

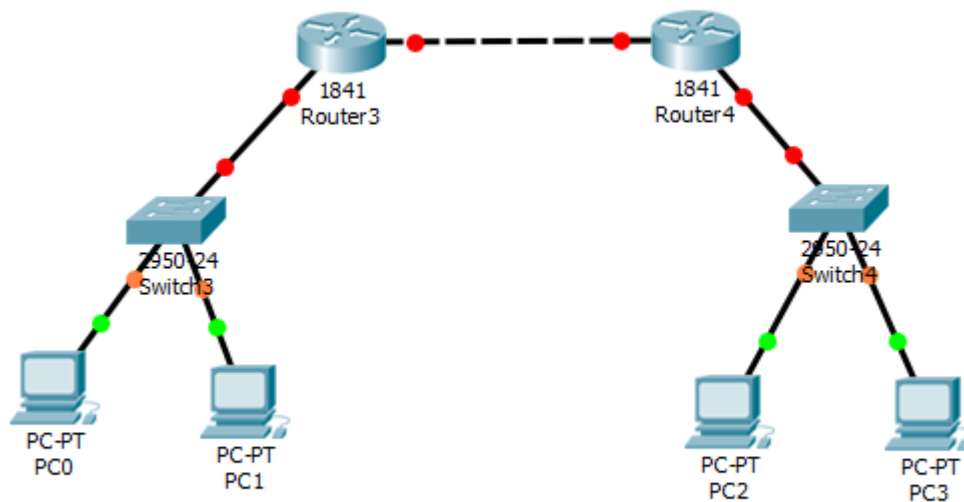
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Laporan Praktikum - Jaringan Komputer

MODUL 8

Kegiatan 1

1. Mendesain jaringan menggunakan cisco packet tracer



2. Memberikan alamat ip untuk digunakan sebagai default gateway bagi semua komputer.

Swieth 1

```
Switch>en
Switch#con t
% Ambiguous command: "con t"
Switch#config 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 shut

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

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

Switch(config-if)#exit
Switch(config)#
```

