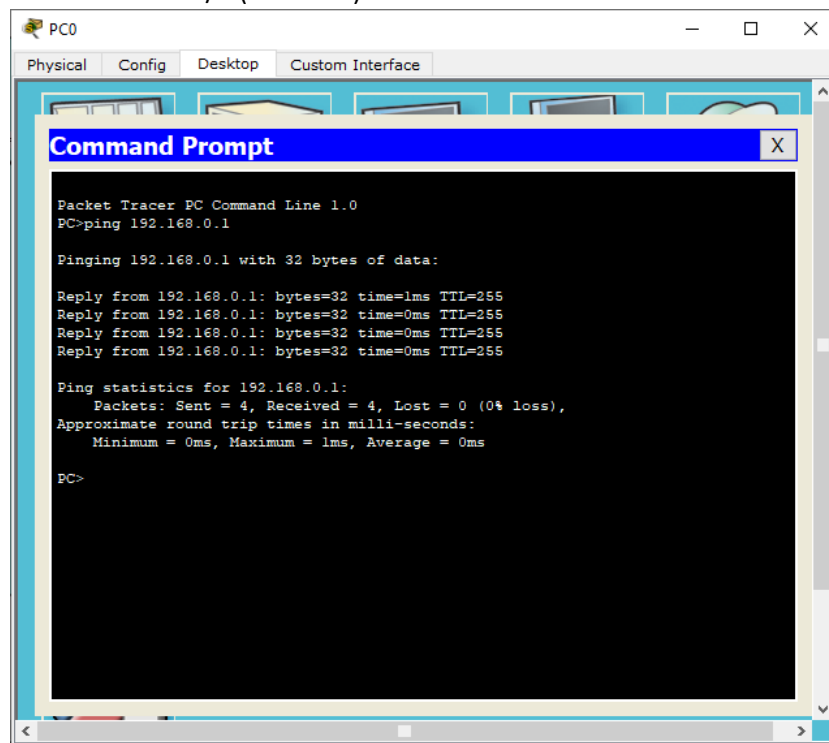
The image shows a network diagram on the left and a Packet Tracer configuration window for Router1 on the right.

Network Diagram: A light blue rectangular area contains a router labeled 'ROUTER A' and a PC labeled 'PC0'. The router has two interfaces: 'Fa 0/0=192.168.0.1/24' and 'Fa 1/0=192.168.1.1/24'. A dashed line connects the router to the PC, labeled 'Network 192.168.0.0'. The PC is labeled 'PC0' and 'IP PC0 = 192.168.0.2'. A dashed line extends from the router's Fa 1/0 interface to the right, labeled 'Network=192.168.1.1'.

Router1 Configuration Window: The window has tabs for 'Physical', 'Config', and 'CLI'. The 'Config' tab is active, showing a tree view on the left with 'GLOBAL', 'ROUTING', and 'INTERFACE' sections. The 'Static Routes' section is expanded, showing fields for 'Network' (192.168.0.0), 'Mask' (255.255.255.0), and 'Next Hop' (192.168.1.1). An 'Add' button is visible. Below the fields, the 'Network Address' is listed as '192.168.0.0/24 via 192.168.1.1'. A 'Remove' button is at the bottom right. The 'Equivalent IOS Commands' section at the bottom shows the following commands:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ip route 192.168.0.0 255.255.255.0 192.168.1.1
Router(config)#
Router(config)#no ip route 192.168.0.0 255.255.255.0 192.168.1.1
Router(config)#ip route 192.168.0.0 255.255.255.0 192.168.1.1
Router(config)#
```

7. Setelah terisi semuanya coba cek dengan perintah ping, dari PC0 atau dari PC1
8. Ping ditiap titik,
misalkan dari PC0
PC0 PING ke Fa0/0 (Router A)



The image shows a Packet Tracer window for PC0 with tabs for 'Physical', 'Config', 'Desktop', and 'Custom Interface'. The 'Desktop' tab is active, showing a 'Command Prompt' window. The command prompt displays the output of a ping command from PC0 to 192.168.0.1.

