

**PRAKTIKUM
JARINGAN KOMPUTER
(Computer Networking)**

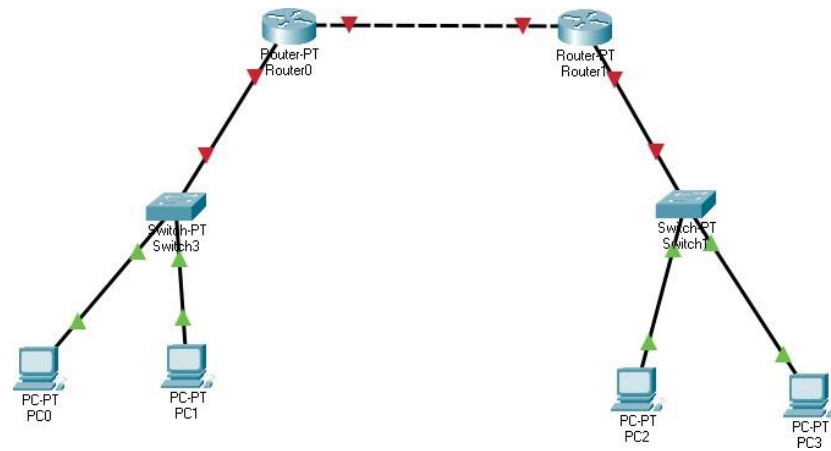
**LAPORAN TUGAS
MODUL 8**



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NIM : L200190151
Kelas : D**

