

Instalacion de Netmiko

```
Administrador Símbolo del sistema
Requirement already satisfied: pyyaml>=5.3 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from netmiko) (6.0)
Requirement already satisfied: ntc-templates>=2.0.0 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from netmiko) (3.1.0)
Requirement already satisfied: scp>=0.13.3 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from netmiko) (0.14.4)
Requirement already satisfied: six in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from textfsm<=1.1.2->netmiko) (1.16.0)
Requirement already satisfied: future in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from textfsm<=1.1.2->netmiko) (0.18.2)
Requirement already satisfied: cryptography>=2.5 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from paramiko>=2.7.2->netmiko) (38.0.1)
Requirement already satisfied: bcrypt>=3.1.3 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from paramiko>=2.7.2->netmiko) (4.0.1)
Requirement already satisfied: pynacl>=1.0.1 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from paramiko>=2.7.2->netmiko) (1.5.0)
Requirement already satisfied: cffi>=1.12 in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from cryptography>=2.5->paramiko>=2.7.2->netmiko) (1.15.1)
Requirement already satisfied: pycparser in c:\users\foser\appdata\local\programs\python\python310\lib\site-packages (from cffi>=1.12->cryptography>=2.5->paramiko>=2.7.2->netmiko) (2.21)
C:\WINDOWS\system32>
```

Importar netmiko

```
#Nombre: Edgar Francisco Hernandez Mendez
from netmiko import ConnectHandler

sshCli = ConnectHandler(
    device_type = 'cisco_ios',
    host = '10.10.20.70',
    port = 2221,
    username = 'admin',
    password = 'admin'
)

output = sshCli.send_command("sh ip int brief",read_timeout= 10)
print(output)

config_commands= [
    'int Loopback 1',
    'ipv4 address 192.168.8.1 255.255.255.0',
    'no sh'
    'description WHATEVER'
]
sshCli.send_command('configure terminal',read_timeout= 10)
sshCli.send_config_set(config_commands)
```

```
ssh.py - C:/Users/foser/OneDrive/Escritorio/Unidad 3 LABORATORIOS/ssh.py (3.10.8)
File Edit Format Run Options Window Help

import netmiko
from netmiko import ConnectHandler
sshCli = ConnectHandler(
    device_type='cisco_ios',
    host='10.10.20.70',
    port=2231,
    username='admin',
    password='admin'
)
output = sshCli.send_command("show ip int brief", read_timeout = 10, expect_string = r"#")
print ("show ip int brief:\n{}\n".format(output))
#print(output)

===== RESTART: C:/Users/foser/OneDrive/Escritorio/Unidad 3 LABORATORIOS/ssh.py =====
show ip int brief:
RP/0/RP0/CPU0:r1#

RP/0/RP0/CPU0:r1#show ip int brief

Thu Nov 24 16:32:20.883 UTC

===== RESTART: C:/Users/foser/OneDrive/Escritorio/Unidad 3 LABORATORIOS/ssh.py =====
show ip int brief:
RP/0/RP0/CPU0:r2#terminal length 0

Thu Nov 24 16:32:45.903 UTC
```

DevNet Sandbox - Workspace X (4) WhatsApp X Your Cisco DevNet Sandbox X Sandbox AnyConnect Down X dw60uptodown.com/dwn/ X 10.10.20.70:2211/ X

10.10.20.70:2211

SSH-2.0-OpenSSH_7.2p2 Ubuntu-4ubuntu2.8
Protocol mismatch.

```

===== RESTART: C:/Users/foser/OneDrive/Documentos/lab2.2.py =====

Wed Nov 30 02:50:57.423 UTC

Interface                IP-Address      Status      Protocol Vrf-Name
Loopback1                192.168.8.1    Up          Up        default
MgmtEth0/RP0/CPU0/0      192.168.122.21 Up          Up        default
GigabitEthernet0/0/0/0   unassigned     Shutdown    Down      default
GigabitEthernet0/0/0/1   unassigned     Shutdown    Down      default
GigabitEthernet0/0/0/2   unassigned     Shutdown    Down      default
GigabitEthernet0/0/0/3   unassigned     Shutdown    Down      default
GigabitEthernet0/0/0/4   unassigned     Shutdown    Down      default

```

Conclusión

¿Qué es Netmiko?

Como tal es una librería de redes multivendedores estándar para las conexiones ssh Python.

¿Qué comandos podemos ejecutar adicionalmente?

Enable, sh run, sh ip route, interface Loopback, router eigr

¿Cómo interactúa Netmiko con Python?

Envío de comandos, soporte extendido de la funcionalidad ssh, recuperar salidas, cisco ios/ios-xe, nx-os, cortafuegos

¿Como es esa vía de comunicación?

Esta vía de comunicación se establece mediante ssh