```
Packet Tracer PC Command Line 1.0
PC>ping 192.168.0.1

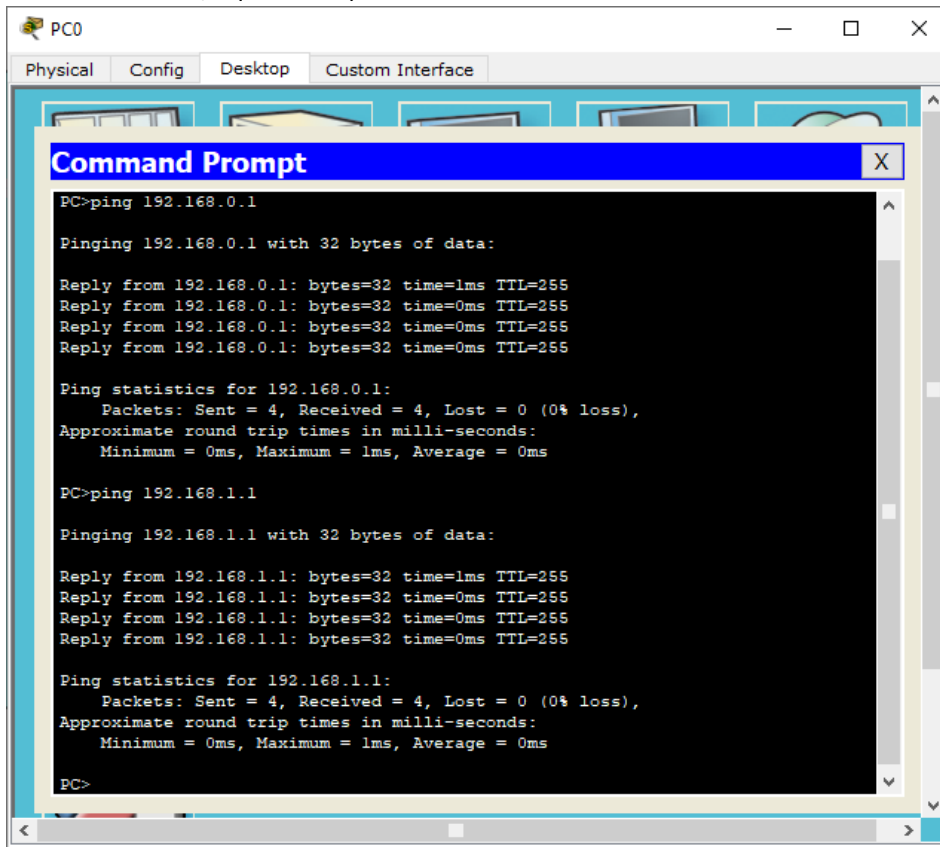
Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=1ms TTL=255
Reply from 192.168.0.1: bytes=32 time=0ms TTL=255
Reply from 192.168.0.1: bytes=32 time=0ms TTL=255
Reply from 192.168.0.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>
```

PC0 PING ke Fa1/0 (Router A)



The screenshot shows a PC0 window with a Command Prompt open. The Command Prompt has a blue title bar and a black background with white text. It displays the results of two ping commands. The first command is 'PC>ping 192.168.0.1', which shows four successful replies with 32 bytes of data, a time of 1ms, and a TTL of 255. The second command is 'PC>ping 192.168.1.1', which also shows four successful replies with 32 bytes of data, a time of 1ms, and a TTL of 255. Both commands show a 0% loss and an average round trip time of 0ms.

```
PC0
Physical Config Desktop Custom Interface

Command Prompt

PC>ping 192.168.0.1

Pinging 192.168.0.1 with 32 bytes of data:

Reply from 192.168.0.1: bytes=32 time=1ms TTL=255
Reply from 192.168.0.1: bytes=32 time=0ms TTL=255
Reply from 192.168.0.1: bytes=32 time=0ms TTL=255
Reply from 192.168.0.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>ping 192.168.1.1

