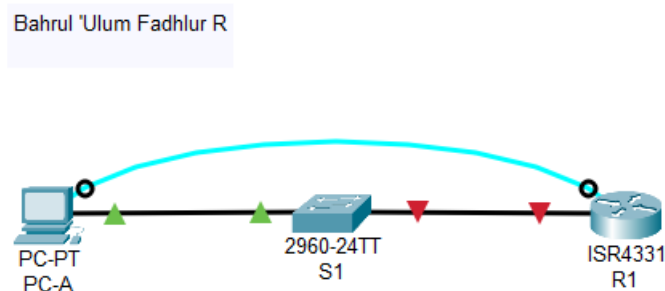


## Tugas Modul 6 – Building and Securing a Small Network

### Bagian 1 : Mengkonfigurasi Pengaturan Perangkat Dasar

#### 1. Menghubungkan tiap komponen



#### 2. Mengkonfigurasi RT-A

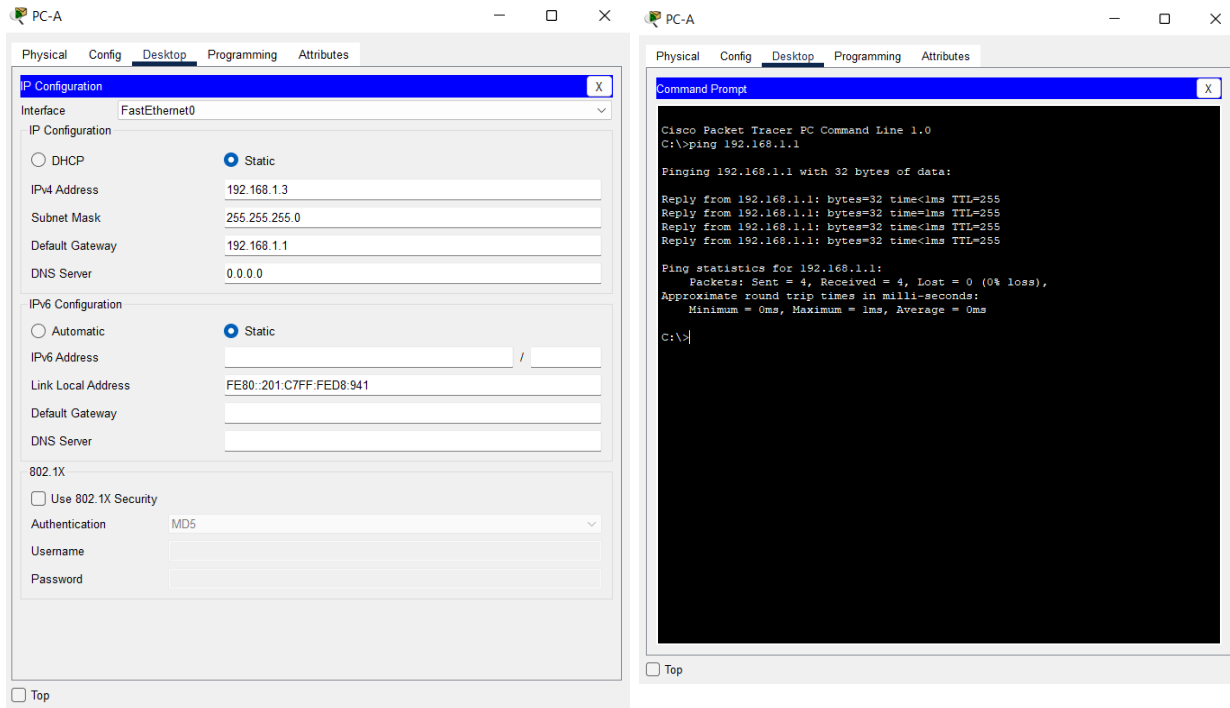
PC-A

```
Router>enable
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#no ip domain-lookup
Router(config)#enable secret class
Router(config)#line console 0
Router(config-line)#password cisco
Router(config-line)#login
Router(config-line)#exit
Router(config)#line vty 0 15
Router(config-line)#password cisco
Router(config-line)#login
Router(config-line)#exit
Router(config)#service password-encryption
Router(config)#banner motd "Authorized User Only"
Router(config)#int g0/0/1
Router(config-if)#ip address 192.168.1.1 255.255.255.0
Router(config-if)#no shutdown

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0/1, changed state to up
Router(config)#end
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
Router#
```

### 3. Mengkonfigurasi PC-A dan Verifikasi Jaringan (Ping)



## Bagian 2 : Mengkonfigurasi Router untuk Akses SSH

### 1. Mengkonfigurasi otentikasi perangkat

```
Router(config)#hostname R1
R1(config)#ip domain-name CCNA-LAB.com
R1(config)#
```