**PROGRAM STUDI INFORMATIKA
FAKULTAS KOMUNIKASI DAN INFORMATIKA
UNIVERSITAS MUHAMMADIYAH
SURAKARTA**

1. Kegiatan 1
 - a. Membuat topologi



- b. Berikan IP pada kedua switch
Switch 0

```
Switch0
Physical Config CLI Attributes
IOS Command Line Interface
System serial number: FHK0610Z0WC
Cisco Internetwork Operating System Software
IOS (tm) PT3000 Software (PT3000-I6Q4L2-M), Version 12.1(22)EA4, RELEASE SOFTWARE (fc1)
Copyright (c) 1986-2006 by Cisco Systems, Inc.
Compiled Fri 12-May-06 17:19 by pt_team
Press RETURN to get started!

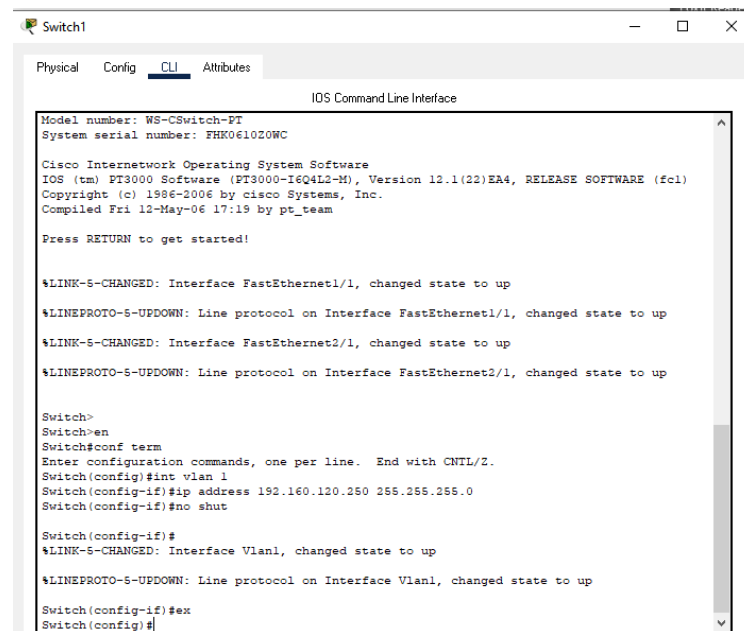
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINK-5-CHANGED: Interface FastEthernet1/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet1/1, changed state to up

Switch>en
Switch#con t
% Ambiguous command: "con t"
Switch#conf term
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int vlan 1
Switch(config-if)#ip address 192.160.110.250 255.255.255.0
Switch(config-if)#no shut

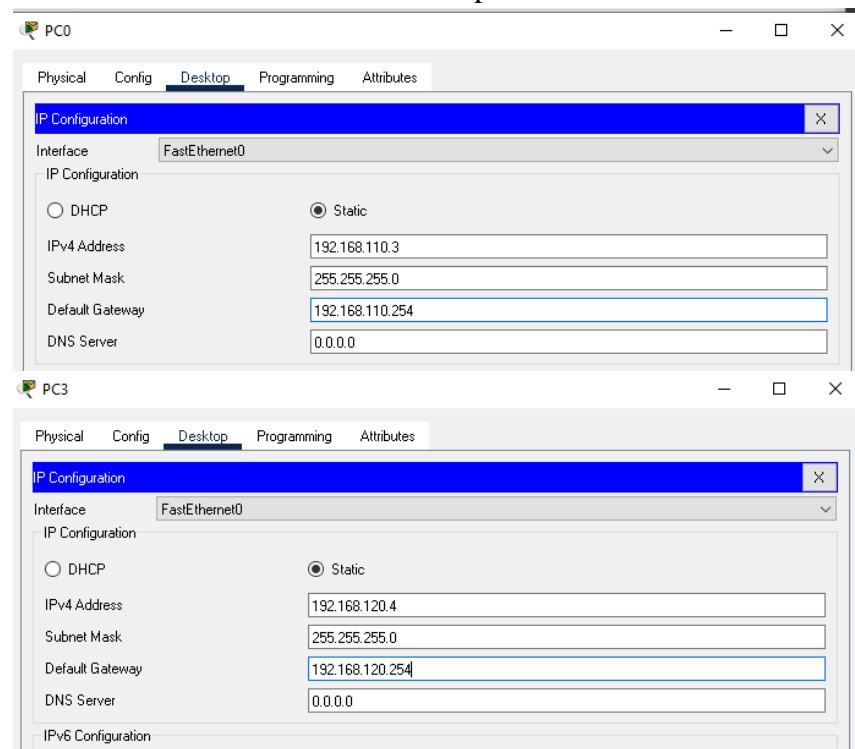
Switch(config-if)#
%LINK-5-CHANGED: Interface Vlan1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Vlan1, changed state to up

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

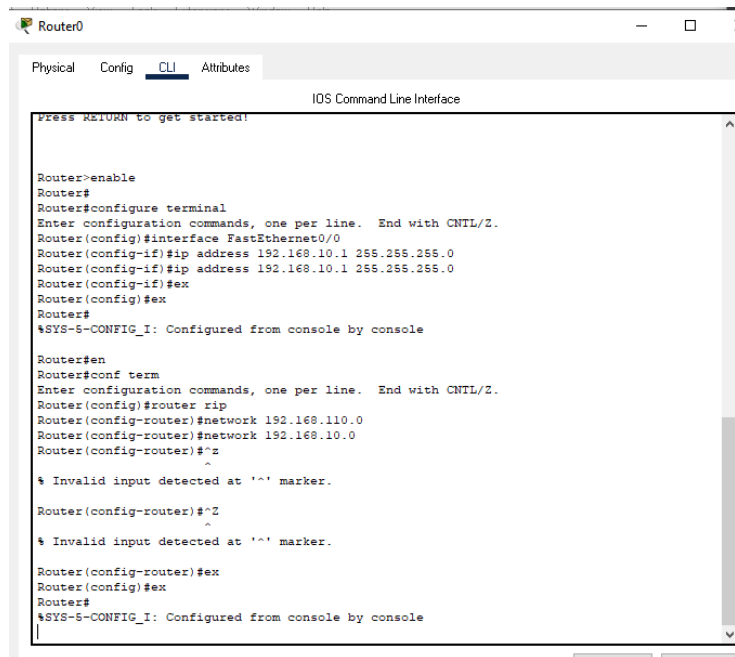
Switch 1



c. Memberikan IP Address untuk setiap PC



- d. Melakukan routing dengan protocol RIP pada kedua jaringan
Router 0



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

Press RETURN to get started!

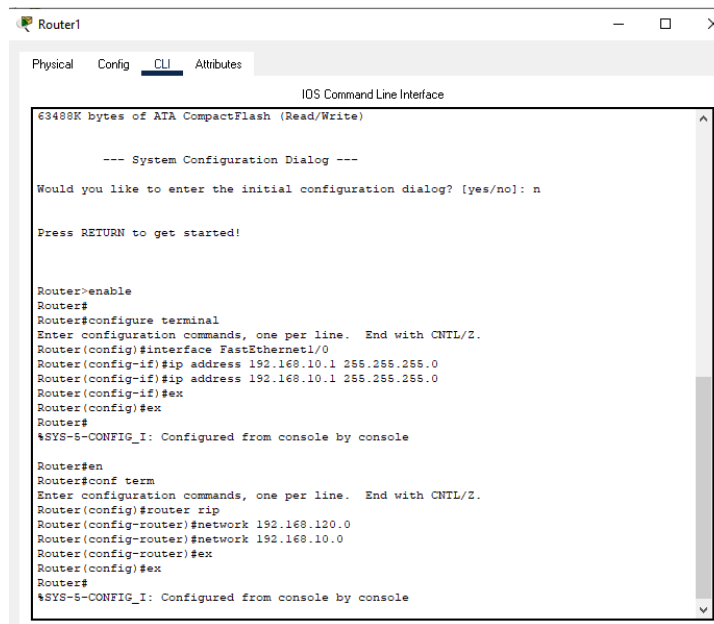
Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ex
Router(config)#ex
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 192.168.110.0
Router(config-router)#network 192.168.10.0
Router(config-router)#z
^
% Invalid input detected at '^' marker.

Router(config-router)#^Z
^
% Invalid input detected at '^' marker.

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

Router 1



