

Nama : Pawitro Purbangkoro

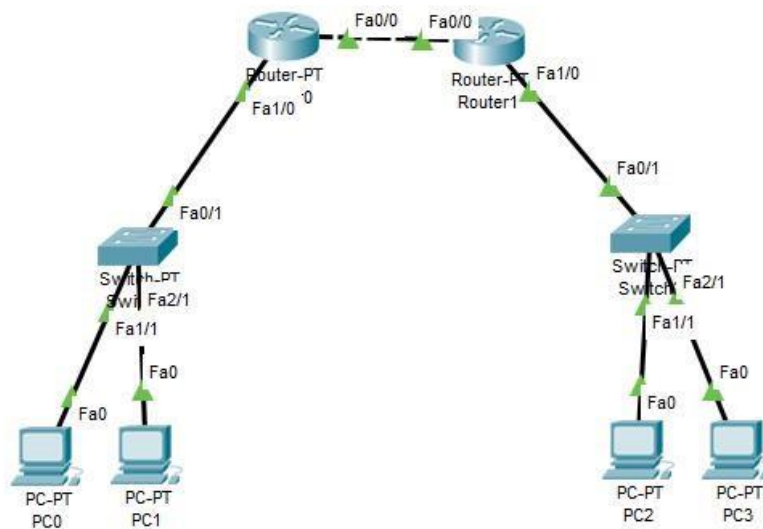
NIM : L200170045

Kelas : B

MODUL08

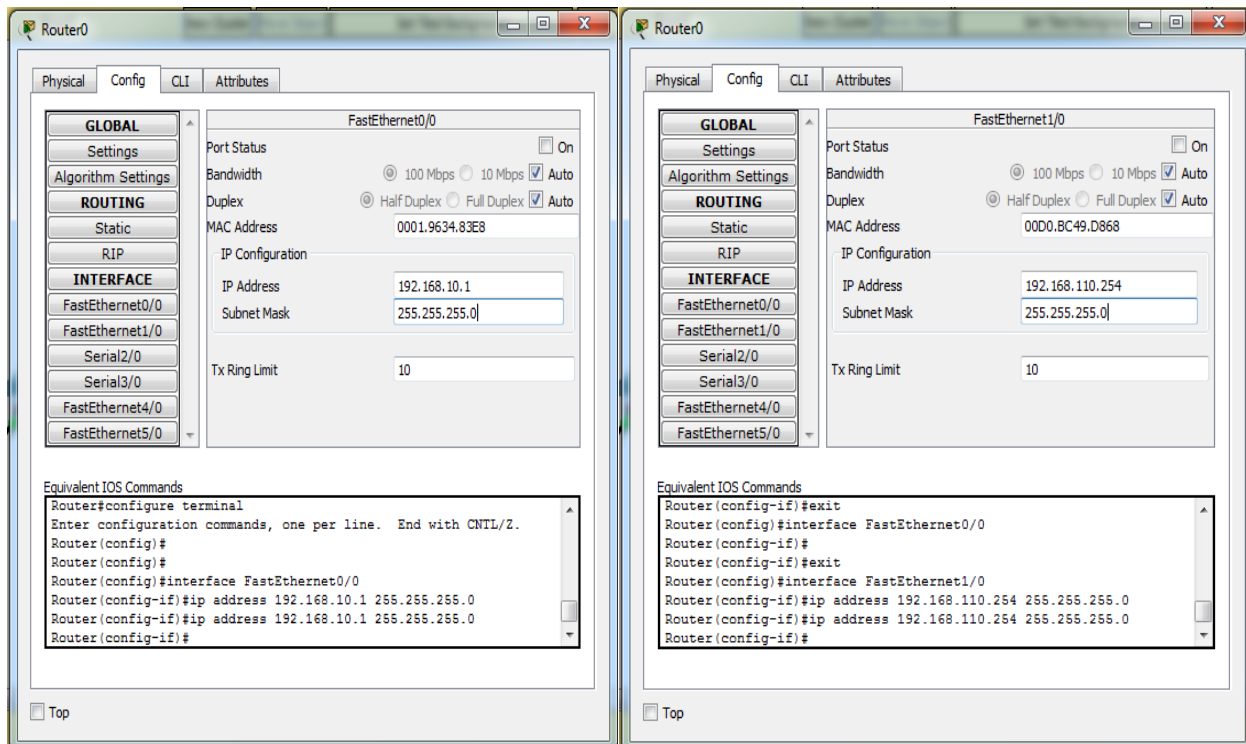
PACKET FILTERING DENGAN ACCESS LIST

