

Day 3 Lab Report

Lab Title

Router Configuration of Hostname, Passwords, Interface IP, and Configuration Verification.

Objective

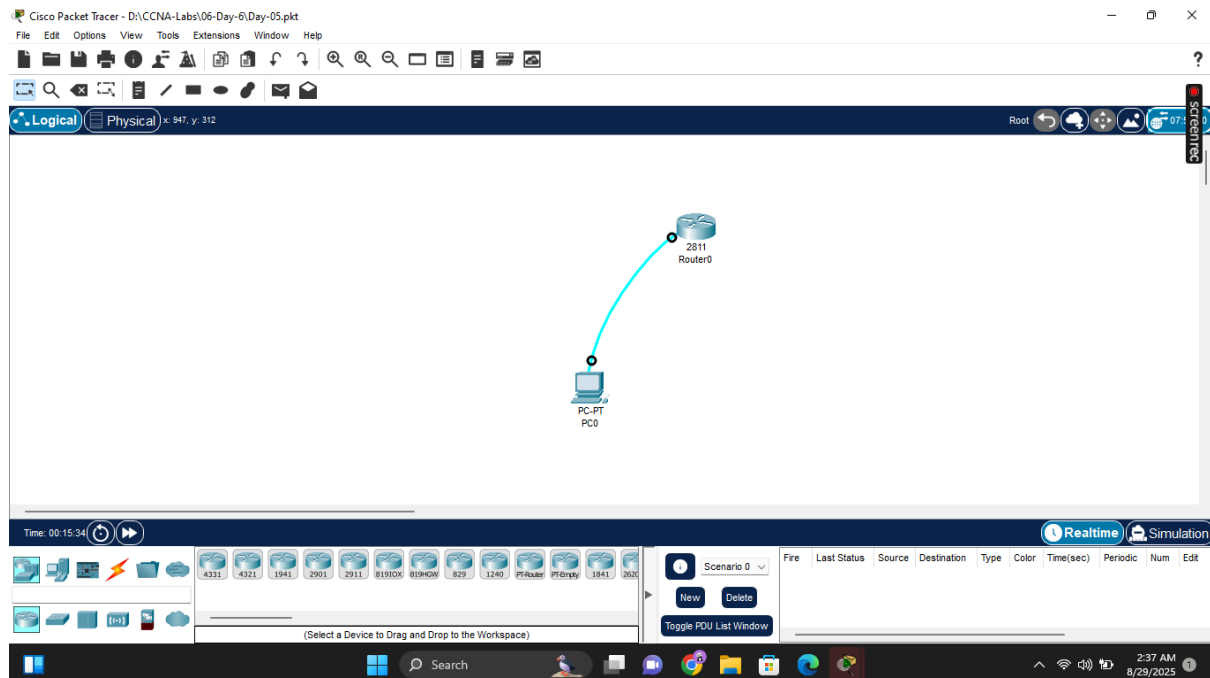
To perform the initial configuration of a Cisco router using CLI. This includes setting the hostname, securing access through console and enable passwords, assigning an IP address to an interface, verifying the configuration in RAM and NVRAM, and saving it for persistent use.

Lab Setup Overview

This lab assumes that you are working in Cisco Packet Tracer. You will use a Cisco router with at least one Ethernet or with the Serial interface. A PC is optional but recommended to simulate console access or configurations via console. Connect the PC to the router using a console cable, then launch the Terminal application on the PC to access the router's CLI. This simulates how network engineers configure routers in real-world scenarios before any remote access is available. In real world networking, the first time the networking device is configured

via

console.



Configuration Steps

Step 1. Access the Router CLI

Click on the router, and go to the CLI tab. If you're simulating physical access, connect the PC to the router using a console cable and open the Terminal on the PC. Press Enter to begin.

```
R-1
Physical Config CLI Attributes
IOS Command Line Interface
cisco 2811 (MPC860) processor (revision 0x200) with 60416K/5120K bytes of memory
Processor board ID JAD05190MTZ (4292891495)
2 FastEthernet interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>
```