```
Router1
Physical Config CLI Attributes
IOS Command Line Interface

63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

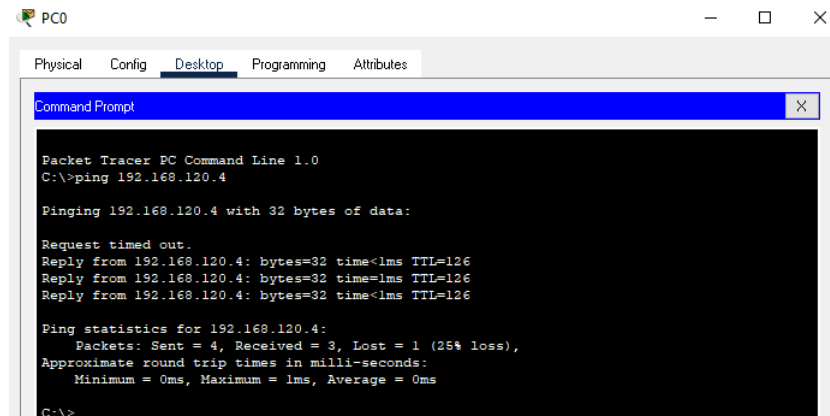
Would you like to enter the initial configuration dialog? [yes/no]: n

Press RETURN to get started!

Router>enable
Router#
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet1/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
Router(config-if)#ex
Router(config)#ex
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)#ex
Router(config)#ex
Router#
%SYS-5-CONFIG_I: Configured from console by console
```

- e. Untuk mengetest routing berhasil, ping PC0 ke PC3



PC0

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.120.4

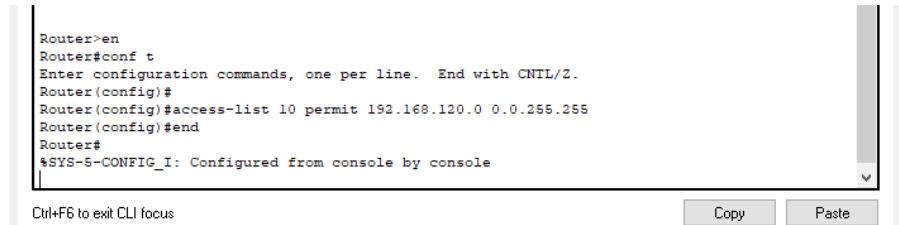
Pinging 192.168.120.4 with 32 bytes of data:

Request timed out.
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 = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

- f. Mengkonfigurasi ACL 10 Permit Network 192.68.120.0

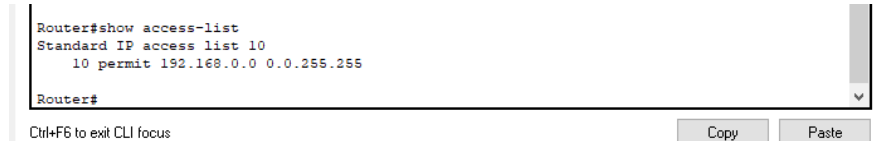


