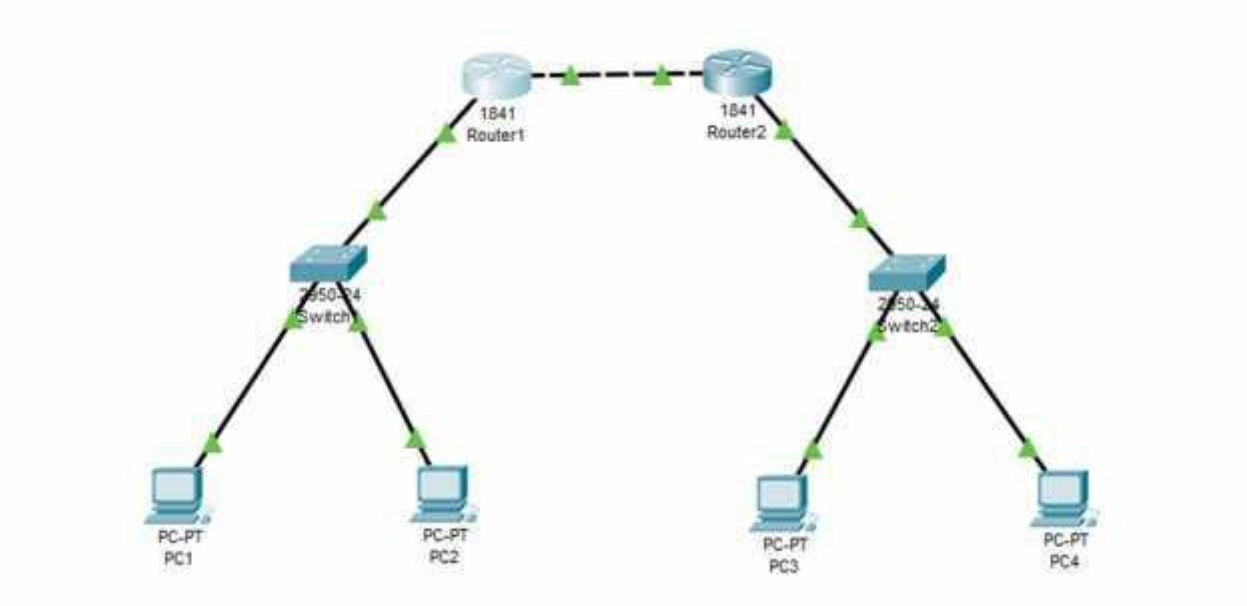
Laporan Praktikum Jaringan Komputer

Nama : Yuda Dwi Nurcahyo
NIM : L200170126
Kelas : C
Modul : 8 (Packet Filtering dengan Access List)

Kegiatan 1. Konfigurasi Access List



Konfigurasi alamat IP pada Switch1.