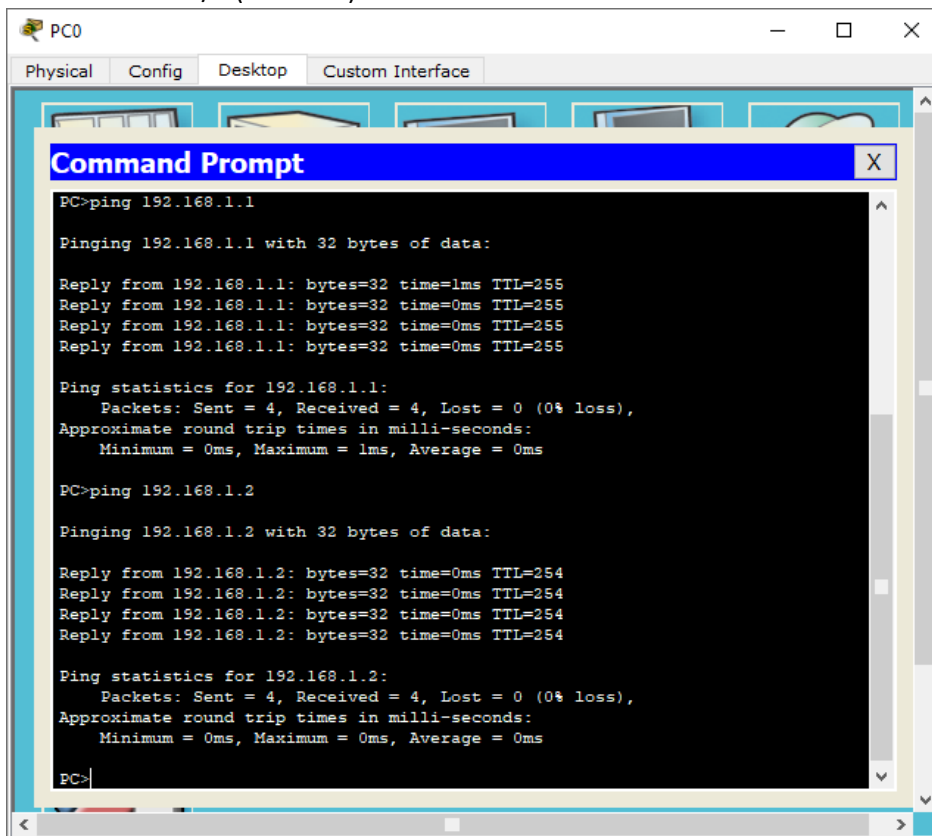
Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>
```

PC0 PING ke Fa1/0 (Router B)



The screenshot shows a PC0 window with a Command Prompt open. The Command Prompt has a blue title bar and a black background with white text. It displays the results of two ping commands. The first command is 'PC>ping 192.168.1.1', which shows four successful replies with 32 bytes of data, a time of 1ms, and a TTL of 255. The second command is 'PC>ping 192.168.1.2', which also shows four successful replies with 32 bytes of data, a time of 0ms, and a TTL of 254. Both commands show a 0% loss and an average round trip time of 0ms.

```
PC0
Physical Config Desktop Custom Interface

Command Prompt

PC>ping 192.168.1.1

Pinging 192.168.1.1 with 32 bytes of data:

Reply from 192.168.1.1: bytes=32 time=1ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255
Reply from 192.168.1.1: bytes=32 time=0ms TTL=255

Ping statistics for 192.168.1.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>ping 192.168.1.2

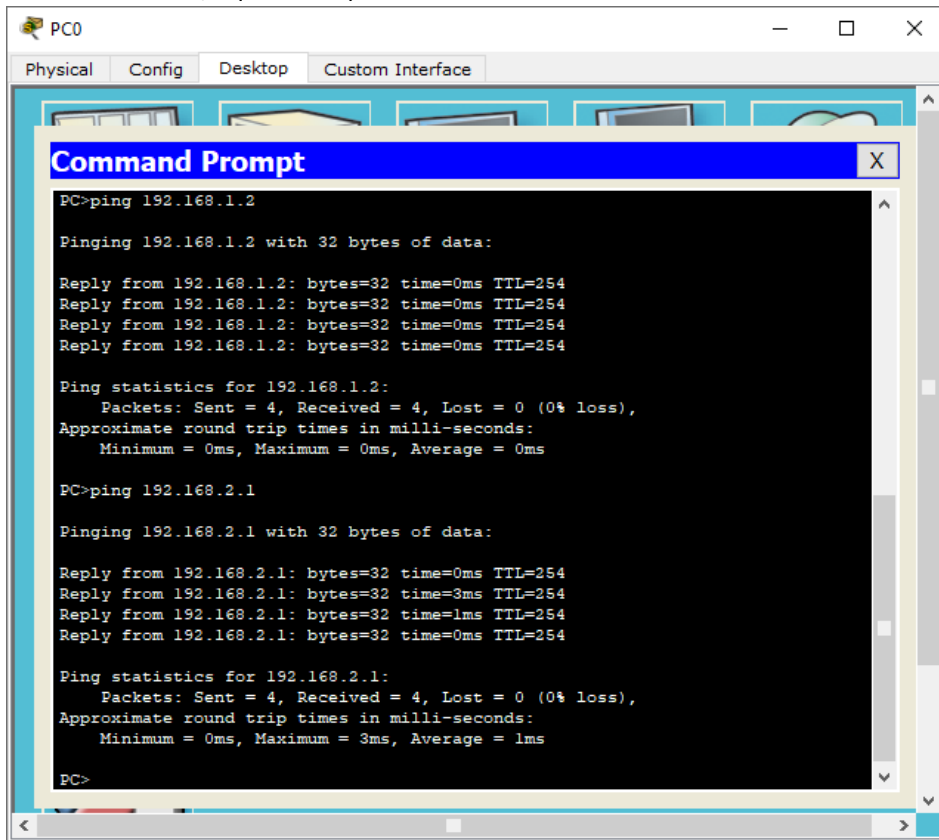
Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=0ms TTL=254
Reply from 192.168.1.2: bytes=32 time=0ms TTL=254
Reply from 192.168.1.2: bytes=32 time=0ms TTL=254
Reply from 192.168.1.2: bytes=32 time=0ms TTL=254