Swieth 2

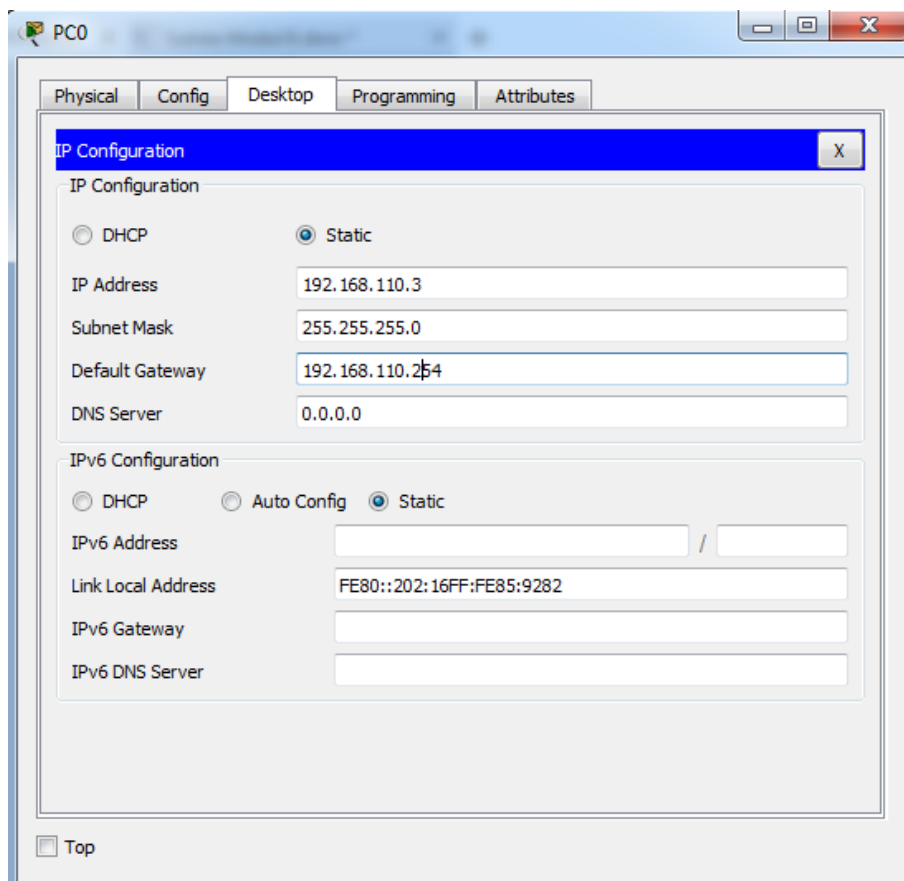
```
Switch>en
Switch#config term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int vlan 1
Switch(config-if)#ip address 192.168.120.250 255.255.255.0
Switch(config-if)#no shut

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

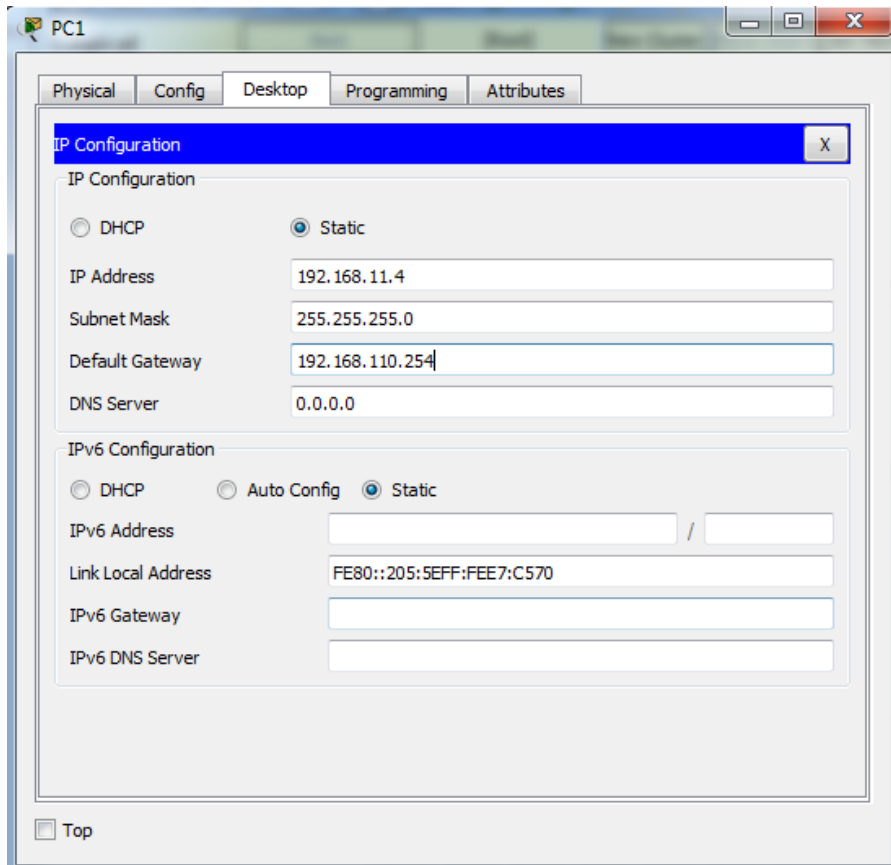
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed
state to up
exit
Switch(config)#
```