```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNIL/Z.
Router(config)#
Router(config)#access-list 10 permit 192.168.120.0 0.0.255.255
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Ctrl+F6 to exit CLI focus
```

Copy Paste

- g. Memperllihatkan konfigurasi Access List pada ethernet 1



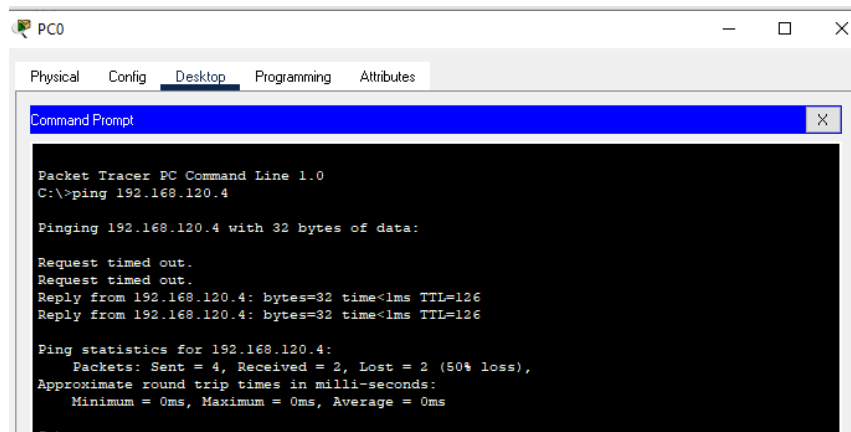
```
Router#show access-list
Standard IP access list 10
  10 permit 192.168.0.0 0.0.255.255

Router#

Ctrl+F6 to exit CLI focus
```

Copy Paste

- h. Ping ke Access List 10
PC 0



PC0

Physical Config Desktop Programming Attributes

Command Prompt

```
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.120.4

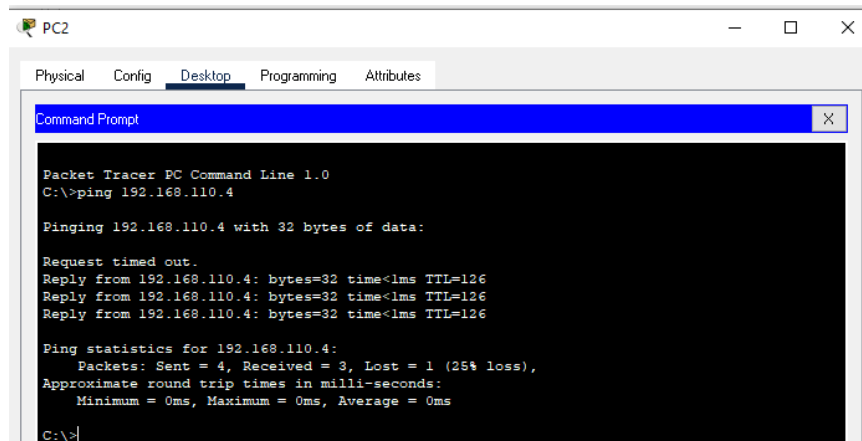
Pinging 192.168.120.4 with 32 bytes of data:

Request timed out.
Request timed out.
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 = 2, Lost = 2 (50% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

