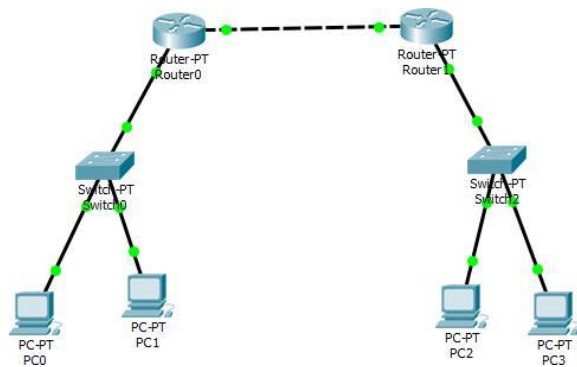


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## Laporan Praktikum Jaringan Komputer Modul 8

### Kegiatan1. Konfigurasi Access List

1. Membuat desain topologi jaringan dengan 2 router, 2 switch, 4 pc.



2. Memberikan IP address pada setiap router, switch dan pc.

Dengan ketentuan :

- ☐ Router0 :
    - o E0 : 192.168.10/24
    - o E1 : 192.168.110.254/24
  - ☐ Router1 :
    - o E0 : 192.168.10.2/24
    - o E1 : 192.168.120.254/24
  - ☐ Switch0 : 192.168.110.250/24
  - ☐ Switch1 : 192.168.120.250/24
  - ☐ Pc0 : 192.168.110.3/24
  - ☐ Pc1 : 192.168.110.4/24
  - ☐ Pc2 : 192.168.120.3/24
  - ☐ Pc3 : 192.168.120.4/24
- ☐ Memberikan IP Address untuk setiap router, masing-masing di fa0/0 dan fa1/0 sesuai dengan dimodul. Berikut contoh pada fa0/0 di Router0.

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

FastEthernet0/0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.A354.1186

IP Configuration

IP Address 192.168.10.1

Subnet Mask 255.255.255.0

Tx Ring Limit 10

- ☐ Memberikan IP Address untuk setiap PC.

PC0

Physical Config Desktop Programming Attributes

IP Configuration

IP Configuration

☐ DHCP ☒ Static

IP Address 192.168.110.3

Subnet Mask 255.255.255.0

Default Gateway 192.168.110.254

DNS Server 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::260:5CFF:FE9E:5191

IPv6 Gateway

IPv6 DNS Server

PC1

Physical Config Desktop Programming Attributes

IP Configuration

☐ DHCP ☒ Static

IP Address: 192.168.110.4

Subnet Mask: 255.255.255.0

Default Gateway: 192.168.110.254

DNS Server: 0.0.0.0

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::201:43FF:FE84:2A10

IPv6 Gateway:

IPv6 DNS Server:

PC2

Physical Config Desktop Programming Attributes

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::2E0:F7FF:FE08:881

IPv6 Gateway:

IPv6 DNS Server:

PC3

Physical Config Desktop Programming Attributes

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

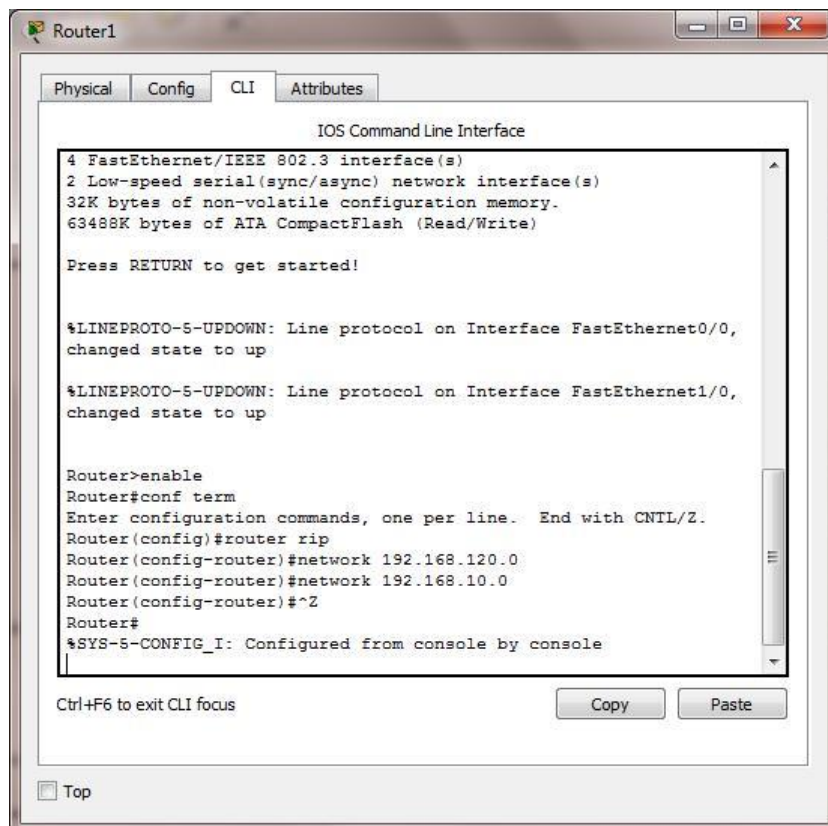
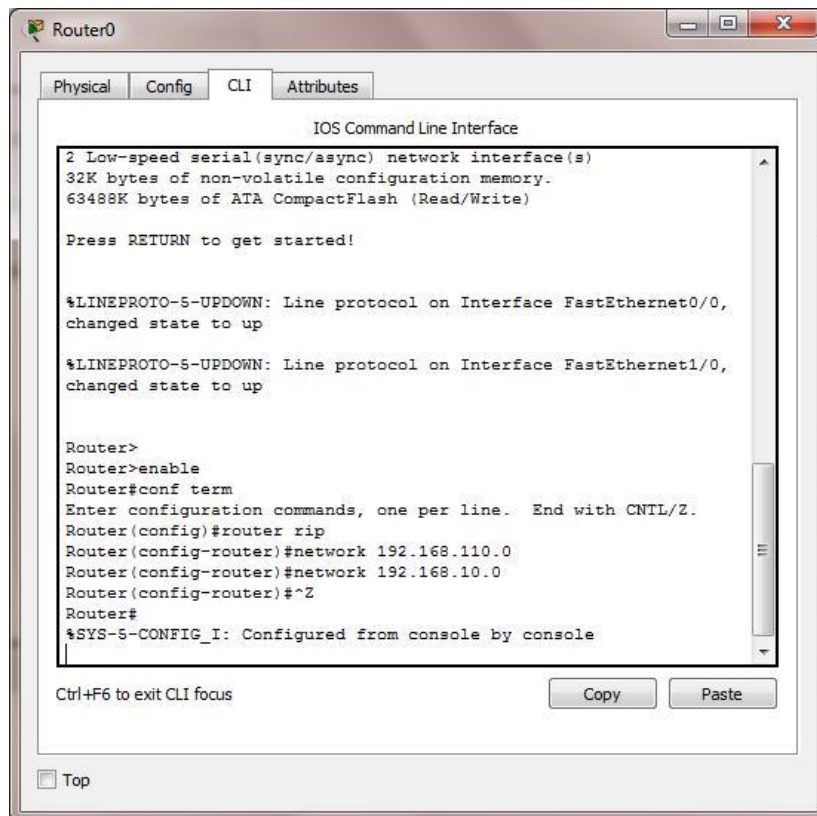
IPv6 Address: /

Link Local Address: FE80::202:4AFF:FE87:643B

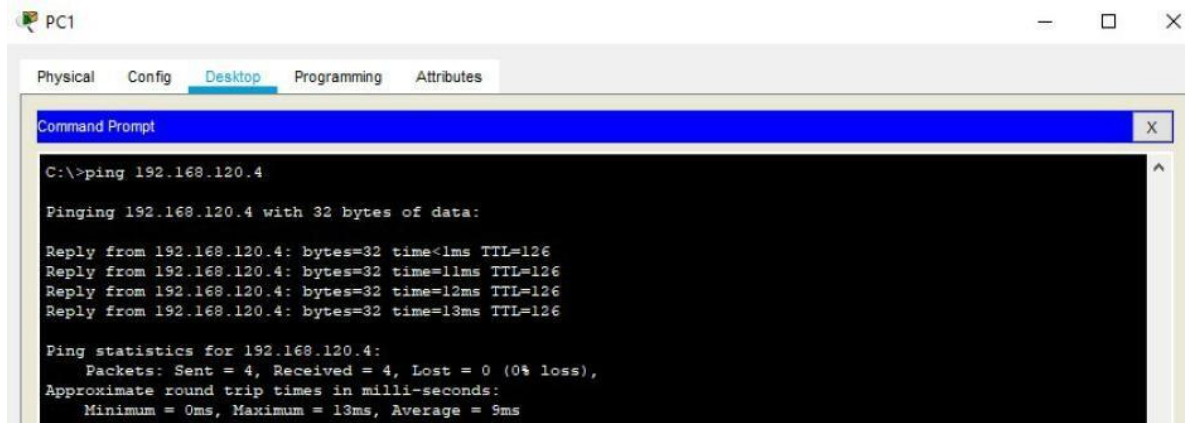
IPv6 Gateway:

IPv6 DNS Server:

3. Melakukan routing dengan protocol RIP pada kedua jaringan



- Untuk mengetest routing berhasil, ping PC1 ke PC4



The screenshot shows a Windows PC window titled 'PC1' with a 'Command Prompt' tab selected. The command prompt displays the output of a ping command to 192.168.120.4. The output shows four successful replies with varying times (1ms, 11ms, 12ms, 13ms) and a TTL of 126. The ping statistics indicate 4 packets sent, 4 received, and 0% loss, with an average round trip time of 9ms.

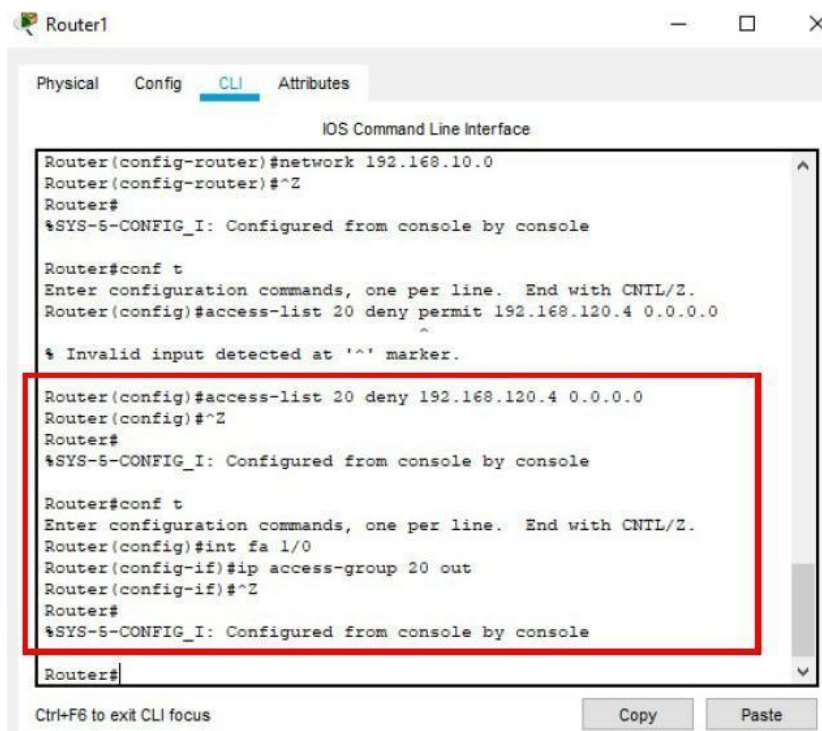
```
C:\>ping 192.168.120.4

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=11ms TTL=126
Reply from 192.168.120.4: bytes=32 time=12ms TTL=126
Reply from 192.168.120.4: bytes=32 time=13ms 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 = 0ms, Maximum = 13ms, Average = 9ms
```

#### 4. Cara memblokir akses.



The screenshot shows a Cisco Router window titled 'Router1' with the 'CLI' tab selected. The CLI shows the configuration of an access list 20 to deny traffic from 192.168.120.4. The configuration is applied to interface fa 1/0. The output shows the configuration commands and the resulting configuration.

```
Router(config-router)#network 192.168.10.0
Router(config-router)#^Z
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)#access-list 20 deny permit 192.168.120.4 0.0.0.0
% Invalid input detected at '^' marker.

Router(config)#access-list 20 deny 192.168.120.4 0.0.0.0
Router(config)#^Z
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 1/0
Router(config-if)#ip access-group 20 out
Router(config-if)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
```

#### 5. Teskoneksi dari PC3 ke PC1 dan PC2

```
PC3
Physical Config Desktop Programming Attributes
Command Prompt
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),

C:\>
```

Destination host unreachable menunjukkan bahwa akses dari PC3 ke PC1 maupun PC2 sudah terblokir.