Kegiatan 1. Konfigurasi Access List

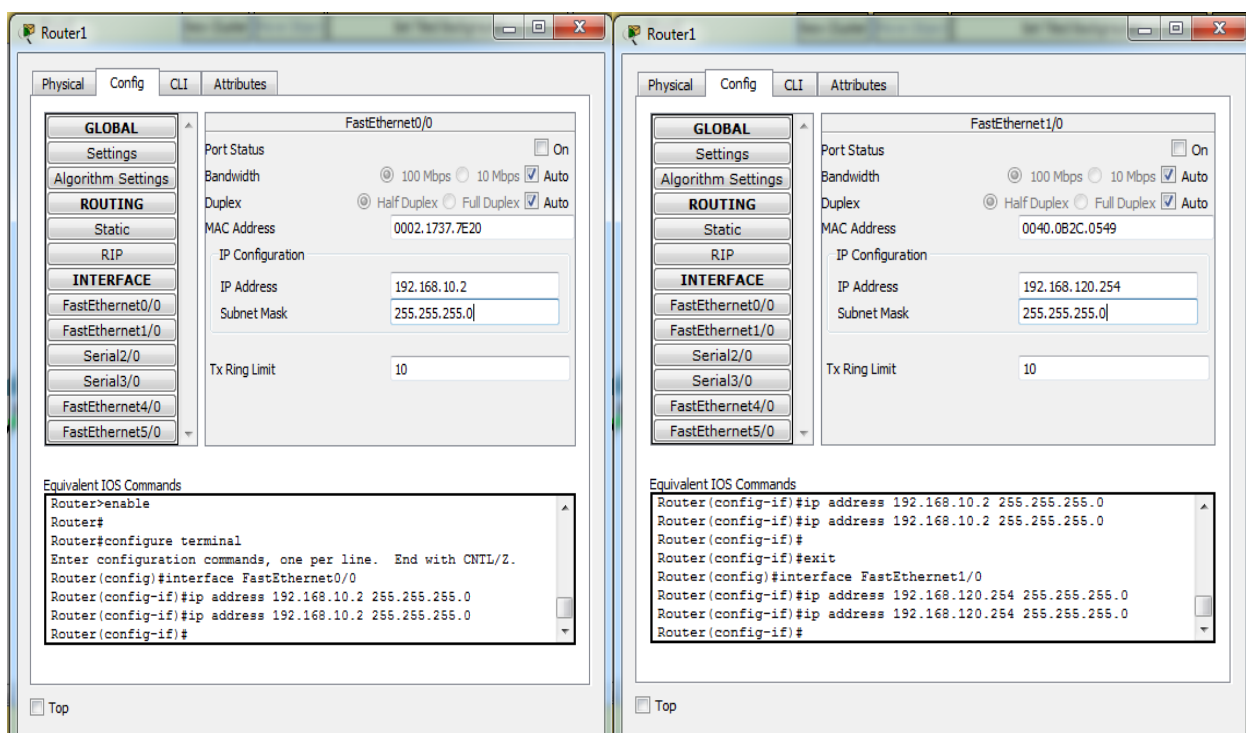


Langkah – langkah yang dilakukan untuk mengkonfigurasi Access List pada rangkaian di atas:

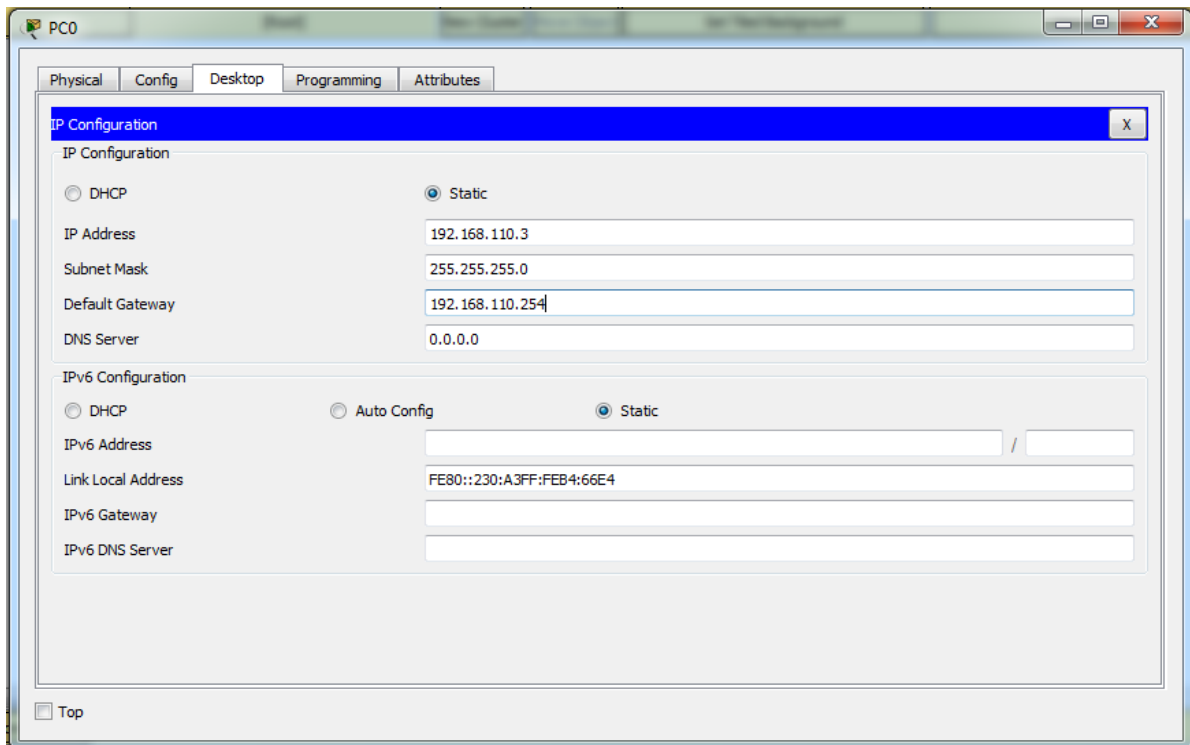
1. Berikan IP pada :
 - a. Router 0.