Step 2 Enter Privileged EXEC Mode Type **enable** to move from user mode to privileged mode. Prompt changes from **Router>** to **Router#**.

```
R-1
Physical Config CLI Attributes
IOS Command Line Interface
Processor board ID JAD05190MTZ (4292891495)
2 FastEthernet interface(s)
DRAM configuration is 64 bits wide with parity disabled.
255K bytes of non-volatile configuration memory.
249856K bytes of ATA System CompactFlash 0 (Read/Write)

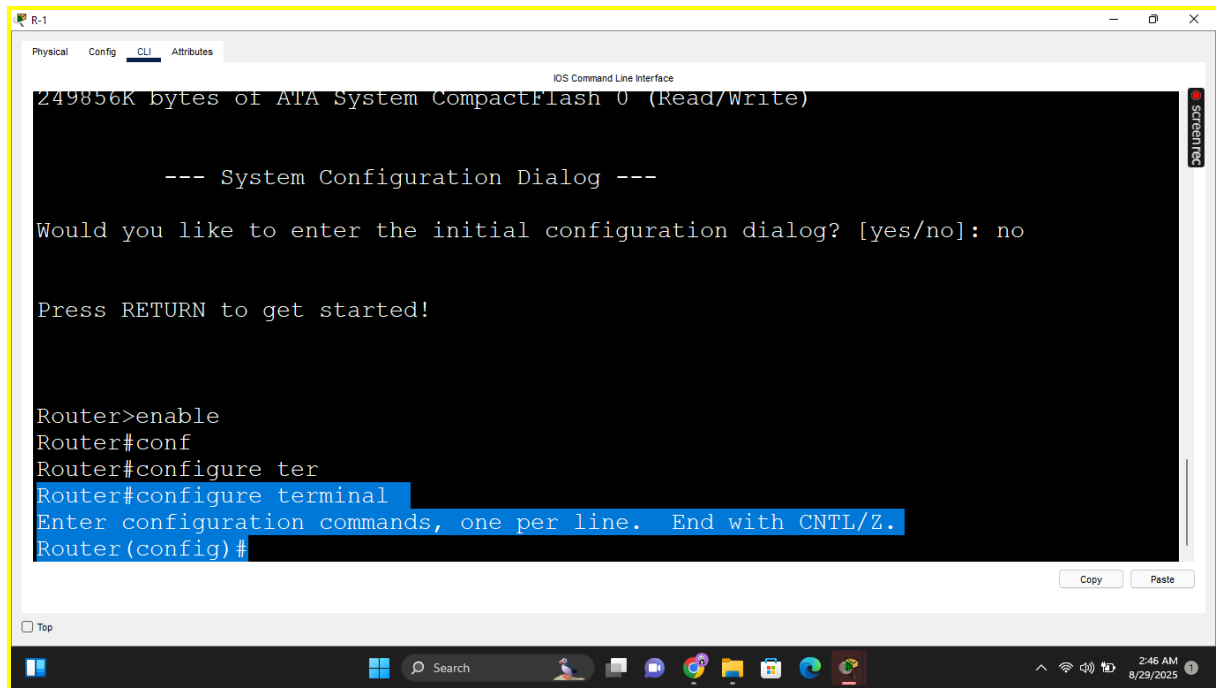
--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>enable
Router#
```

Step 3 Enter Global Configuration Mode Type `configure terminal` to enter global config mode. Prompt becomes `Router(config)#`.



