

## Lab 2.2

Julián Alexis Cano Cruces

2.2 Lab - CLI Automation with Python using netmiko - Word

alex cano cruces

Archivo Inicio Insertar Diseño Referencias Correspondencia Revisar Vista Ayuda ¿Qué desea hacer?

Portapapeles Fuente Párrafo Estilos Edición

### aLab – CLI Automation with Python

#### Objectives

- Part 1: Install the **netmiko** Python module
- Part 2: Connect to IOS XE's SSH session
- Part 3: Use **netmiko** to gather information
- Part 4: Use **netmiko** to alter configuration

#### Background / Scenario

For simple network automation using Python, we have been using various screen scrapers and scripts we utilized to automate entering commands on the command line. With the evolution of the open source project hosted and maintained on GitHub, we can now interface using similar techniques like **netmiko**.

In this lab activity, you will identify the commands for network automation.

#### Required Resources

- Access to a router with the IOS XE
- Access to the Internet
- Python 3.x environment

#### Instructions

```
C:\WINDOWS\system32\cmd.exe
netmiko (4.0.1)
Requirement already satisfied: cryptography>=3.3 in c:\users\alexj\appdata\local\programs\python\python312\lib\site-packages (from paramiko>=2.9.5->netmiko) (41.0.5)
Requirement already satisfied: pynacl>=1.5 in c:\users\alexj\appdata\local\programs\python\python312\lib\site-packages (from paramiko>=2.9.5->netmiko) (1.5.0)
Requirement already satisfied: six in c:\users\alexj\appdata\local\programs\python\python312\lib\site-packages (from textfsm>=1.1.3->netmiko) (1.16.0)
Requirement already satisfied: future in c:\users\alexj\appdata\local\programs\python\python312\lib\site-packages (from textfsm>=1.1.3->netmiko) (0.18.3)
Requirement already satisfied: cffi>=1.12 in c:\users\alexj\appdata\local\programs\python\python312\lib\site-packages (from cryptography>=3.3->paramiko>=2.9.5->netmiko) (1.16.0)
Requirement already satisfied: pycparser in c:\users\alexj\appdata\local\programs\python\python312\lib\site-packages (from cffi>=1.12->cryptography>=3.3->paramiko>=2.9.5->netmiko) (2.21)
C:\Users\alexj>
```

Página 1 de 4 819 palabras

13°C Mayorm. nublado

Buscar

11:19 p. m. 06/12/2023

2.2 Lab - CLI Automation with Python using netmiko - Word

alex cano cruces

Archivo Inicio Insertar Diseño Referencias Correspondencia Revisar Vista Ayuda ¿Qué desea hacer?

Portapapeles Fuente Párrafo Estilos Edición

### Part 2: Connect to

#### Connect to IOS XE

The **netmiko** module provides a successful connection to the device.

- In Python IDLE, create a new Python file named **netmiko.py**.
- In the new Python file, import the **netmiko** module:
- Setup a **sshClient** object using the **ConnectHandler()** function.

The parameters of the **ConnectHandler()** function are:

- device\_type** – identifies the remote device type
- host** – the address (host or IP) of the remote device (adjust the IP address "192.168.56.101" to match your router's current address)
- port** – the remote port of the **ssh** service

Cisco AnyConnect Secure Mobility Client

VPN: Connected to devnetsandbox-usw1-reservation.cisco.com:20121. Disconnect

Web Security: No License Key.