- b. Router1



2. Berikan alamat IP, subnet mask, dan default gateway pada PC0, PC1, PC2, dan PC3

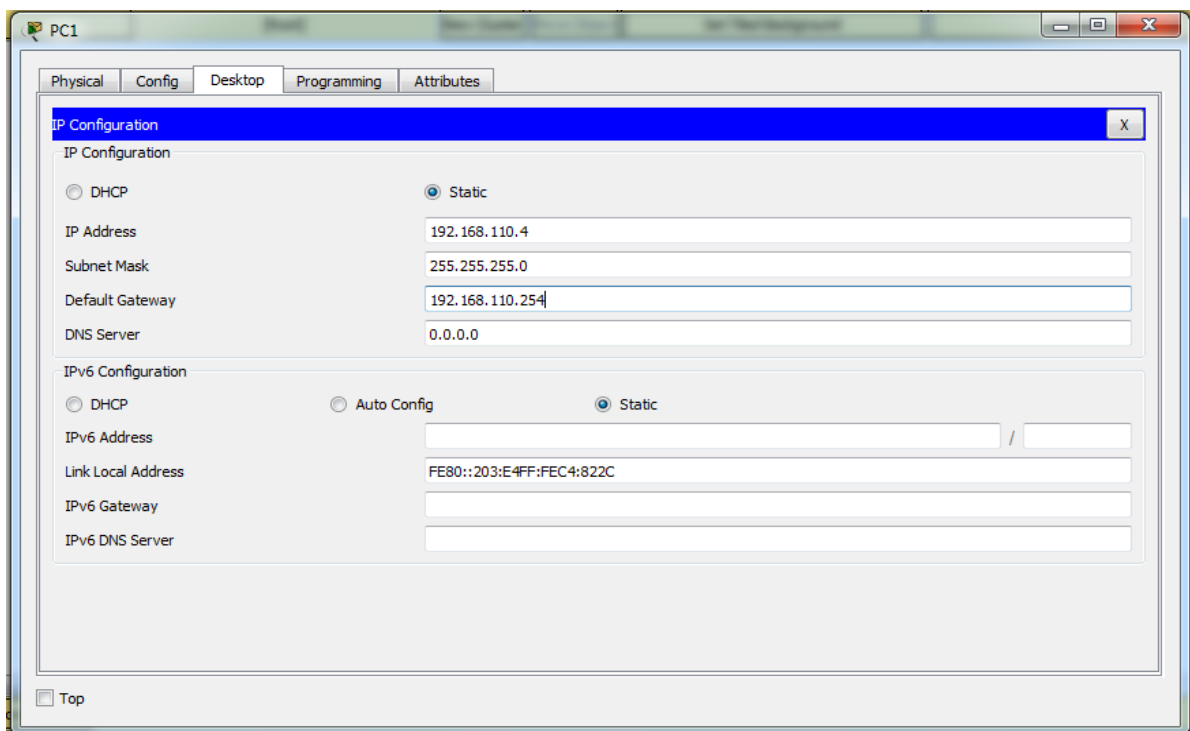


The screenshot shows the 'IP Configuration' window for PC0. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

Field	Value
IP Address	192.168.110.3
Subnet Mask	255.255.255.0
Default Gateway	192.168.110.254
DNS Server	0.0.0.0

Under 'IPv6 Configuration', the 'Static' radio button is selected. The fields are filled with the following values:

Field	Value
IPv6 Address	
Link Local Address	FE80::230:A3FF:FE84:66E4
IPv6 Gateway	
IPv6 DNS Server	



The screenshot shows the 'IP Configuration' window for PC1. The 'Static' radio button is selected under 'IP Configuration'. The fields are filled with the following values:

Field	Value
IP Address	192.168.110.4
Subnet Mask	255.255.255.0
Default Gateway	192.168.110.254
DNS Server	0.0.0.0

Under 'IPv6 Configuration', the 'Static' radio button is selected. The fields are filled with the following values:

Field	Value
IPv6 Address	
Link Local Address	FE80::203:E4FF:FEC4:822C
IPv6 Gateway	
IPv6 DNS Server	

PC2

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.120.3

Subnet Mask 255.255.255.0

Default Gateway 192.168.120.254

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

Link Local Address FE80::260:3EFF:FE65:AA50

IPv6 Gateway

IPv6 DNS Server

Top

PC3

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.120.4

Subnet Mask 255.255.255.0

Default Gateway 192.168.120.254

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address /

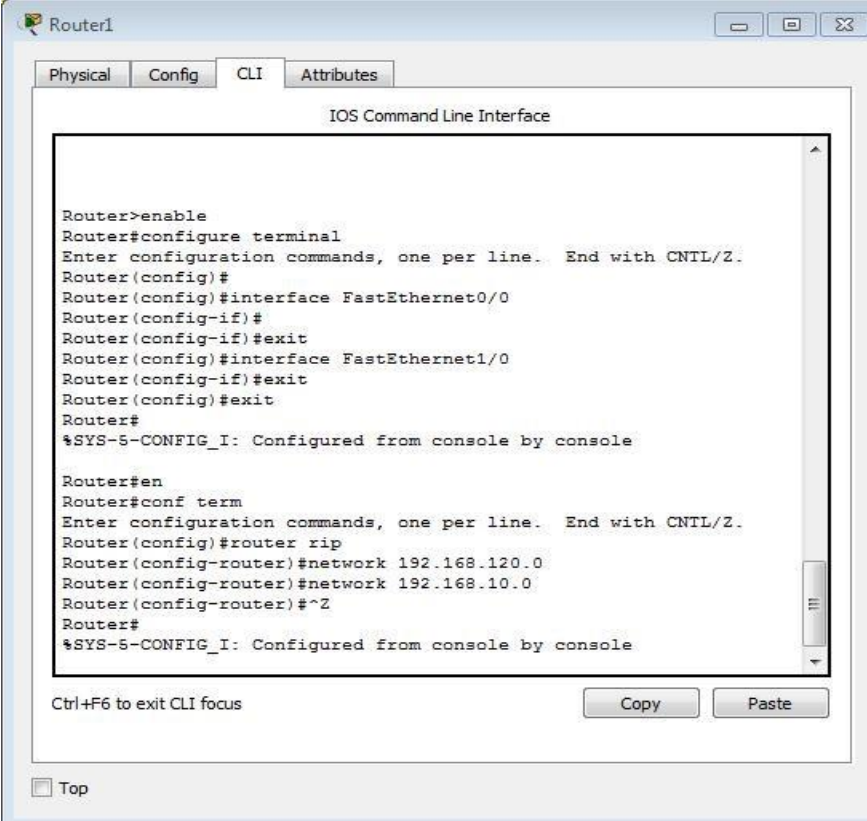
Link Local Address FE80::2D0:97FF:FE65:B0EB