The screenshot shows a Windows desktop with a terminal window titled 'R-1' running the 'IOS Command Line Interface'. The terminal displays the following text:

```
249856K bytes of ATA System CompactFlash 0 (Read/Write)

--- System Configuration Dialog ---

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

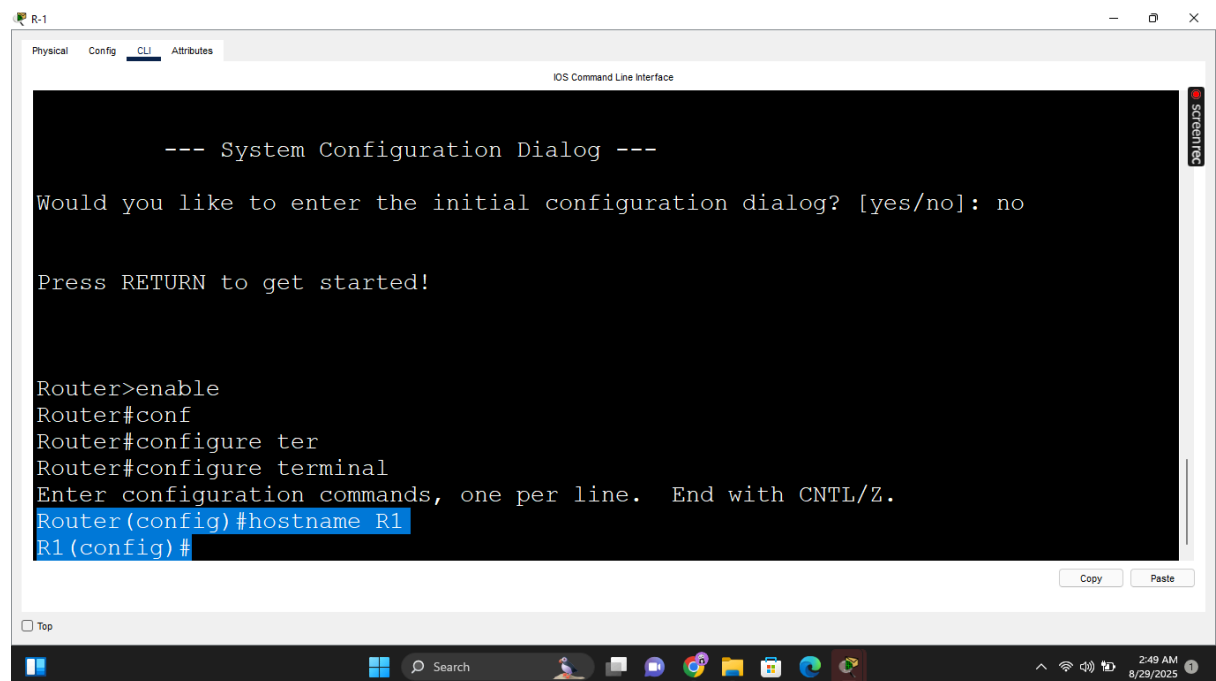
Press RETURN to get started!

Router>enable
Router#conf
Router#configure ter
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
```

The prompt has changed from `Router>` to `Router(config)#` after entering `configure terminal`. The Windows taskbar at the bottom shows the time as 2:46 AM on 8/29/2025.

Step 4: Set the Hostname

Type `hostname R1` to rename the router. Prompt updates to `R1(config)#`.



This screenshot shows the same terminal window as the previous one, but at a later stage. The prompt is now `R1(config)#` after the `hostname R1` command has been entered. The terminal text is as follows:

```
--- System Configuration Dialog ---

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

Press RETURN to get started!

Router>enable
Router#conf
Router#configure ter
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname R1
R1(config)#
```

The prompt has updated from `Router(config)#` to `R1(config)#`. The Windows taskbar at the bottom shows the time as 2:49 AM on 8/29/2025.

Step 5

Configure Console Password.

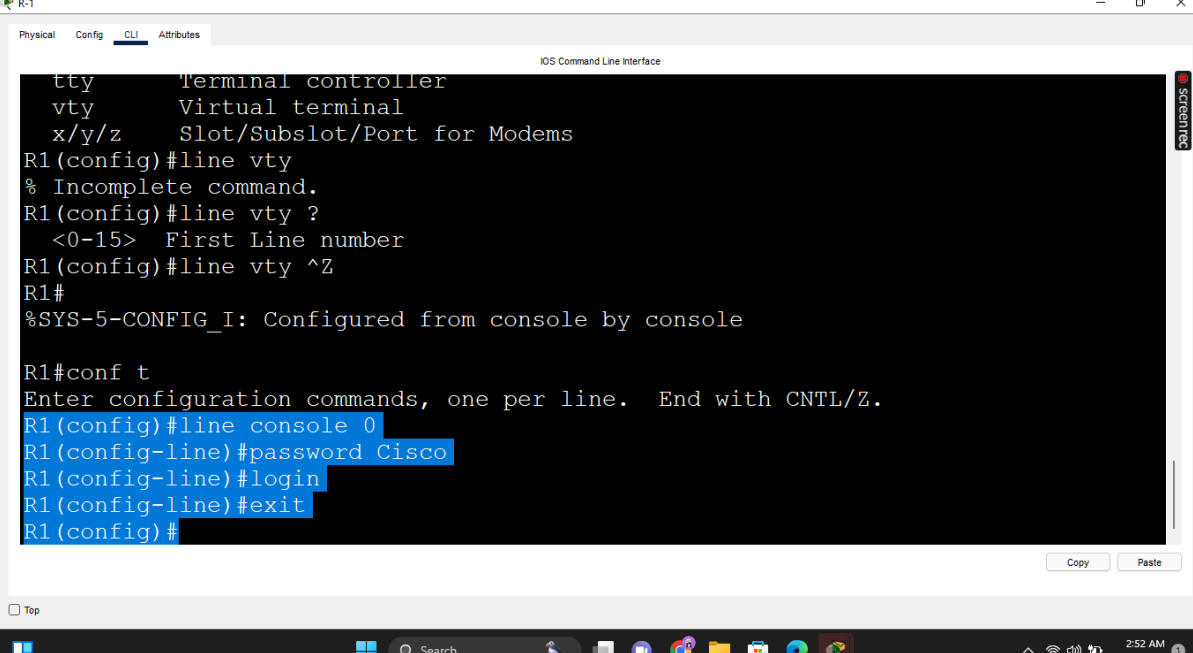
This secures physical access via the console cable. Enter the following commands one by one in the global configuration mode.