### 2. Mengkonfigurasi metode kunci enkripsi

```
R1(config)#crypto key generate rsa
The name for the keys will be: R1.CCNA-LAB.com
Choose the size of the key modulus in the range of 360 to 2048 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.

How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

R1(config)#
*Mar 1 0:11:4.277: %SSH-5-ENABLED: SSH 1.99 has been enabled
```

### 3. Mengkonfigurasi nama pengguna basis data lokal

```
R1(config)#username praktik secret P@ssPr4k
R1(config)#
```

### 4. Aktifkan SSH pada baris VTY

```
R1(config)#line vty 0 15
R1(config-line)#transport input ssh
R1(config-line)#login local
R1(config-line)#end
R1#
```

## 5. Menyimpan konfigurasi

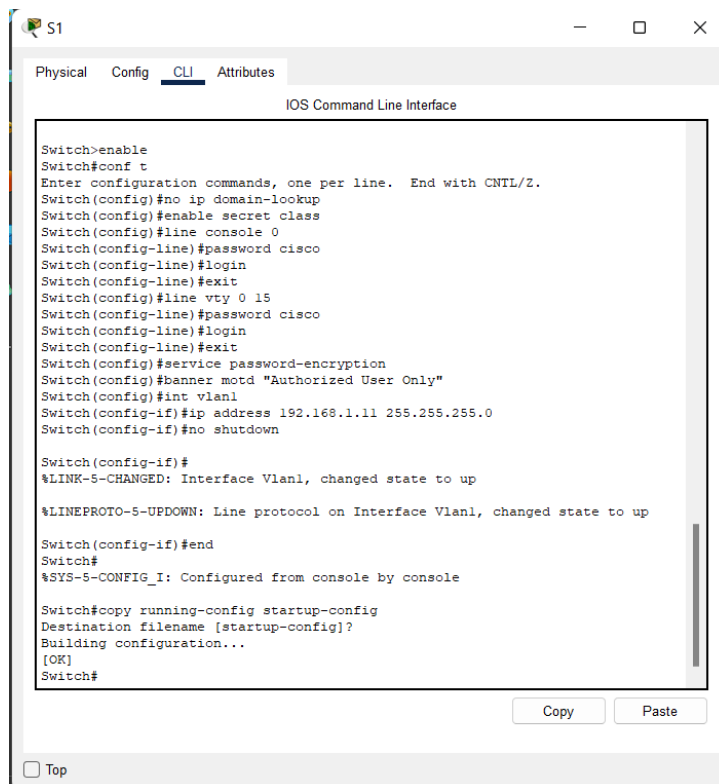
```
-----  
R1#copy running-config startup-config  
Destination filename [startup-config]?  
Building configuration...  
[OK]  
R1#
```

## 6. Membuat koneksi SSH ke Router

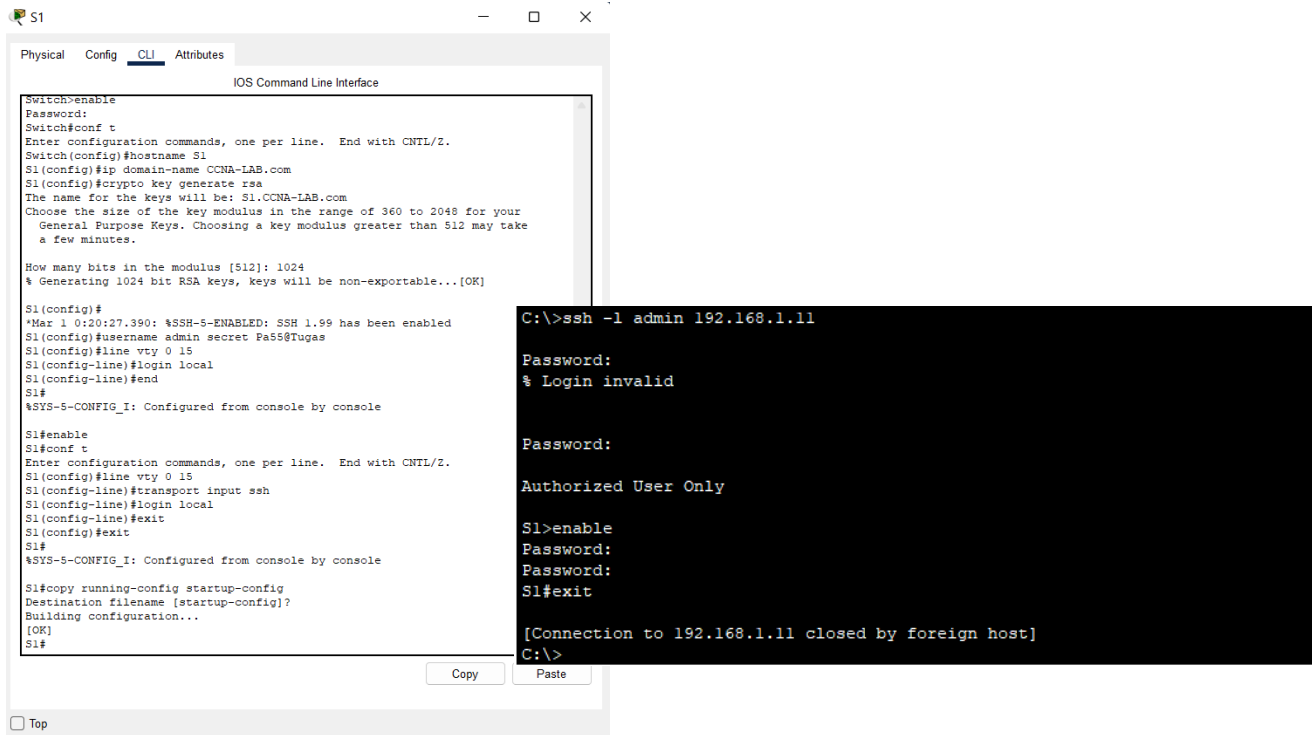
```
C:\>ssh -l prakkomdat 192.168.1.1  
  
Password:  
  
Authorized User Only  
  
R1>enable  
Password:  
Password:  
R1#exit  
  
[Connection to 192.168.1.1 closed by foreign host]  
C:\>
```

