

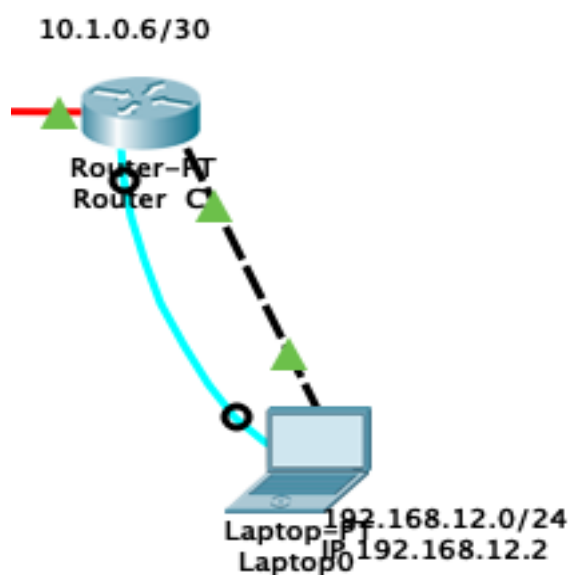
## Securing Access to the network devices

To prevent the unauthorized access to your network devices you can configure User level password and Console, Telnet passwords.

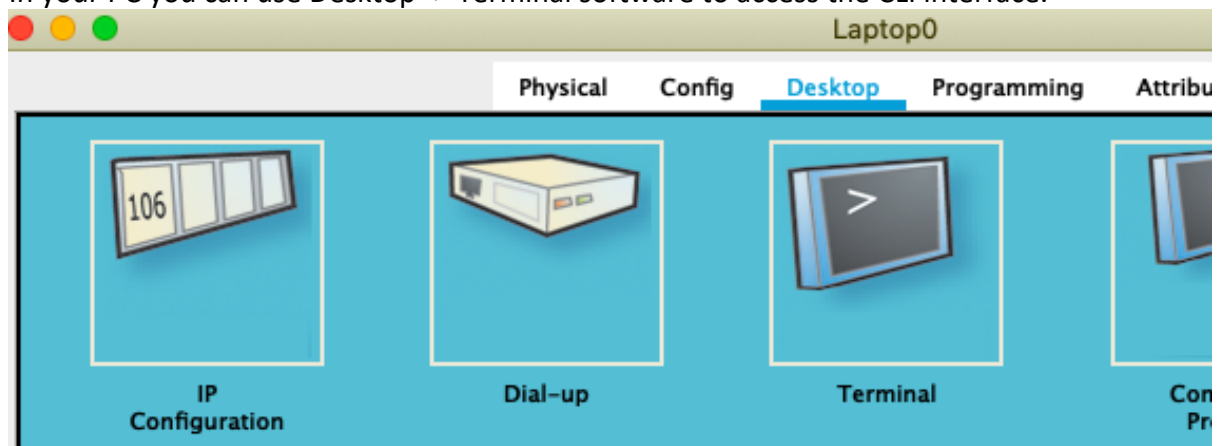
Using '*enable password*' or '*enable secret command*' we can restrict access to the privilege level of the device IOS.

Using Console or the Telnet password we can control access to the device through Console port or the IP network. (\*\* You can refer to the Lecture 1 for more information about device access methods)

1. To configure the console password, connect console cable to your device console port and the other end to your PC's serial port.



2. In your PC you can use Desktop -> Terminal software to access the CLI interface.



```
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0,
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, change
C>
C>
C>
```

3. You can access CLI of the router via Routers CLI tab. It's a shortcut in Packet racer to easy your life.

```
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface
FastEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0,
changed state to up
C>
C>
C>
```

4. To configure the line console password, refer the following commands.

```
C#
C#
C#configure terminal
Enter configuration commands, one per line. End with CNTL/
Z.
C(config)#line console 0
C(config-line)#password C543
C(config-line)#login
C(config-line)#
```

Command+F6 to exit CLI focus

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5. Now you have to enter a password to access the CLI.

```
Press RETURN to get started!

User Access Verification

Password:
C>|
```

Command+F6 to exit CLI focus

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6. To access the CLI via IP network we can configure Telnet using following commands. This command will enable 5 parallel connections to the device.

```
C(config)#
C(config)#
C(config)#line vty 0 4
C(config-line)#password T654
C(config-line)#login
C(config-line)#
C(config-line)#
```

Command+F6 to exit CLI focus

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☐ Top

7. From your PC you can use the command prompt to access the CLI via IP network. But you will not succeed this attempt and will see an error message saying, "No password set". To overcome this error, you have to configure Privilege level password to the device.

```
Command Prompt

Packet Tracer PC Command Line 1.0
C:\>telnet 192.168.12.2
Trying 192.168.12.2 ...
% Connection refused by remote host
C:\>telnet 192.168.12.1
Trying 192.168.12.1 ...Open

User Access Verification

Password:
C>en
% No password set.
```

8. To set the privilege level password you can use the commands '*enable password*' or '*enable secret*'. Both commands will do the same but the command '*enable secret*' will save the password in encrypted format in the configuration file.

```
C(config)#
C(config)#enable secret S432
C(config)#enable password E321
C(config)#
```

Command+F6 to exit CLI focus

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```
-----
no service password-encryption
!
hostname C
!
!
!
enable secret 5 $1$mERr$/wGLmbdlZvPfVIIwh/coj/
enable password E321
!
!
!
!
!
ip cef
--More-- |
```

9. But when you configure both at once only secret password will be active and the other will be disabled automatically.
10. To encrypt the passwords which are in clear text, we can use service password encryption command.

```
C(config)#service password-encryption
C(config)#
```

Command+F6 to exit CLI focus

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11. Now all the passwords are in unreadable format.

```
!
enable secret 5 $1$mERr$/wGLmbdlZvPfVIIwh/coj/
enable password 7 08041F1C58
!
!
line con 0
  password 7 0802191A5A
  login
!
line aux 0
!
line vty 0 4
  password 7 08151A1B5D
  login
,
```