line console 0,

password Cisco,

login,

exit



The screenshot shows a Cisco IOS CLI window titled "R-1" with tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface". The terminal output shows the following sequence of commands and responses:

```
tty      Terminal controller
vty      Virtual terminal
x/y/z    Slot/Subslot/Port for Modems
R1(config)#line vty
% Incomplete command.
R1(config)#line vty ?
<0-15>   First Line number
R1(config)#line vty ^Z
R1#
%SYS-5-CONFIG_I: Configured from console by console

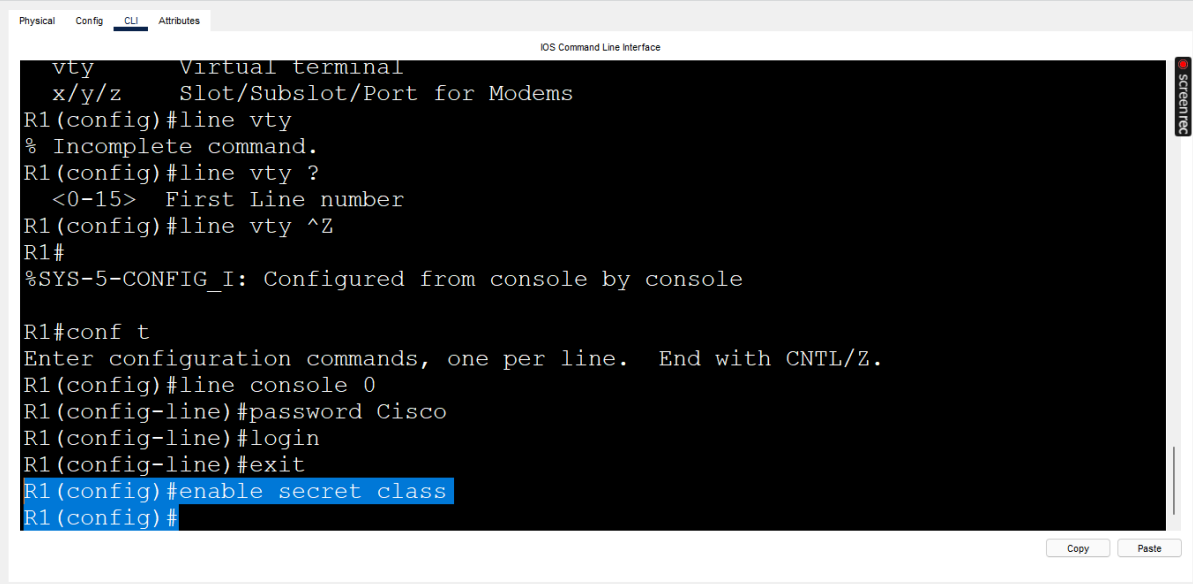
R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#line console 0
R1(config-line)#password Cisco
R1(config-line)#login
R1(config-line)#exit
R1(config)#
```

At the bottom of the window, there is a "Copy" button and a "Paste" button. The Windows taskbar is visible at the bottom of the screen, showing the time as 2:52 AM on 8/29/2025.