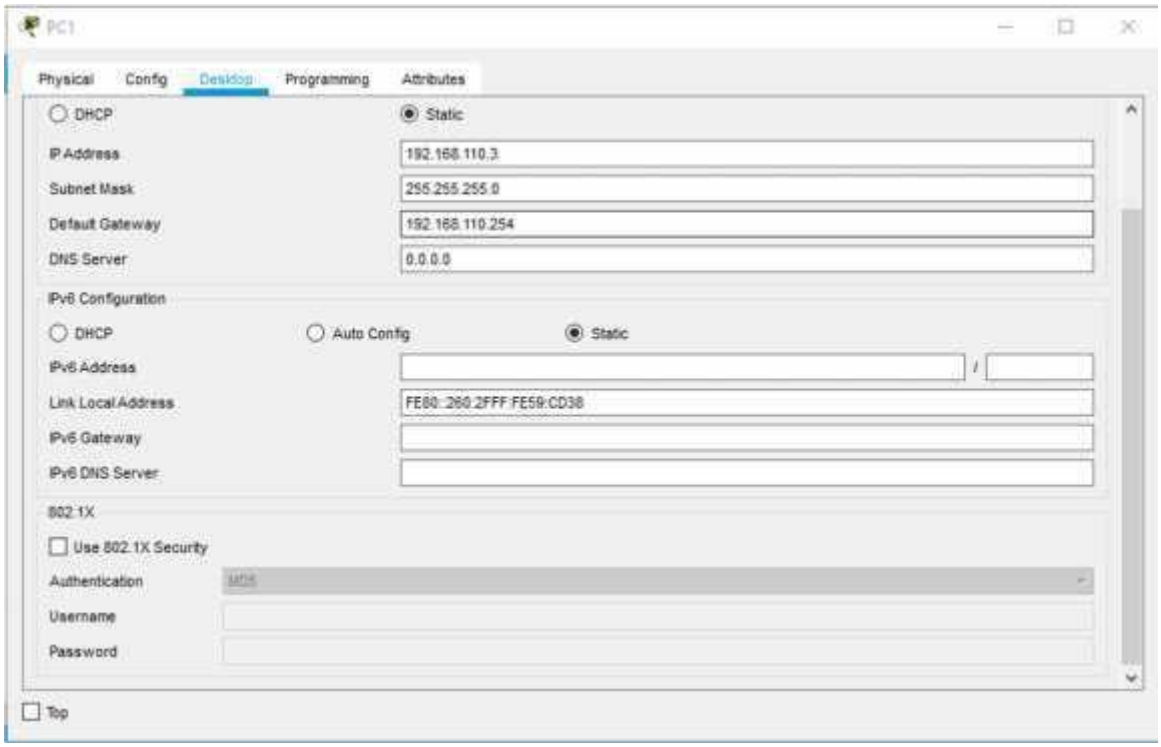
```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int vlan 1
Switch(config-if)#ip address 192.168.110.250 255.255.255.0
Switch(config-if)#no shutdown

Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```

Konfigurasi alamat IP pada Switch2.

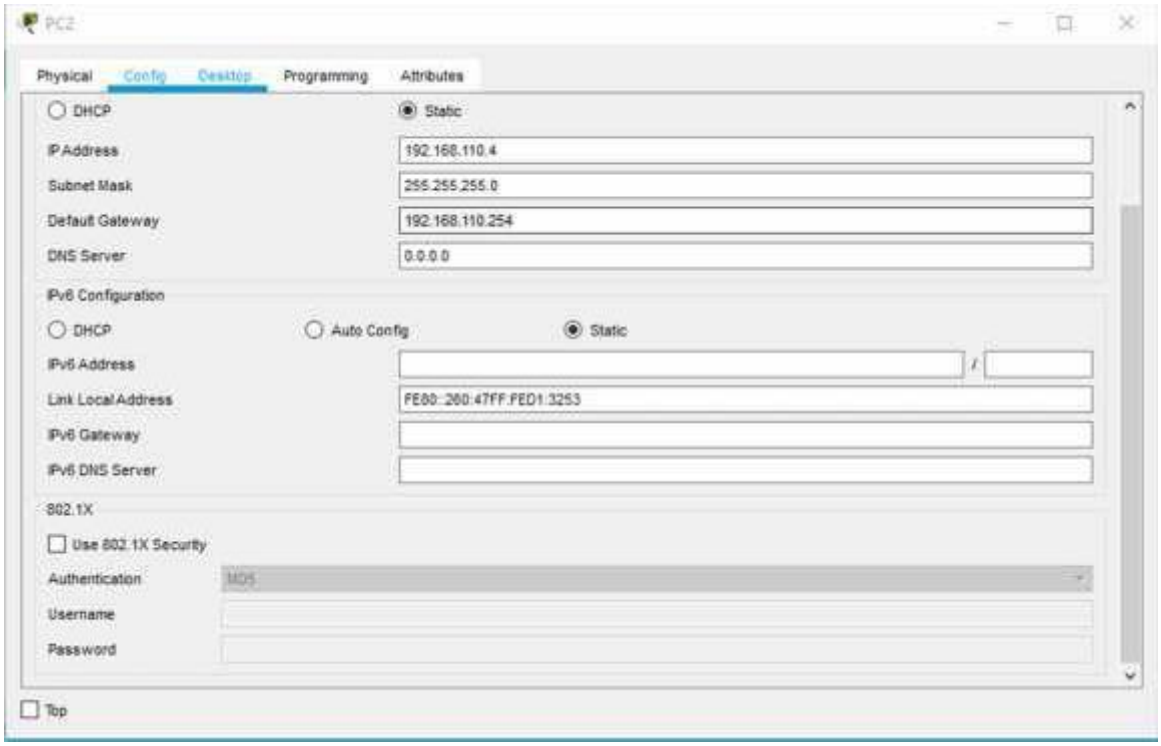
```
Switch>enable
Switch#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Switch(config)#int vlan 1
Switch(config-if)#ip address 192.168.120.250 255.255.255.0
Switch(config-if)#no shutdown

Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up
```

Konfigurasi alamat IP, Subnet Mask, dan Default Gateway pada masing-masing PC.

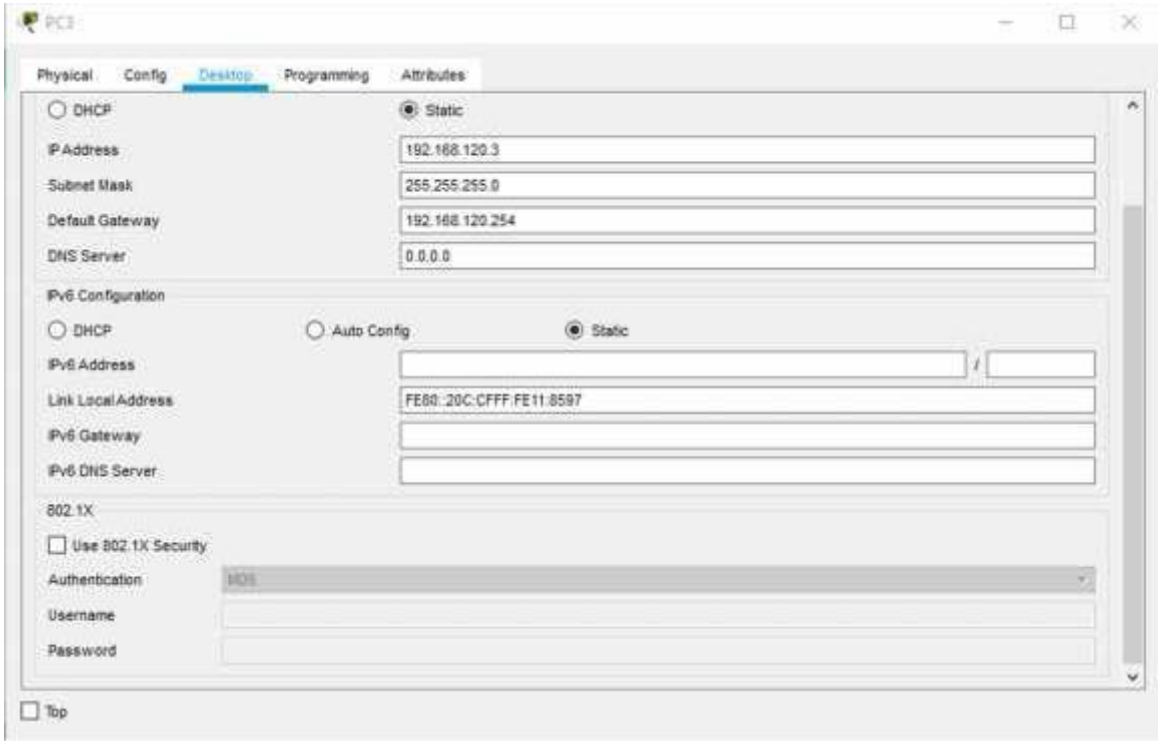
- PC 1



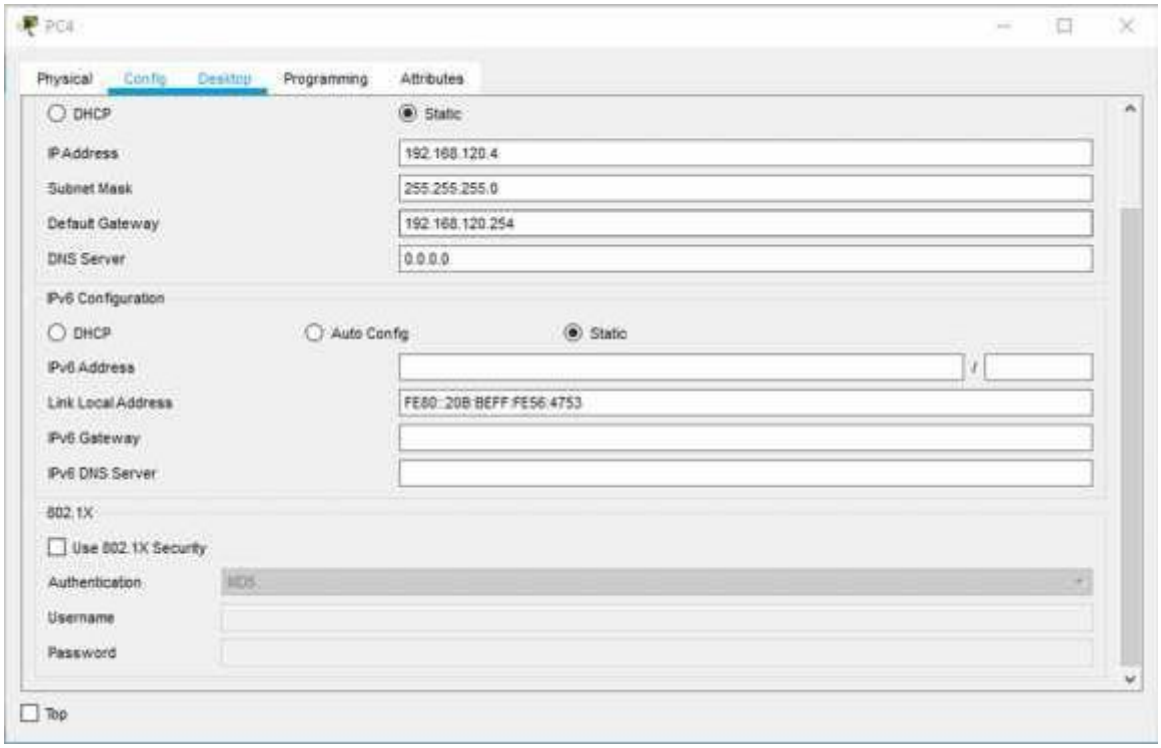
- PC 2


PC2
Physical
Config
Desktop
Programming
Attributes
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::260:47FF:FED1:3253
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top

- PC 3


PC3
Physical
Config
Desktop
Programming
Attributes
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::20C:CFFF:FE11:8597
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5
Username
Password
Top

- PC 4



Konfigurasi alamat IP dan Interface pada masing-masing Router.

- Router 1

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#no ip address
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 192.168.110.254 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
```