00:00:33

IPV4

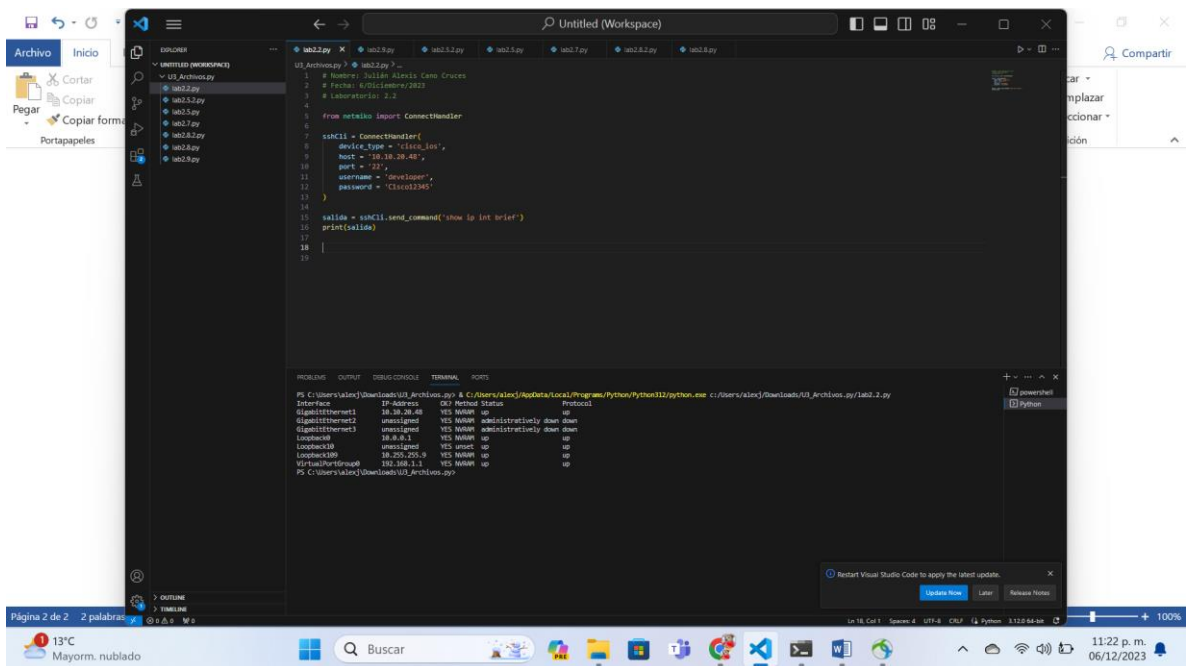
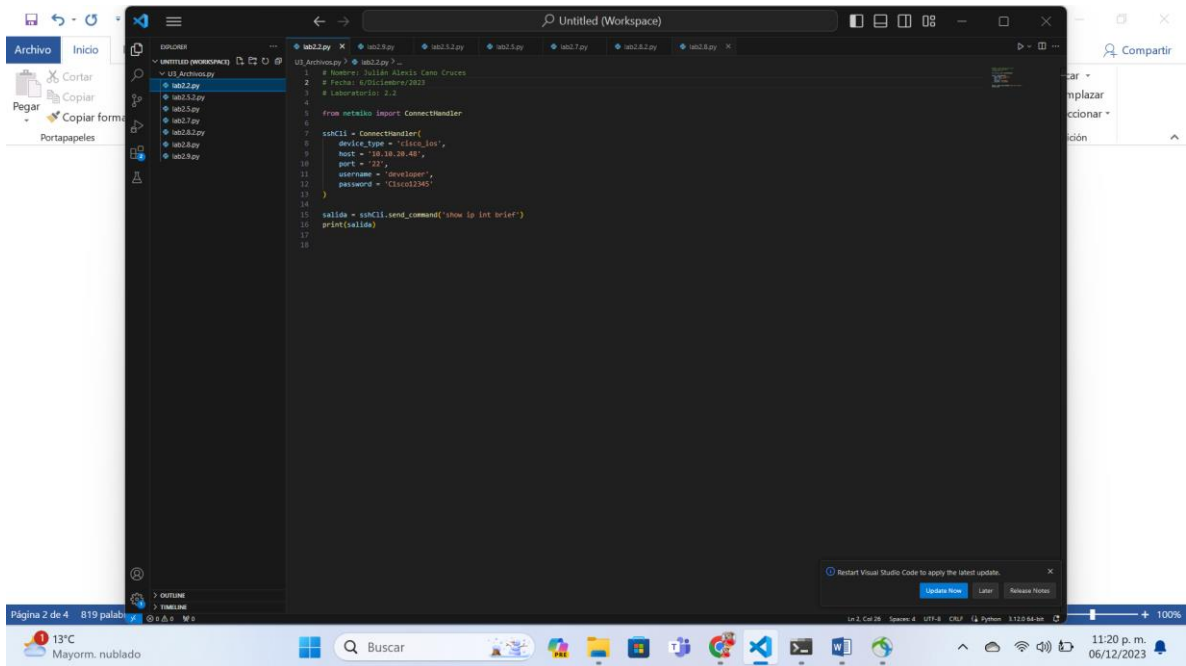
```
sshClient = ConnectHandler(
    device_type='cisco',
    host='192.168.56.101',
    port=22,
    username='cisco',
    password='cisco1231'
)
```