Step 6: Set Enable Secret Password.

This protects privileged EXEC mode with encryption and sets the password for the privileged exec mode. Type the following command in the global configuration mode.

enable secret class



The screenshot shows a Cisco IOS CLI window titled "R-1" with tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface". The terminal output shows the following commands and responses:

```

vty          Virtual terminal
x/y/z        Slot/Subslot/Port for Modems
R1(config)#line vty
% Incomplete command.
R1(config)#line vty ?
<0-15> First Line number
R1(config)#line vty ^Z
R1#
%SYS-5-CONFIG_I: Configured from console by console

R1#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)#line console 0
R1(config-line)#password Cisco
R1(config-line)#login
R1(config-line)#exit
R1(config)#enable secret class
R1(config)#
```

The command "R1(config)#enable secret class" is highlighted in blue. The window also features a "Copy" button and a "Paste" button on the right side of the terminal area. The Windows taskbar at the bottom shows the time as 2:57 AM on 8/29/2025.

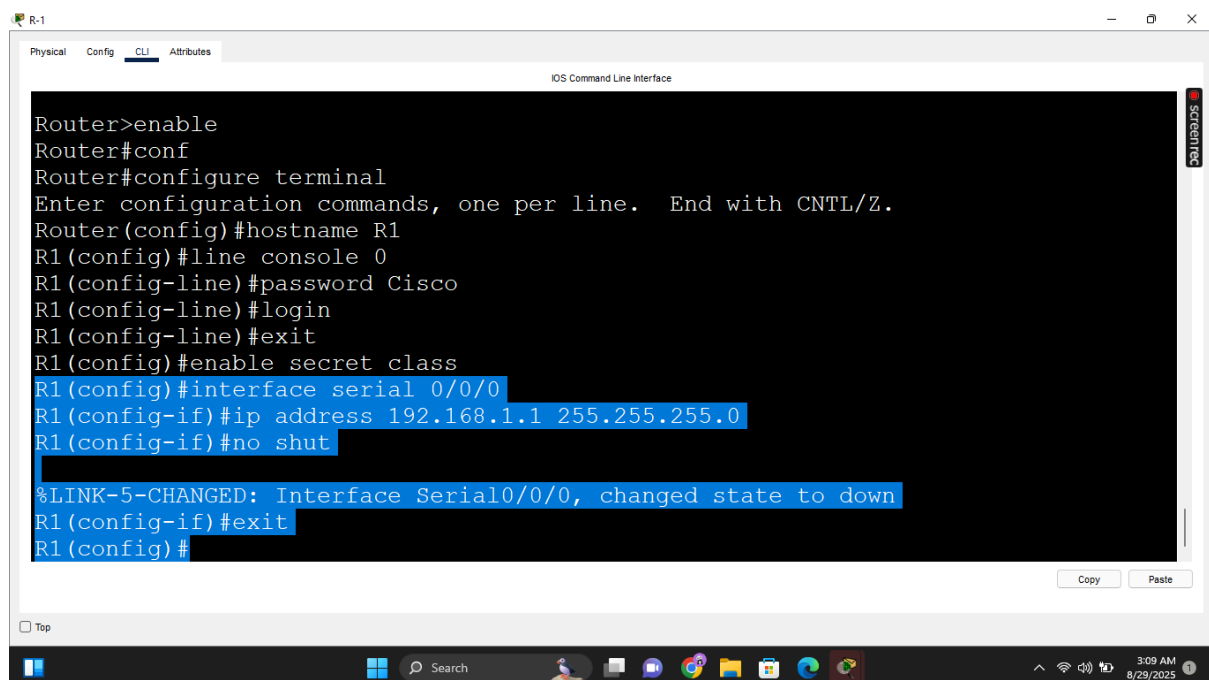
Step 7: Assign IP Address to an Interface Choose based on your router's available interface. In packet tracer first add the WIC-2T module from the modules section. For module addition , click on the router , go to the physical tab, click on the green light button and turn the router off, then from the module menu on the left side scroll down and select the WI-2T module and drag it to the blank portion and drop it there. Then turn the router on again by clicking the same button. Modules provide the serial interfaces. For Serial interface type the following commands in the global configuration mode.