PC 3



```
PC2
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.110.4

Pinging 192.168.110.4 with 32 bytes of data:

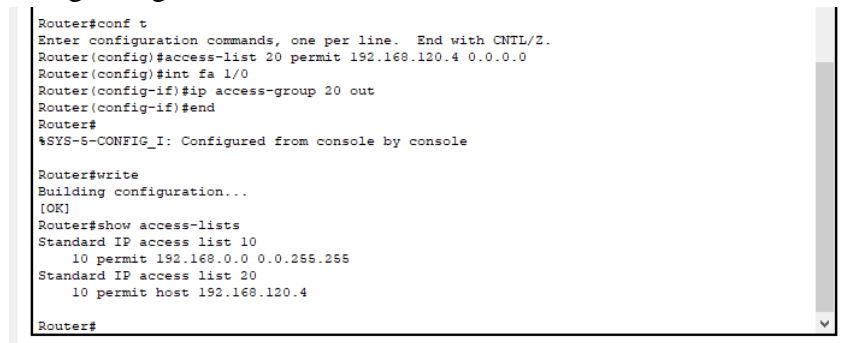
Request timed out.
Reply from 192.168.110.4: bytes=32 time<1ms TTL=126
Reply from 192.168.110.4: bytes=32 time<1ms TTL=126
Reply from 192.168.110.4: bytes=32 time<1ms TTL=126

Ping statistics for 192.168.110.4:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

Kesimpulan : Kesimpulan: Paket dapat terkirim karena ACL router1 sudah mendapat izin paket dari Network 192.168.120.0 keluar interface router1 ke network 192.168.110.0

i. Mengkonfigurasi ACL 20 Permit Network 192.68.120.4

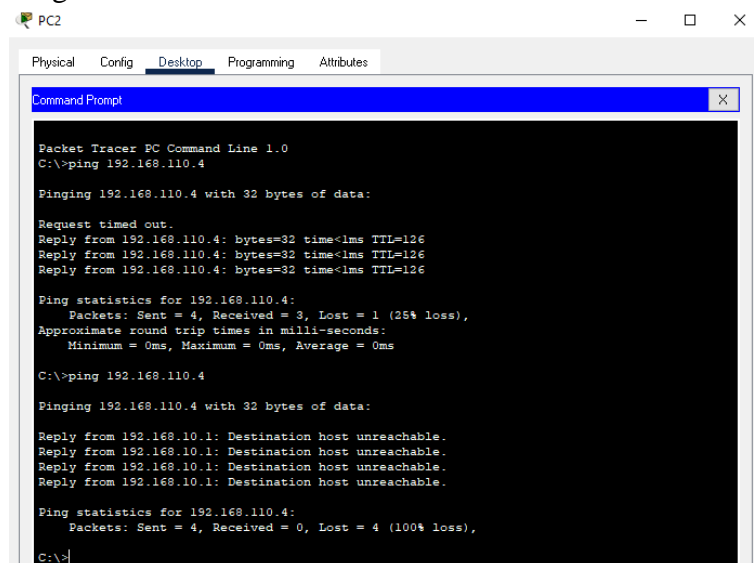


```
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#access-list 20 permit 192.168.120.4 0.0.0.0
Router(config)#int fa 1/0
Router(config-if)#ip access-group 20 out
Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#write
Building configuration...
[OK]
Router#show access-lists
Standard IP access list 10
 10 permit 192.168.0.0 0.0.255.255
Standard IP access list 20
 10 permit host 192.168.120.4

Router#
```

j. Ping dari ACL 20



```
PC2
Physical Config Desktop Programming Attributes
Command Prompt
Packet Tracer PC Command Line 1.0
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<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 = 3, Lost = 1 (25% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

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:\>
```

Kesimpulan: Hasilnya paket dari PC2 tidak tercapai karena hanya host dari PC3 yang bisa mengirim pakatnya

2. Kegiatan 2

- a. Melakukan konfigurasi extended access list dengan mengizinkan (permit) paket telnet dari semua host yang ada di dalam 192.168.120.0 ke host 192.168.110.3

```
Router#conf t
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)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console
Router#
```

- b. Menetapkan Access List ke interface router

```
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa 0/0
Router(config-if)#ip access-group 100 in
Router(config-if)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#write
Building configuration...
[OK]
Router#show access-lists
Standard IP access list 10
 10 permit 192.168.0.0 0.0.255.255
Standard IP access list 20
 10 permit host 192.168.120.4
Extended IP access list 100
 10 permit tcp 192.168.120.0 0.0.0.255 host 192.168.110.3 eq telnet
 20 permit tcp 192.168.120.0 0.0.0.255 host 192.168.110.3
Router#
```