- ☐ Tes koneksi dari PC4 ke PC1 dan PC2

```
PC4
Physical Config Desktop Programming Attributes
Command Prompt
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.

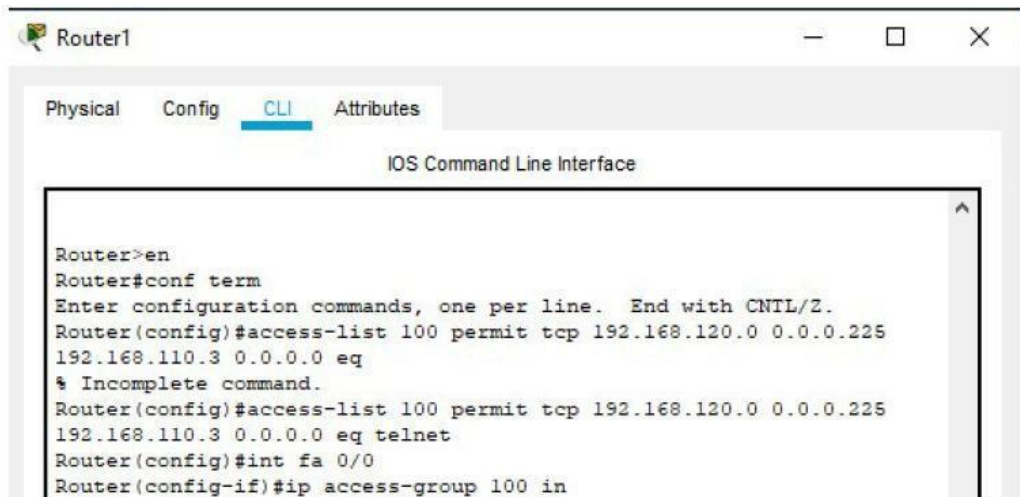
Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\>
```

Destination host unreachable menunjukkan bahwa akses dari PC4 ke PC1 maupun PC2 sudah terblokir.

## Kegiatan2. Kegiatan Extended Access List

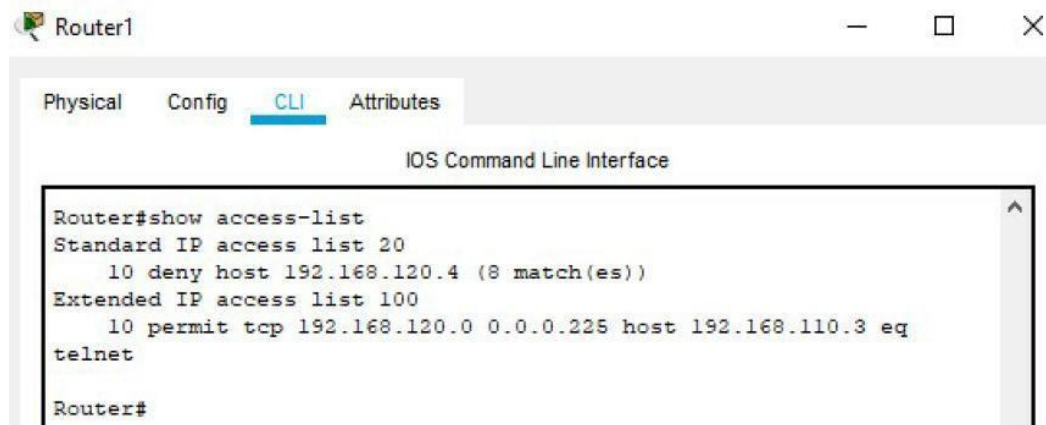
1. Konfigurasi mengizinkan paket telnet dari semua host yang ada di jaringan 192.168.120 ke host 192.168.110.3



The screenshot shows the CLI interface of Router1. The user enters 'en' to enter enable mode, then 'conf term' to enter configuration mode. They then configure an extended access list 100 to permit TCP traffic from the 192.168.120.0/24 network to host 192.168.110.3 on port 22 (telnet). Finally, they apply this access list to interface fa 0/0 in the inbound direction.

```
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 0.0.0.225
192.168.110.3 0.0.0.0 eq
% Incomplete command.
Router(config)#access-list 100 permit tcp 192.168.120.0 0.0.0.225
192.168.110.3 0.0.0.0 eq telnet
Router(config)#int fa 0/0
Router(config-if)#ip access-group 100 in
```

2. Melihat hasil konfigurasi.



The screenshot shows the CLI interface of Router1. The user enters 'show access-list' to display the current configuration of access lists. The output shows a standard IP access list 20 denying traffic from 192.168.120.4 and an extended IP access list 100 permitting TCP traffic from the 192.168.120.0/24 network to host 192.168.110.3 on port 22.

```
Router#show access-list
Standard IP access list 20
 10 deny host 192.168.120.4 (8 match(es))
Extended IP access list 100
 10 permit tcp 192.168.120.0 0.0.0.225 host 192.168.110.3 eq
telnet
Router#
```