interface serial0/0/0

ip address 192.168.1.1 255.255.255.0

no shutdown

exit



```
Router>enable
Router#conf
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#hostname R1
R1(config)#line console 0
R1(config-line)#password Cisco
R1(config-line)#login
R1(config-line)#exit
R1(config)#enable secret class
R1(config)#interface serial 0/0/0
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if)#no shut

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to down
R1(config-if)#exit
R1(config)#
```

For FastEthernet interface

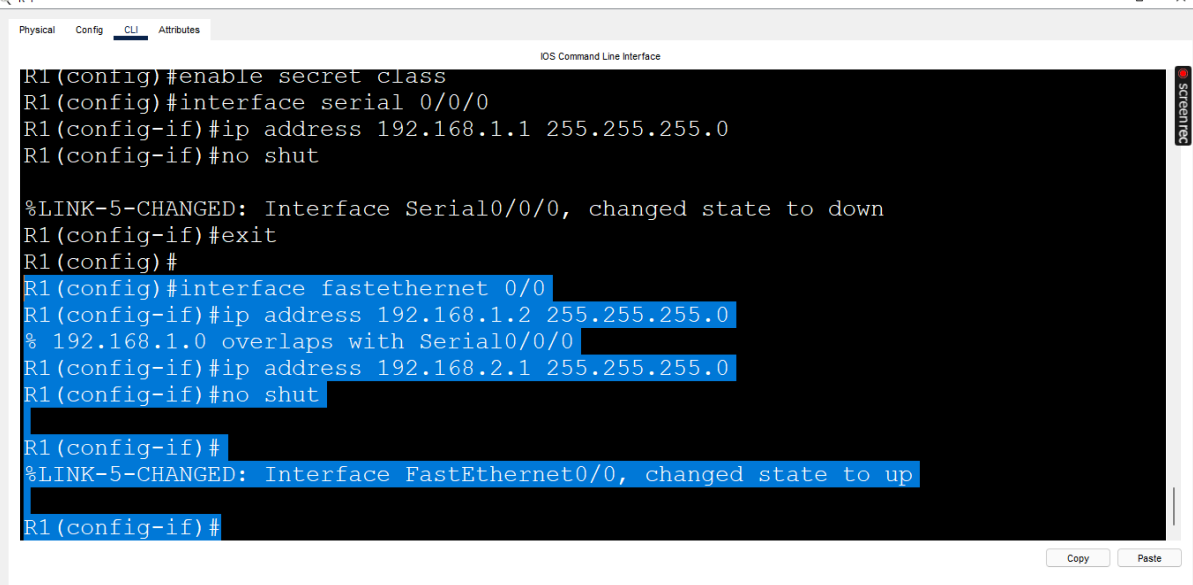
Type the following commands one by one in the global configuration mode to configure an IP address on the FastEthernet interface.