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```

PC0 PING ke Fa0/0 (Router B)



The screenshot shows a PC0 window with a Command Prompt open. The Command Prompt has a blue title bar and a black background with white text. It displays the results of two ping commands. The first command is 'ping 192.168.1.2', which shows four successful replies with 0ms round trip times. The second command is 'ping 192.168.2.1', which shows four successful replies with round trip times of 0ms, 3ms, 1ms, and 0ms. The window has tabs for 'Physical', 'Config', 'Desktop', and 'Custom Interface'.

```
PC0
Physical Config Desktop Custom Interface

Command Prompt

PC>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:

Reply from 192.168.1.2: bytes=32 time=0ms TTL=254
Reply from 192.168.1.2: bytes=32 time=0ms TTL=254
Reply from 192.168.1.2: bytes=32 time=0ms TTL=254
Reply from 192.168.1.2: bytes=32 time=0ms TTL=254

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>ping 192.168.2.1

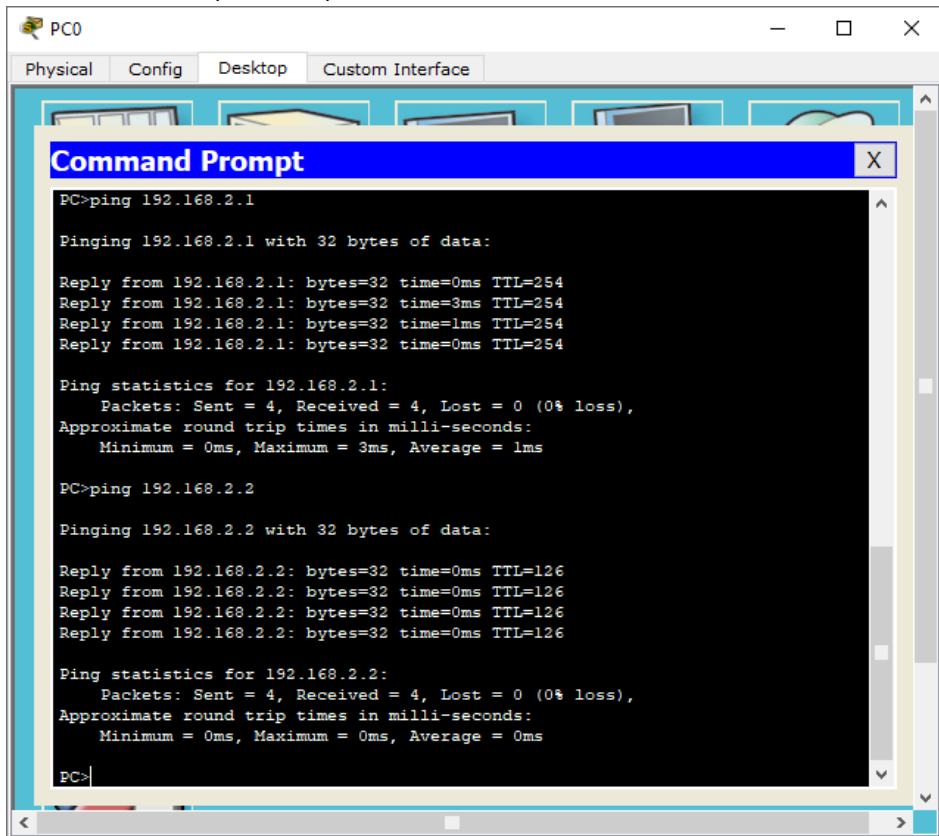
Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=0ms TTL=254
Reply from 192.168.2.1: bytes=32 time=3ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=0ms TTL=254

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

PC>
```