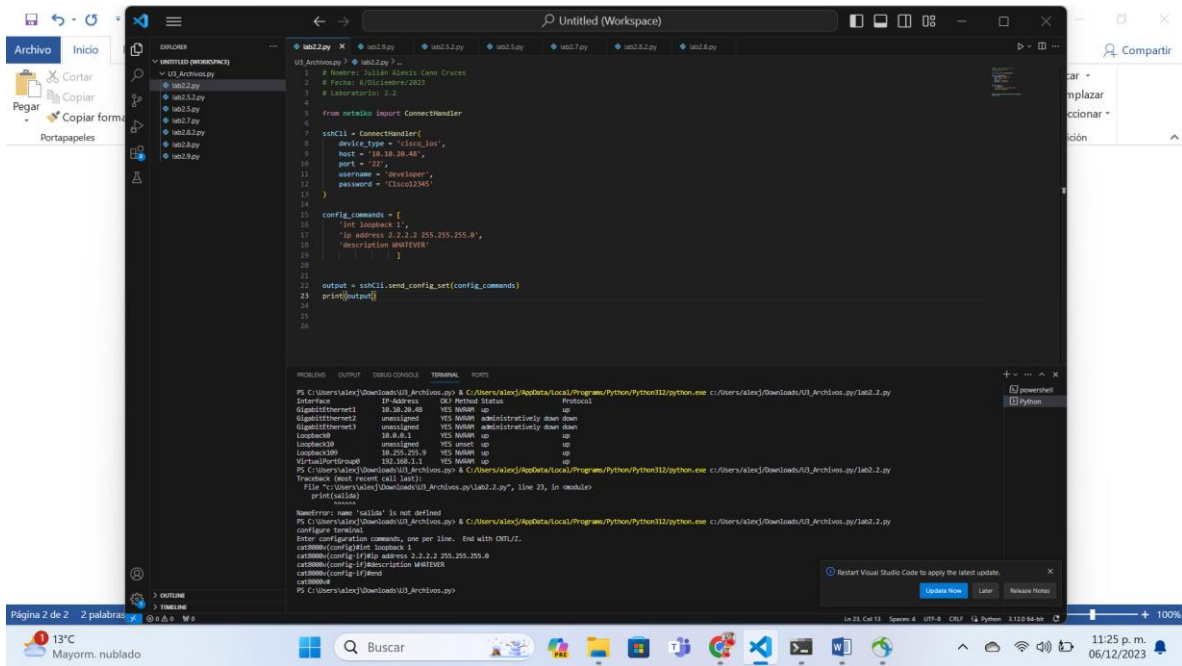
Página 2 de 4 819 palabras

13°C Mayorm. nublado

Buscar

11:20 p. m. 06/12/2023

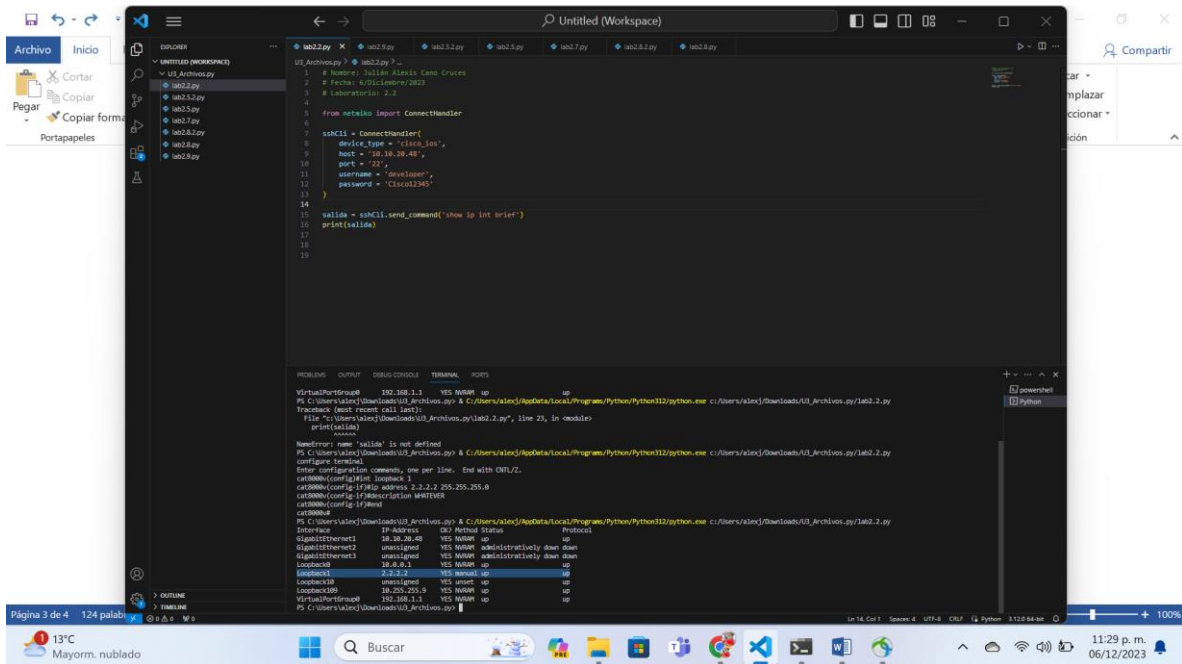




¿Por qué el resultado de “show ip int brief” no incluye la interfaz “loopback1”?

Por que la interfaz no existía a la hora de ejecutar ese comando

¿Cómo ejecutar y mostrar el resultado del comando “show ip int brief” después de crear las interfaces loopback?



Al ejecutarse de la misma manera pero posterior a crearse la interfaz, está ya aparece.