IPv6 Gateway

IPv6 DNS Server

Top

3. Setting RIP protocol pada masing – masing router.

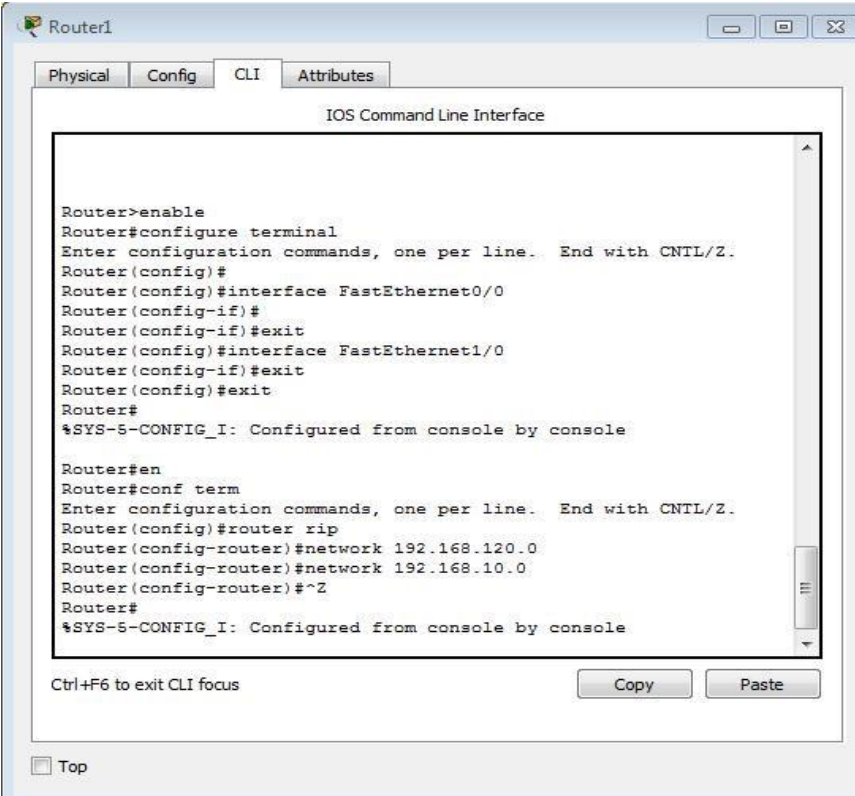


The screenshot shows the Router1 CLI interface with the following commands and output:

```
Router>enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet1/0
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 192.168.120.0
Router(config-router)#network 192.168.10.0
Router(config-router)#~Z
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Below the terminal window, there is a text label "Ctrl+F6 to exit CLI focus" and two buttons labeled "Copy" and "Paste". At the bottom left, there is a checkbox labeled "Top".



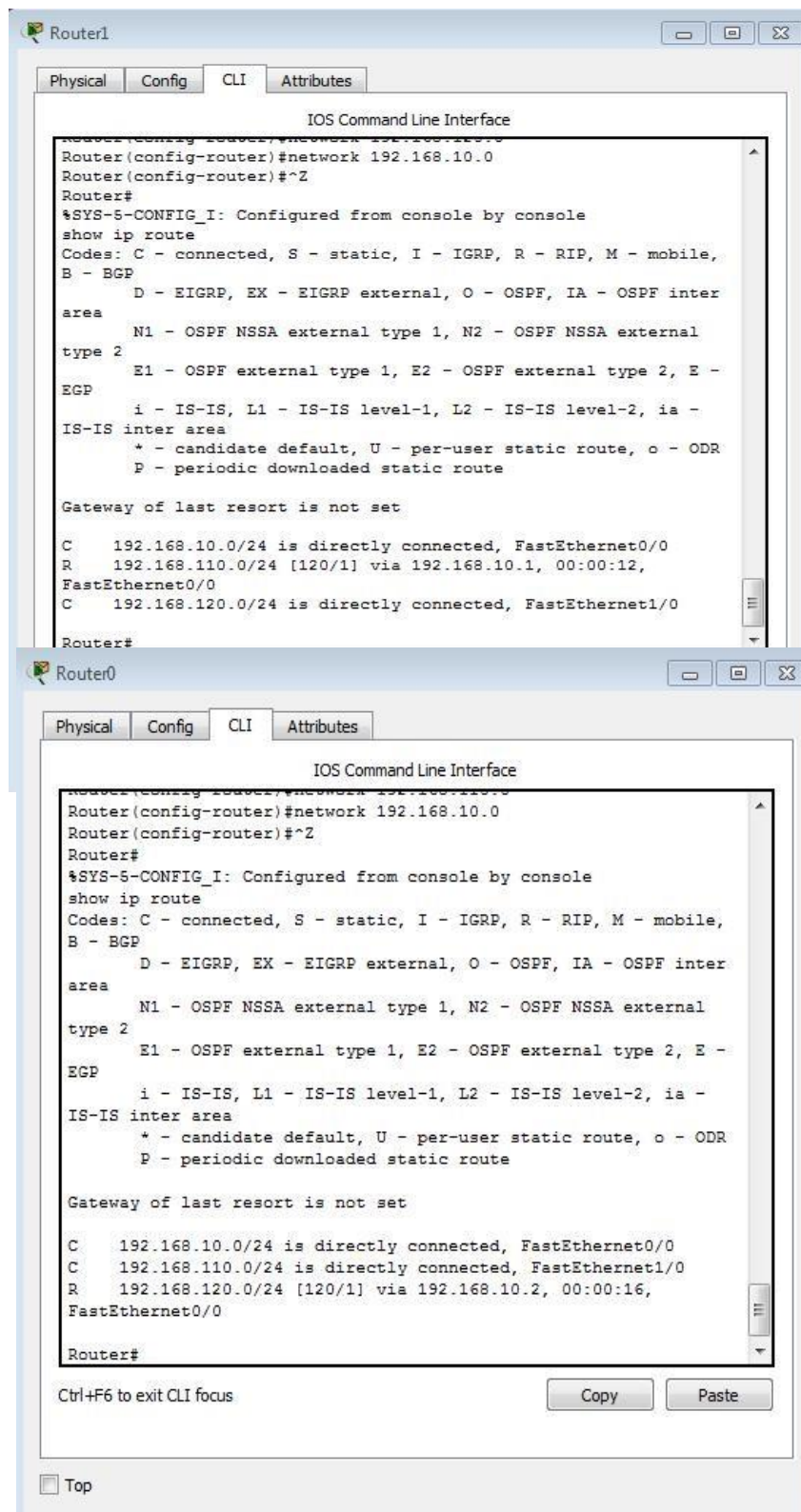
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Router(config-if)#exit
Router(config)#exit
Router#
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%SYS-5-CONFIG_I: Configured from console by console
```

Below the terminal window, there is a text label "Ctrl+F6 to exit CLI focus" and two buttons labeled "Copy" and "Paste". At the bottom left, there is a checkbox labeled "Top".

4. Mengecek tabel routing pada masing – masing router.



5. Melakukan tes koneksi dengan menggunakan perintah [ping] pada PC0 ke PC3, dan sebaliknya.

PC0

```
C:\>ping 192.168.120.4

Pinging 192.168.120.4 with 32 bytes of data:

Reply from 192.168.120.4: bytes=32 time=1ms TTL=126
Reply from 192.168.120.4: bytes=32 time=1ms TTL=126
Reply from 192.168.120.4: bytes=32 time=1ms TTL=126
Reply from 192.168.120.4: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.120.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 1ms, Average = 1ms
```