PC0 PING ke PC1 (Router B)



The screenshot shows a PC0 window with a Command Prompt open. The Command Prompt has a blue title bar and a black background with white text. It displays the results of two ping commands. The first command is 'ping 192.168.2.1', which shows four successful replies with round trip times of 0ms, 3ms, 1ms, and 0ms. The second command is 'ping 192.168.2.2', which shows four successful replies with 0ms round trip times. The window has tabs for 'Physical', 'Config', 'Desktop', and 'Custom Interface'.

```
PC0
Physical Config Desktop Custom Interface

Command Prompt

PC>ping 192.168.2.1

Pinging 192.168.2.1 with 32 bytes of data:

Reply from 192.168.2.1: bytes=32 time=0ms TTL=254
Reply from 192.168.2.1: bytes=32 time=3ms TTL=254
Reply from 192.168.2.1: bytes=32 time=1ms TTL=254
Reply from 192.168.2.1: bytes=32 time=0ms TTL=254

Ping statistics for 192.168.2.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 3ms, Average = 1ms

PC>ping 192.168.2.2

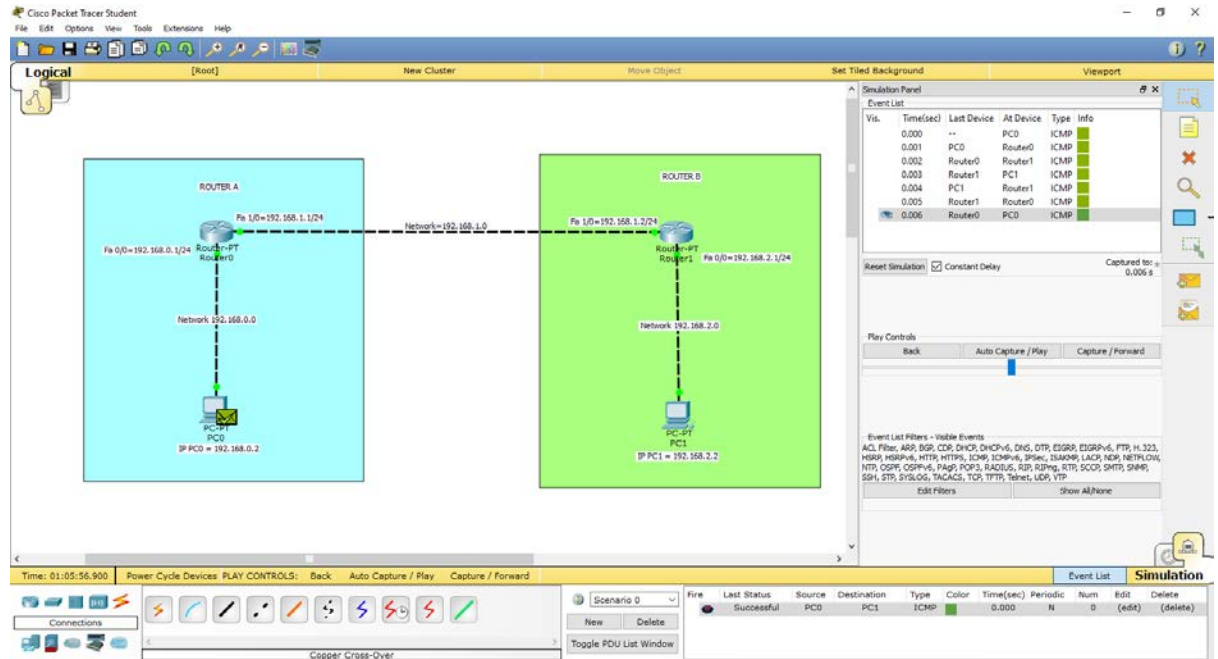
Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time=0ms TTL=126
Reply from 192.168.2.2: bytes=32 time=0ms TTL=126
Reply from 192.168.2.2: bytes=32 time=0ms TTL=126
Reply from 192.168.2.2: bytes=32 time=0ms 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 = 0ms, Maximum = 0ms, Average = 0ms

PC>
```


9. Setelah semuanya bias terPING, lakukan simulasi pengiriman packet



10. Kalau sudah melakukan PING sudah reply dan simulasi pengiriman packet hasilnya successful berarti ROUTING STATIC sudah bekerja