- Router 2

```
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.10.2 255.255.255.0
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

Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 192.168.120.254 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
```

Membuat Routing dengan Protokol RIP.

- Router 1

```
Router>enable
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 192.168.110.0
Router(config-router)#network 192.168.10.0
Router(config-router)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

- Router 2

```
Router>enable
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
```

Pengecekan Table Routing pada masing-masing Router.

- Router 1

```
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.10.0/24 is directly connected, FastEthernet0/0
C    192.168.110.0/24 is directly connected, FastEthernet0/1
R    192.168.120.0/24 [120/1] via 192.168.10.2, 00:00:01, FastEthernet0/0
```

- Router 2

```
Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C    192.168.10.0/24 is directly connected, FastEthernet0/0
R    192.168.110.0/24 [120/1] via 192.168.10.1, 00:00:11, FastEthernet0/0
C    192.168.120.0/24 is directly connected, FastEthernet0/1
```

Tes koneksi (ping) dari PC1 ke PC4.

```
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=2ms 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=11ms 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 = 11ms, Average = 3ms
```

Access List yang mengijinkan semua host dari jaringan 192.168.120.0 dapat mengakses jaringan 192.168.100.0

```
Router>enable
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
```

Penerapan Access List pada Interface Router 1.

```
Router>enable
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa0/1
Router(config-if)#ip access-group 10 out
Router(config-if)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Menampilkan konfigurasi Access List pada Router 1.

```
Router>enable
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa0/1
Router(config-if)#ip access-group 10 out
Router(config-if)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show access-lists
Standard IP access list 10
    10 permit 192.168.0.0 0.0.255.255

Router#
```

Konfigurasi Access List pada Ethernet 1.

```
Router#show running-config
Building configuration...

Current configuration : 712 bytes
!
version 12.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
 --More--
```

```
spanning-tree mode pvst
!
!
!
!
!
!
interface FastEthernet0/0
 ip address 192.168.10.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 ip address 192.169.110.254 255.255.255.0
 ip access-group 10 out
 duplex auto
 speed auto
!
interface Vlan1
 no ip address
 shutdown
!
router rip
 network 192.168.10.0
 --More--
```

```
router rip
 network 192.168.10.0
 network 192.168.110.0
!
ip classless
!
ip flow-export version 9
!
!
access-list 10 permit 192.168.0.0 0.0.255.255
!
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
```

Tes koneksi dua arah antara PC3 dengan PC1.

- Dari PC1 ke PC3

```
C:\>ping 192.168.120.3

Pinging 192.168.120.3 with 32 bytes of data:

Reply from 192.168.120.3: bytes=32 time<1ms TTL=126
Reply from 192.168.120.3: bytes=32 time=1ms TTL=126
Reply from 192.168.120.3: bytes=32 time=11ms TTL=126
Reply from 192.168.120.3: bytes=32 time=13ms TTL=126

Ping statistics for 192.168.120.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 13ms, Average = 6ms
```

- Dari PC3 ke PC1

```
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 192.168.110.3: bytes=32 time=1ms TTL=126
Reply from 192.168.110.3: bytes=32 time=24ms TTL=126
Reply from 192.168.110.3: bytes=32 time<1ms 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 = 0ms, Maximum = 24ms, Average = 6ms
```

Access List pada 1 host yaitu PC4 dengan alamat IP 192.168.120.4 agar dapat mengakses jaringan 192.168.110.0

```
Router>enable
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
```