PC1

```
C:\>ping 192.168.110.4

Pinging 192.168.110.4 with 32 bytes of data:

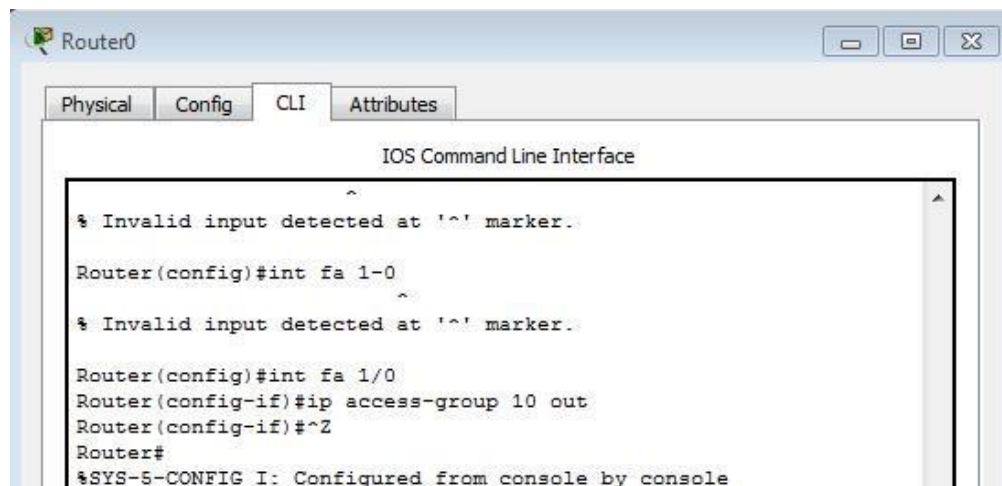
Reply from 192.168.110.4: bytes=32 time=1ms TTL=126
Reply from 192.168.110.4: bytes=32 time=1ms TTL=126
Reply from 192.168.110.4: bytes=32 time<1ms TTL=126
Reply from 192.168.110.4: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```

Dari hasil yang muncul, menunjukkan bahwa masing – masing PC saling membalas ping yang mereka terima, sehingga routing berhasil.

6. Berikutnya mengatur Access List pada Router0.

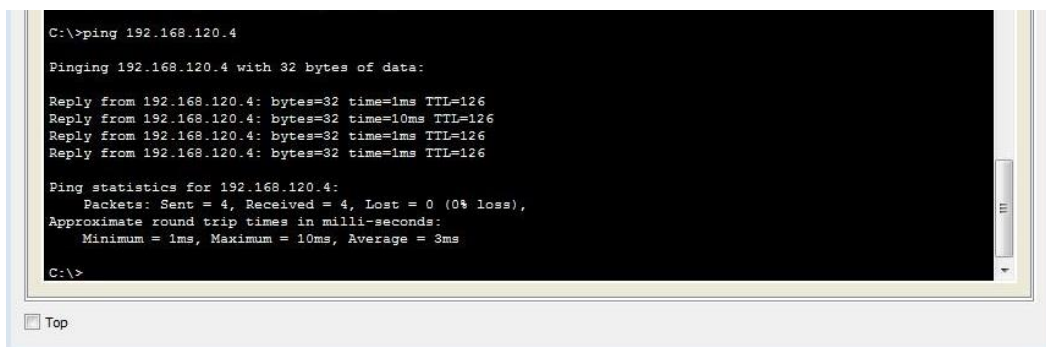
```
Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#access-list 10 permit 192.168.120.0 0.0.255.255
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
```



7. Melihat konfigurasi Access List Router0.

```
show access-lists
Standard IP access list 10
 10 permit 192.168.0.0 0.0.255.255
```

1. Melakukan tes koneksi dengan menggunakan perintah [ping] pada PC0 ke PC3, dan sebaliknya. kedua PC tersebut berada pada jaringan yang berbeda, jika koneksi berhasil maka routing anda berhasil