interface fastethernet0/0

ip address 192.168.2.1 255.255.255.0

no shutdown

exit



The screenshot shows a Cisco IOS CLI window titled "R-1" with tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the following commands and output:

```
R1(config)#enable secret class
R1(config)#interface serial 0/0/0
R1(config-if)#ip address 192.168.1.1 255.255.255.0
R1(config-if)#no shut

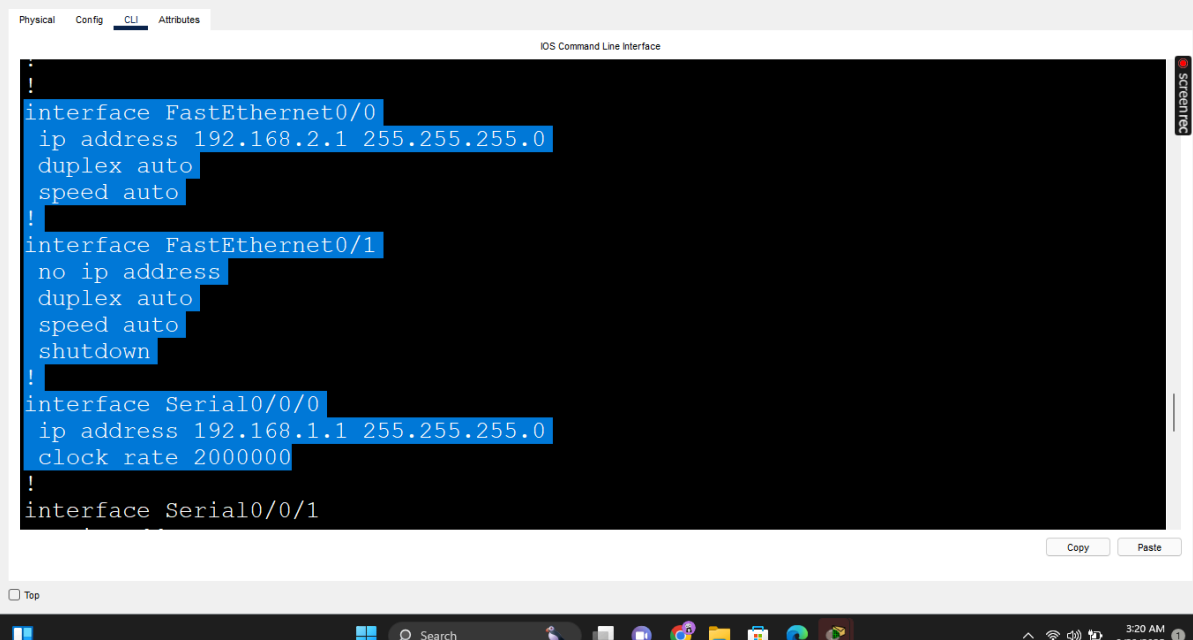
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to down
R1(config-if)#exit
R1(config)#
R1(config)#interface fastethernet 0/0
R1(config-if)#ip address 192.168.1.2 255.255.255.0
% 192.168.1.0 overlaps with Serial0/0/0
R1(config-if)#ip address 192.168.2.1 255.255.255.0
R1(config-if)#no shut

R1(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up
R1(config-if)#
```

At the bottom of the window, there are "Copy" and "Paste" buttons. The Windows taskbar is visible at the bottom of the screen, showing the time as 3:13 AM on 8/29/2025.

Step 8: Go back to the privileged mode by “exit” and verify the Configurations in RAM. Use `show running-config` to view the active configuration. Type this command in the privilege mode

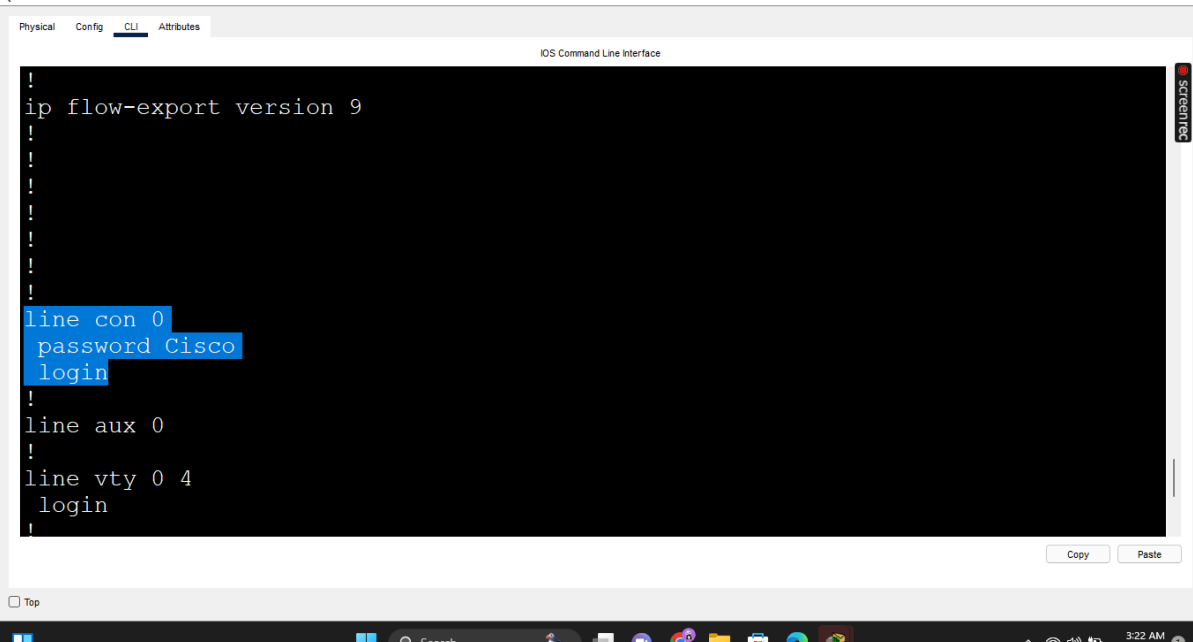
`show running-config` Verify configurations , hostname , ip addresses on the interfaces, console password



The screenshot shows the IOS Command Line Interface with the following configuration:

```
!
interface FastEthernet0/0
 ip address 192.168.2.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial0/0/0
 ip address 192.168.1.1 255.255.255.0
 clock rate 2000000
!
interface Serial0/0/1
```

The interface configuration for Serial0/0/1 is partially visible at the bottom of the screen.