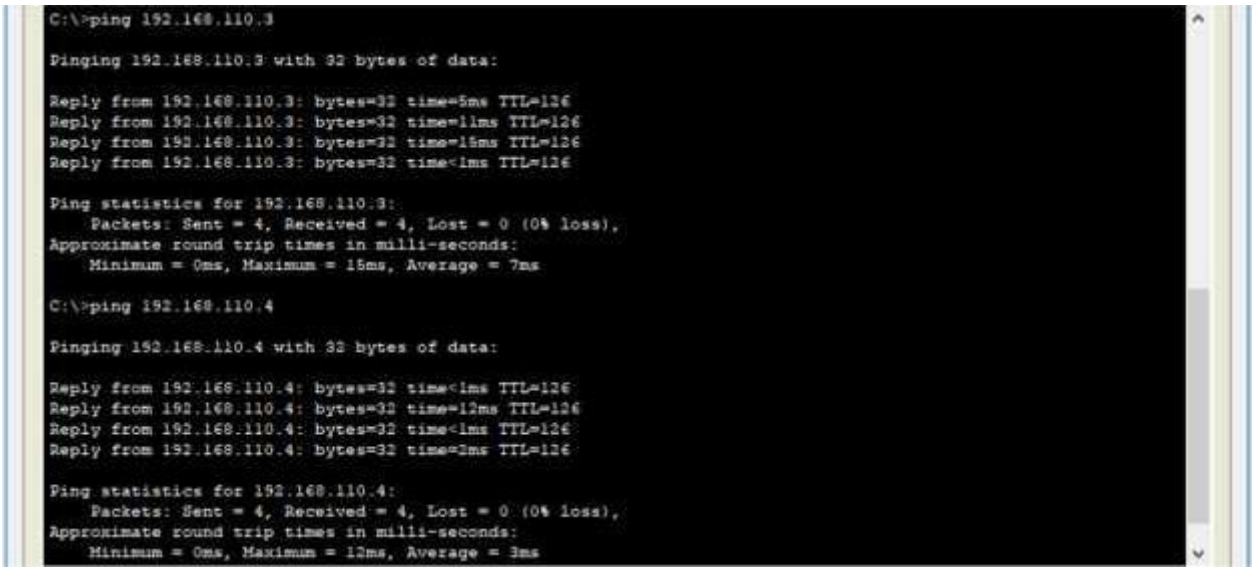
Penerapan Access List ke interface [Ethernet 1] pada Router 1.

```
Router#conf term
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#int fa0/1
Router(config-if)#ip access-group 20 out
Router(config-if)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

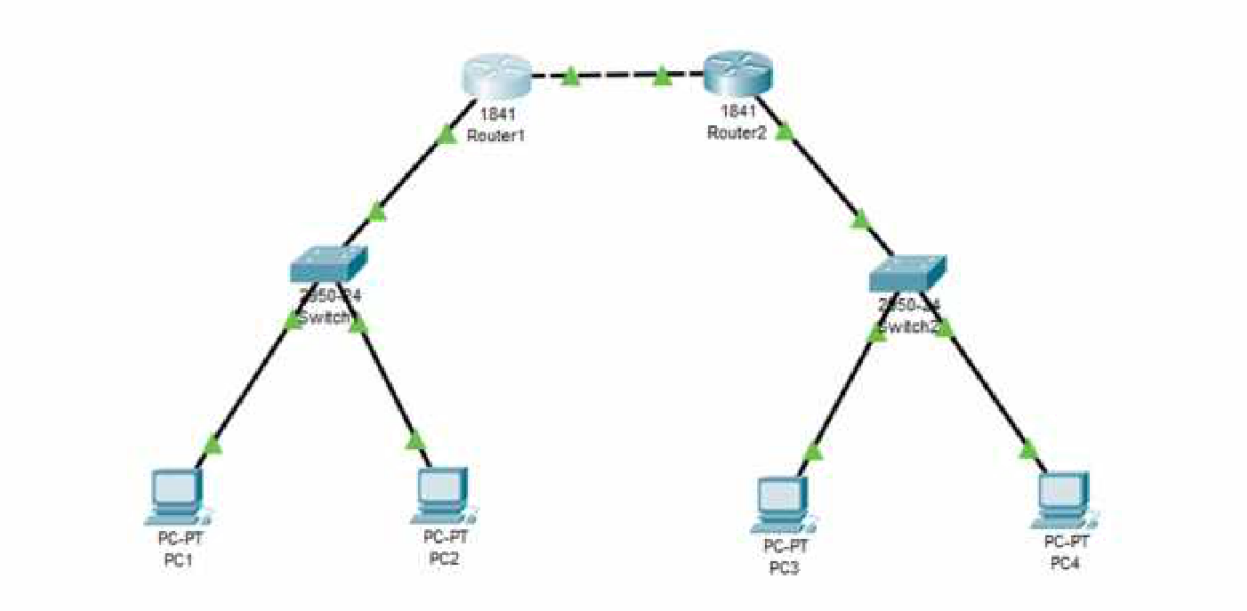
Tes koneksi dari PC3 ke PC1 dan PC2.

```
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),
```

Tes koneksi dari PC4 ke PC1 dan PC2.



Kegiatan 2. Konfigurasi Extended Access List



Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
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 fa0/1
Router(config-if)#ip access-group 20 out
Router(config-if)#^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)#access-list 100 permit tcp 192.168.120.0 0.0.0.255 192.168.110.3
0.0.0.0 eq any

^
% Invalid input detected at '^' marker.

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 fa0/1
Router(config-if)#ip access-group 100 in
Router(config-if)#exit
Router(config)#
```

Ctrl+F6 to exit CLI focus

Copy Paste

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