```
C:\>ping 192.168.120.4

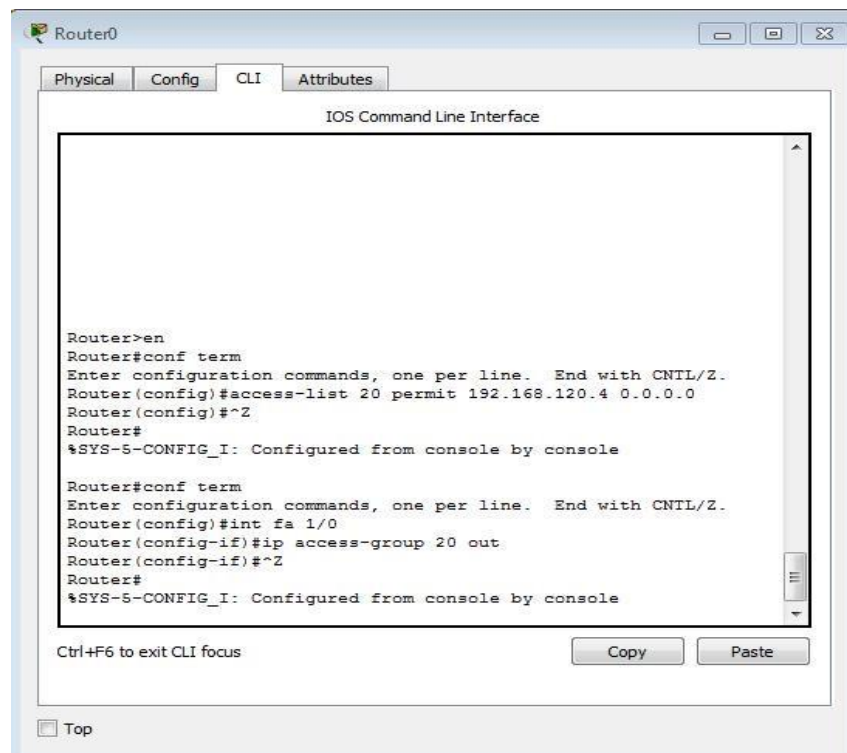
Pinging 192.168.120.4 with 32 bytes of data:

Reply from 192.168.120.4: bytes=32 time=1ms TTL=126
Reply from 192.168.120.4: bytes=32 time=10ms TTL=126
Reply from 192.168.120.4: bytes=32 time=1ms TTL=126
Reply from 192.168.120.4: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.120.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 10ms, Average = 3ms

C:\>
```

8. Membuat Access List lain pada Router0.



```
Router0
Physical Config CLI Attributes
IOS Command Line Interface

Router>en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#access-list 20 permit 192.168.120.4 0.0.0.0
Router(config)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 1/0
Router(config-if)#ip access-group 20 out
Router(config-if)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console

Ctrl+F6 to exit CLI focus
```


9. Melakukan test koneksi pada PC2 yang berada pada jaringan 192.168.120.0 ke PC0 dan PC1 yang ada pada jaringan 192.168.110.0.

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>ping 192.168.110.4

Pinging 192.168.110.4 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

Kesimpulan dari tes 'ping' diatas adalah berhasil terjadi koneksi dikarenakan dari [Router 0] mengijinkan semua host dari jaringan 192.168.120.0 dapat mengakses jaringan 192.168.110.0

10. Melakukan test koneksi pada PC3 yang berada pada jaringan 192.168.120.0 ke PC0 dan PC1 yang ada pada jaringan 192.168.110.0.

```
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.110.3: bytes=32 time=1ms TTL=126
Reply from 192.168.110.3: bytes=32 time=3ms TTL=126
Reply from 192.168.110.3: bytes=32 time=10ms TTL=126
Reply from 192.168.110.3: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 10ms, Average = 3ms
```

```
C:\>ping 192.168.110.4

Pinging 192.168.110.4 with 32 bytes of data:

Request timed out.
Reply from 192.168.110.4: bytes=32 time=11ms TTL=126
Reply from 192.168.110.4: bytes=32 time=10ms TTL=126
Reply from 192.168.110.4: bytes=32 time=1ms TTL=126

Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 1ms, Maximum = 11ms, Average = 7ms
```

Kesimpulannya, tes di atas berhasil karena Access List yang diatur untuk koneksi diatur agar mengijinkan hanya host dengan ip address 192.168.120.4 dimana merupakan ip dari PC3, sehingga pada saat di lakukan ping berhasil.

Kegiatan 2. Konfigurasi Extended Access List

Mengkonfigurasi Extended Access List pada Router0.

```
Router#en
Router#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#access-list 100 permit tcp 192.168.120.0 0.0.0.255
192.168.110.3 0.0.0.0 eq telnet
Router(config)#int fa 0/0
Router(config-if)#ip access-group 100 in
Router(config-if)#
```

Melakukan test koneksi dengan ping.

PC2

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 192.168.110.4

Pinging 192.168.110.4 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

PC3

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.3:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\>ping 192.168.110.4

Pinging 192.168.110.4 with 32 bytes of data:

Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.
Reply from 192.168.10.1: Destination host unreachable.

Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```