## Bagian 3 : Mengkonfigurasi Switch untuk Akses SSH

### 1. Mengkonfigurasi pengaturan dasar pada Switch



## 2. Mengkonfigurasi Switch untuk konektivitas SSH dan Cek SSH ke Switch



The screenshot displays the Cisco Packet Tracer interface with a switch named S1. The 'CLI' tab is active, showing the following configuration commands:

```
Switch>enable
Password:
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#hostname S1
S1(config)#ip domain-name CCNA-LAB.com
S1(config)#crypto key generate rsa
The name for the keys will be: S1.CCNA-LAB.com
Choose the size of the key modulus in the range of 360 to 2048 for your
General Purpose Keys. Choosing a key modulus greater than 512 may take
a few minutes.

How many bits in the modulus [512]: 1024
% Generating 1024 bit RSA keys, keys will be non-exportable...[OK]

S1(config)#
*Mar 1 0:20:27.390: %SSH-5-ENABLED: SSH 1.99 has been enabled
S1(config)#username admin secret Pa55$Tugas
S1(config)#line vty 0 15
S1(config-line)#login local
S1(config-line)#end
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#enable
S1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
S1(config)#line vty 0 15
S1(config-line)#transport input ssh
S1(config-line)#login local
S1(config-line)#exit
S1(config)#exit
S1#
%SYS-5-CONFIG_I: Configured from console by console

S1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
S1#
```

Overlaid on the right is a terminal window showing the SSH connection attempt from a PC:

```
C:\>ssh -l admin 192.168.1.11

Password:
% Login invalid

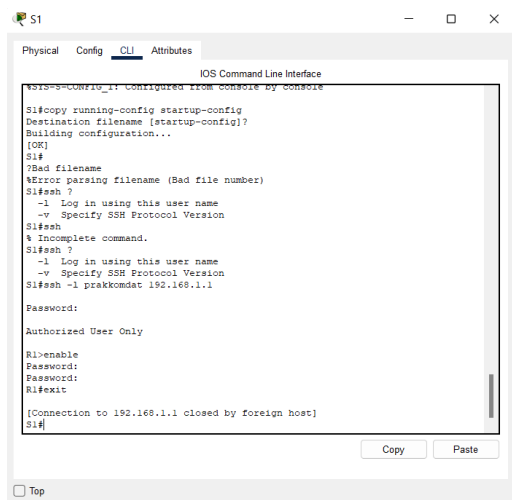
Password:

Authorized User Only

S1>enable
Password:
Password:
S1#exit

[Connection to 192.168.1.11 closed by foreign host]
C:\>
```

## Bagian 4 : SSH dari CLI di Switch



The screenshot shows the CLI of switch S1 with the following commands and output:

```
%SYS-5-CONFIG_I: Configured from console by console

S1#copy running-config startup-config
Destination filename [startup-config]?
Building configuration...
[OK]
S1#
?Bad filename
%Error parsing filename (Bad file number)
S1#ssh ?
  -l  Log in using this user name
  -v  Specify SSH Protocol Version
S1#ssh
% Incomplete command.
S1#ssh ?
  -l  Log in using this user name
  -v  Specify SSH Protocol Version
S1#ssh -l prakkomdat 192.168.1.1

Password:

Authorized User Only

R1>enable
Password:
Password:
R1#exit

[Connection to 192.168.1.1 closed by foreign host]
S1#
```

## Kesimpulan :

Kita bisa melakukan mengkonfigurasi R1 menggunakan SSH R1 lalu memasukkan Username prakkomdat, IP 192.168.1.1 dan Password P@SsPr4k ke CLI S1.