3. Mengatur konfigurasi tiap PC

PC 0



PC 1



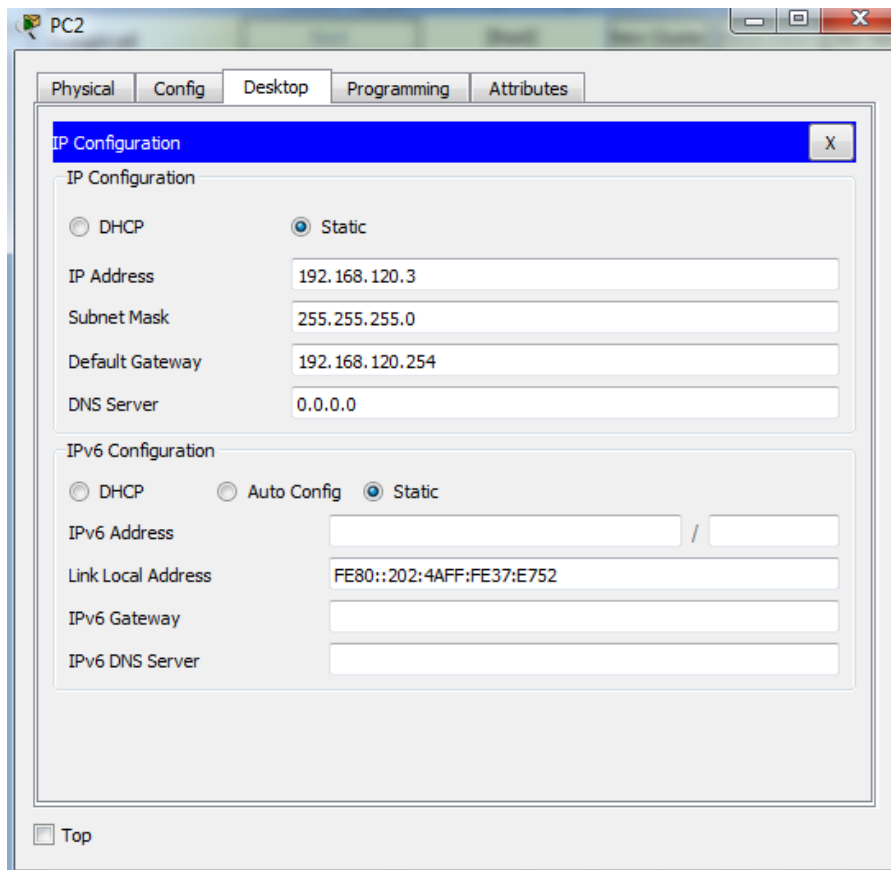
The screenshot shows the configuration window for PC1. The 'Config' tab is selected, and the 'IP Configuration' section is active. The 'Static' radio button is selected for IP Configuration. The IP Address is 192.168.11.4, Subnet Mask is 255.255.255.0, Default Gateway is 192.168.110.254, and DNS Server is 0.0.0.0. The IPv6 Configuration section shows 'Static' selected, with an empty IPv6 Address field, a Link Local Address of FE80::205:5EFF:FEE7:C570, and empty fields for IPv6 Gateway and IPv6 DNS Server. A 'Top' button is at the bottom left.

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IP Address	192.168.11.4
Subnet Mask	255.255.255.0
Default Gateway	192.168.110.254
DNS Server	0.0.0.0

IPv6 Configuration		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::205:5EFF:FEE7:C570	
IPv6 Gateway		
IPv6 DNS Server		

☐ Top

PC 2



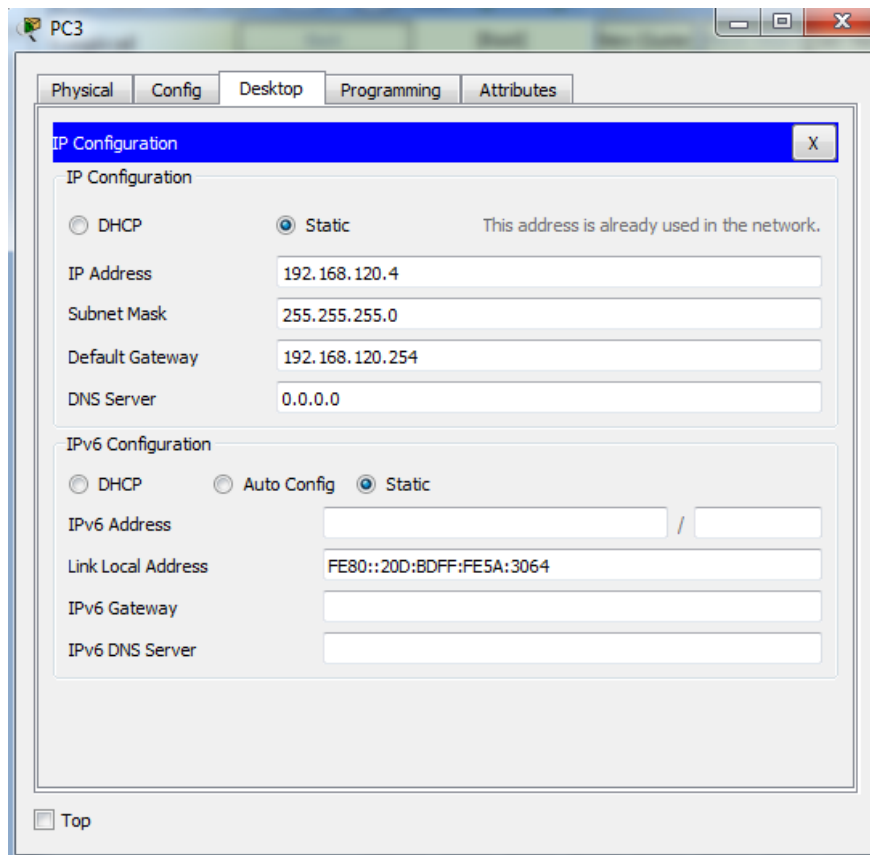
The screenshot shows the configuration window for PC2. The 'Config' tab is selected, and the 'IP Configuration' section is active. The 'Static' radio button is selected for IP Configuration. The IP Address is 192.168.120.3, Subnet Mask is 255.255.255.0, Default Gateway is 192.168.120.254, and DNS Server is 0.0.0.0. The IPv6 Configuration section shows 'Static' selected, with an empty IPv6 Address field, a Link Local Address of FE80::202:4AFF:FE37:E752, and empty fields for IPv6 Gateway and IPv6 DNS Server. A 'Top' button is at the bottom left.

IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> 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		
<input type="radio"/> DHCP	<input type="radio"/> Auto Config	<input checked="" type="radio"/> Static
IPv6 Address		
Link Local Address	FE80::202:4AFF:FE37:E752	
IPv6 Gateway		
IPv6 DNS Server		

☐ Top

PC 3



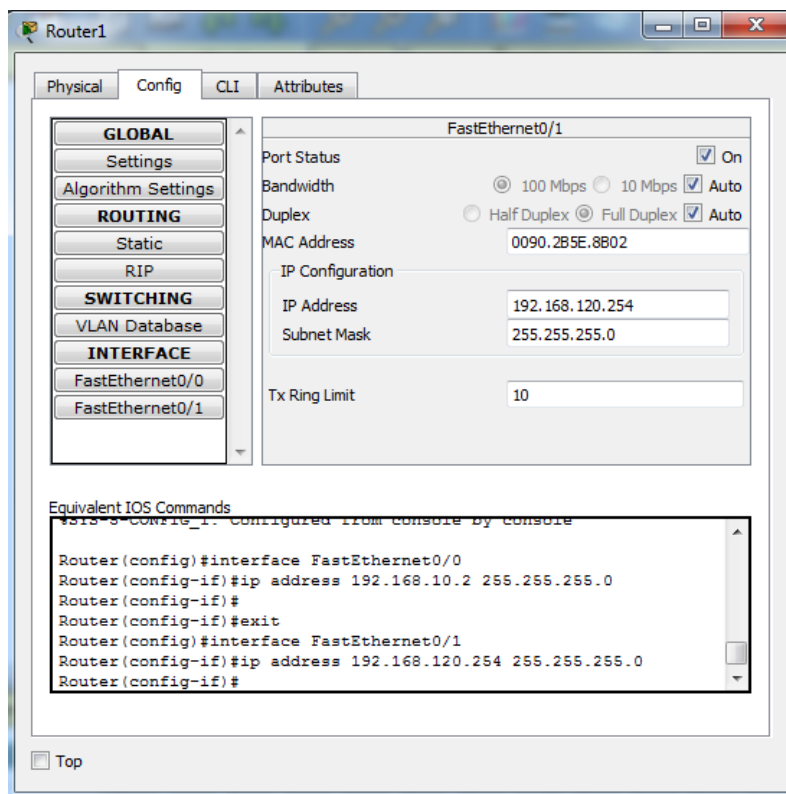
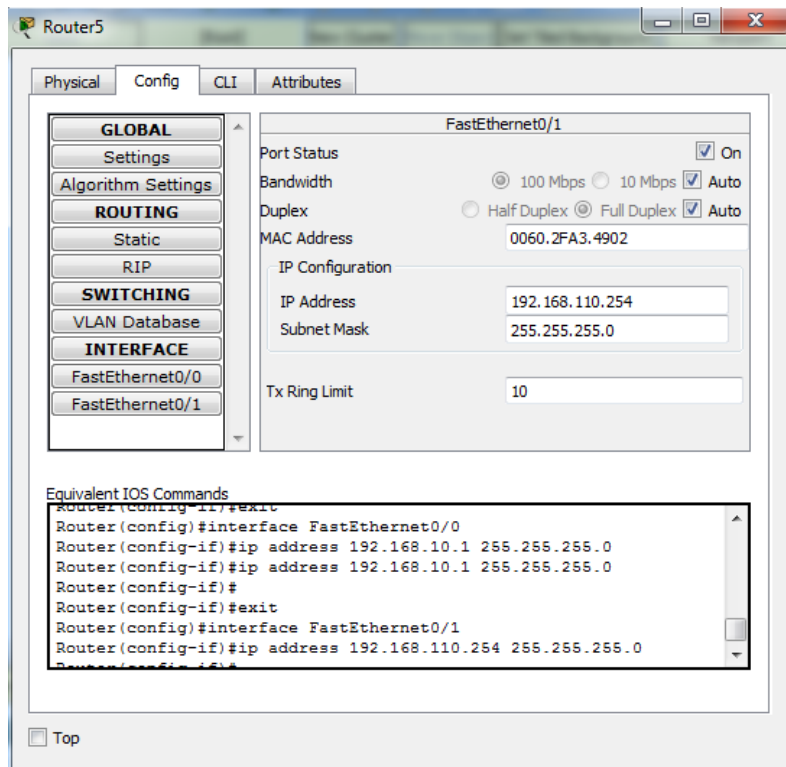
4. Gunakan routing dengan protocol RIP pada kedua jaringan.