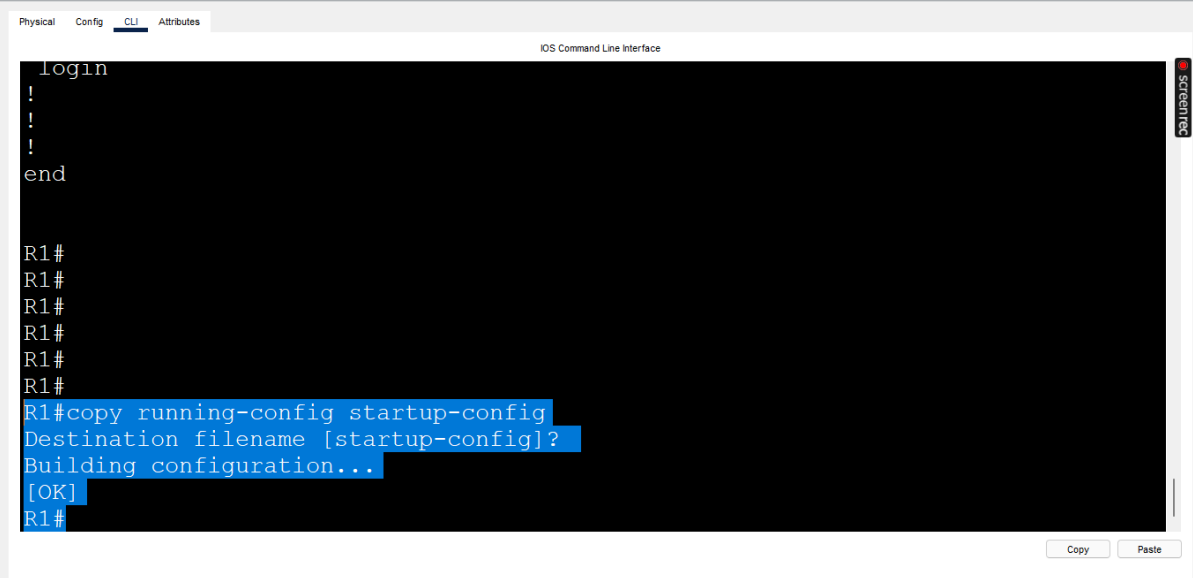


The screenshot shows the IOS Command Line Interface with the following configuration:

```
!
ip flow-export version 9
!
!
!
!
!
!
!
line con 0
 password Cisco
 login
!
line aux 0
!
line vty 0 4
 login
!
```


Step 9: Save Configuration to NVRAM

Use `copy running-config startup-config` command and press Enter to confirm the default filename. Configurations will be saved to NVRAM as the startup configurations.



The screenshot shows a Cisco IOS CLI window titled "R-1" with tabs for "Physical", "Config", "CLI", and "Attributes". The "CLI" tab is active, displaying the "IOS Command Line Interface". The command history shows the following sequence of commands and prompts:

```
login
!
!
!
end

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

At the bottom of the window, there are "Copy" and "Paste" buttons. The Windows taskbar is visible at the bottom of the screen, showing the time as 3:26 AM on 8/29/2025.

Step 10: Verify Configuration in NVRAM

Verify that all the configurations are saved to NVRAM or not. Use `show startup-config` to confirm the saved configuration in NVRAM.

Conclusion

This lab walks through the foundational steps of router setup from accessing the device via console cable to securing it with passwords, assigning IP addresses, and ensuring configurations are saved. These are the first things any network engineer must master before diving into routing protocols or advanced services. Whether you're prepping for CCNA or deploying real infrastructure, this workflow builds muscle memory for reliable, secure configuration.

