Cisco IOS CLI

⊛ What is CLI?
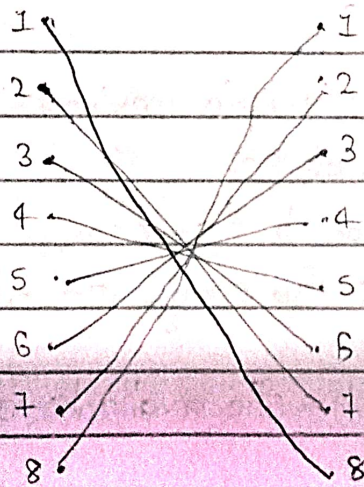
Command-line interface

The interface you use to configure cisco devices

⊛ How to connect to a Cisco device? (Console port)

USB Mini B ———— RJ45

Rollover cable (also called a Cisco console cable)
is used to connect a computer to the console
Port of a router & switch.

Now use Terminal Emulator after connection

Terminal software like (PuTTY, Tera Term, Hyper Terminal)

• Now choose Serial connection & Click on open

Defult settings

Speed baud	9600
Data bits	8
Stop bits	1
Parity	None
flow control	None

⊕ User EXEC Mode

Router ≥
    ↳ = user EXEC mode
    Hostname of the Device

- User EXEC mode is very limited
- User can look at some things, but can't make any changes
- to the configuration.
- Also called 'user mode'

⊛ Privileged EXCE Mode

Router ≥ enable
Router #
        ↳ = privileged EXEC Mode

- Provides complete access to view the device's configuration, restart the Device etc.
- Cannot change the configuration, but can change the time on the device, save the configuration file etc

NOTE⊛ → Use a questionmark (?) to view the available commands.

? = use to see all comments

tab = If you write 'en' & press tab it rewrite in new line.

Shortcut = en → for enable

⊛ Global Configuration Mode

Router ≥ enable
Router # configure terminal

- for make changes we used to configuration Mode

⊛ Enable Password :

Router(config)# enable password ?
    1   _   _   _   _
         _   _   _   _
         _   _   _   _

Router(config)# enable password CCNA ?
    <cr>
Router(config)# enable password CCNA
Router(config)#

⊛ runnig-config | startup-config
   These are 2 types of separate configuration files kept
   on the device at once.

   • Running config
     ↳ the current, active configuration files on the device.
        As you enter commands in the CLI, you edit the
        active configuration.

   • Startup-config
     ↳ the configuration file that will be loaded upon
        restart of the device.

   ↳ Use "Show running-config" to see it. → enable password CCNA
      Use "Show startup-config" to see it. → start config is not present

   There are 3 ways to save running configuration
   to make it startup-configuration
   • Router# write
   • Router# write memory
   • Router# copy running-config startup-config

After saving running config:
Router# show startup-config ⟶ enable password CCNA

> if shown clear simple text it becomes security risk. you use encryption

⊕ Service password - encryption

Router# conf t
Router (config)#service password-encryption

Now, If we run:
Router# show running -config
. . . .
. . . .
enable password 7 08026F6028
!
!
                        ↳ This No. 7 show's or
                          indicate which encryption
                          is used   Type of

NOTE: Service password-encryption is
not too secure because we
crack the password in easy
by google website. But we
have more secure password-
encryption present known as
"enable secret cisco"

⊕ Enable secret
Router (config) # enable secret Cisco
Router (config) # do sh run

. . . .
!
. . . .
. . . .
                                → MD5 encryption

enable secret ⑤ 1mERs$Y1CkLMCVWn......
enable password 7 08026F6028
↳ If these both are enable then enable password
     will be ignored not in use

⊕ Canceling Commands
Router(config)#no service password-encryption
              ↳ for canceling any command
                 we use no in starting & in this
                 case from Now Password will not
                 be encrypted.

⊕ Service password- encryption.

  If you enable service password encryption
          ↳ current password will be encrypted.
          ↳ future password will be encrypted.
          ↳ the enable secret will not be effected.

  If you disable service password-encryption
          ↳ current password will not be decrypted
          ↳ future password will not be encrypted
          ↳ the enable secret will not be effected.

@ Command Review

Router>enable

used to enter privileged ExEc mode.

Router#configure terminal

used to enter global configuration mode.

Router(config)# enable password "password"

configures a password to protect privileged exec mode.