Router 1

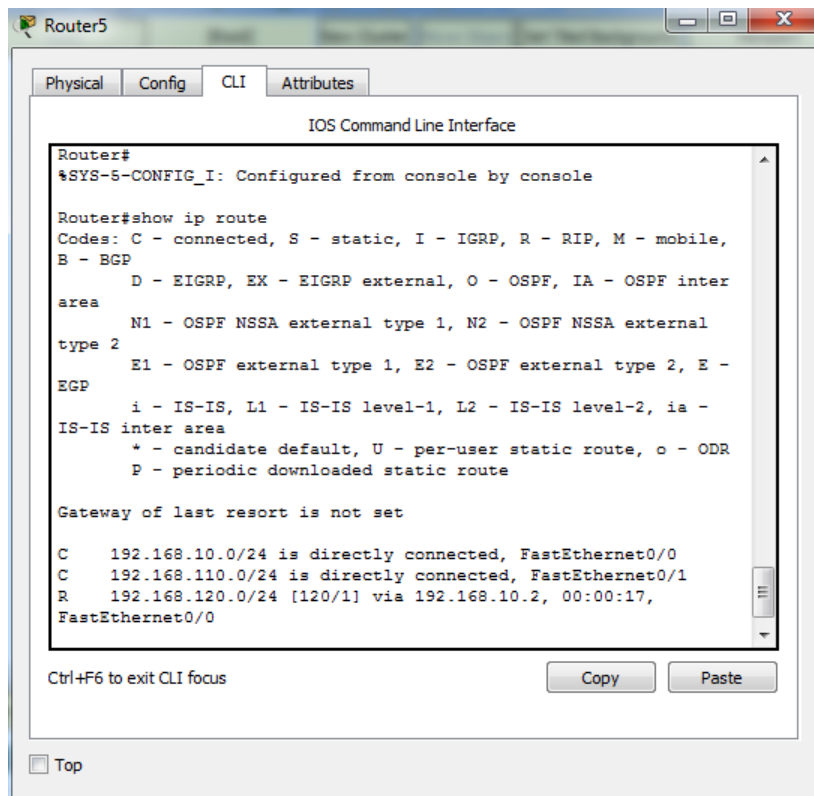
```
Router>en
Router#config term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#router rip
Router(config-router)#network 192.168.110.0
Router(config-router)#network 192.168.10.0
Router(config-router)#^Z
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

Router 2

```
Router>en
Router#config 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
```



5. Melakukan pengecekan tabel routing pada kedua router



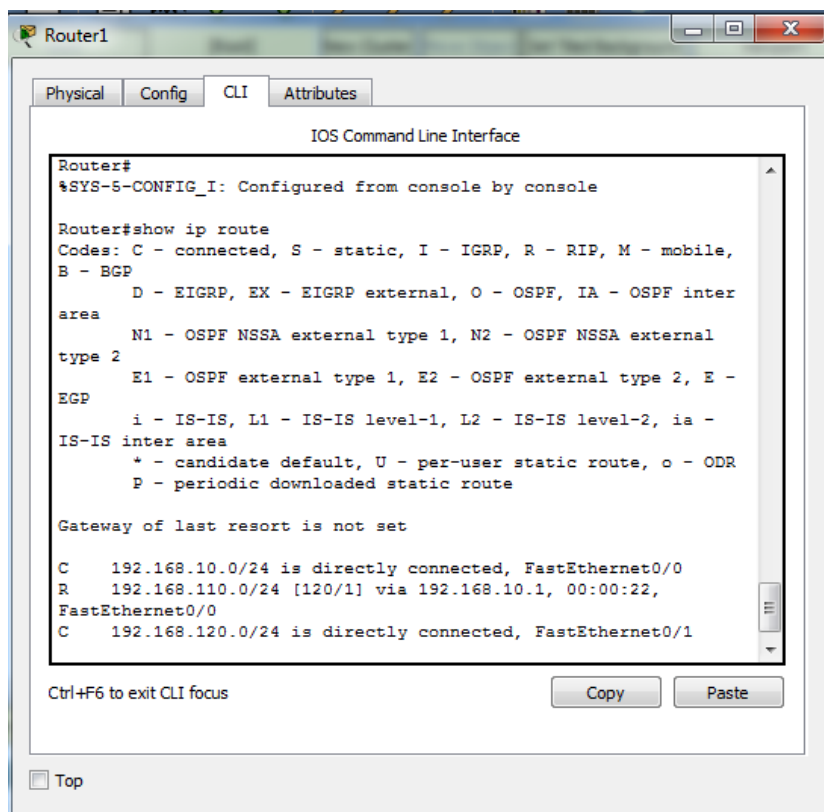
The screenshot shows the CLI window for Router5. The window has tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the IOS Command Line Interface. The prompt is Router#. The command entered is %SYS-S-CONFIG_I: Configured from console by console. The command executed is Router#show ip route. The output shows the routing table for Router5, which includes three directly connected routes: 192.168.10.0/24, 192.168.110.0/24, and 192.168.120.0/24. The output also includes a legend for route codes and a note about the gateway of last resort.

```
Router#
%SYS-S-CONFIG_I: Configured from console by console

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, 00:00:17,
FastEthernet0/0
```



The screenshot shows the CLI window for Router1. The window has tabs for Physical, Config, CLI, and Attributes. The CLI tab is active, displaying the IOS Command Line Interface. The prompt is Router#. The command entered is %SYS-S-CONFIG_I: Configured from console by console. The command executed is Router#show ip route. The output shows the routing table for Router1, which includes three directly connected routes: 192.168.10.0/24, 192.168.110.0/24, and 192.168.120.0/24. The output also includes a legend for route codes and a note about the gateway of last resort.

```
Router#
%SYS-S-CONFIG_I: Configured from console by console

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, 00:00:22,
FastEthernet0/0
C    192.168.120.0/24 is directly connected, FastEthernet0/1
```

6. Melakukan tes koneksi dari PC 1 ke PC 4 menggunakan perintah ping.

```
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 = 0ms, Maximum = 1ms, Average = 0ms
```

7. Menentukan Access List yang akan diterapkan dalam jaringan.

```
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
|
```

8. Melihat konfigurasi access list pada router 1

```
Router#config term
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/1
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
```

9. Melihat konfigurasi Access List pada ethernet 1.

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

Current configuration : 710 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-- |
```

10. Melakukan tes koneksi

```
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

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

11. Memberikan access hanya pada 1 host PC4 dengan alamat IP 192.168.120.4

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

Router#|
```


12. Melakukan ping dari PC3 ke PC1 dan PC2

```
C:\>ping 192.168.110.3

Pinging 192.168.110.3 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

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:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

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

13. Melakukan uji tes koneksi dari PC 4 ke PC1 dan PC2

```
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<1ms 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 = 1ms, Average = 0ms

C:\>
```

```
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<1ms TTL=126
Reply from 192.168.110.4: bytes=32 time=8ms 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 = 0ms, Maximum = 8ms, Average = 2ms
```