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Task 1

1. Modify your script to get the prompt from all the devices in the topology

from netmiko import Netmiko

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=Netmiko(\*\*device)

print(f"Default prompt: {net\_connect.find\_prompt()}")

net\_connect.send\_command\_timing("disable")

print(f"Disable command: {net\_connect.find\_prompt()}")

net\_connect.enable()

print(f"Enable command: {net\_connect.find\_prompt()}\n")

Text

Description automatically generated

Task 2:

1. Modify this script to find the uptimes of all the routers in the topology.

from netmiko import Netmiko

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=Netmiko(\*\*device)

output=net\_connect.send\_command("show version")

net\_connect.disconnect()

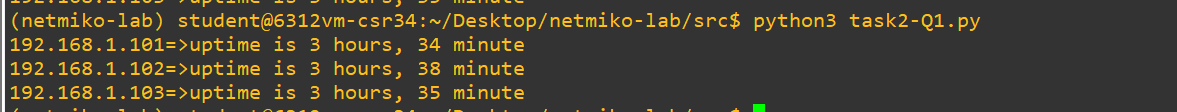
#print(output,'\n')

result=output.find('uptime is')

begin=int(result)

end=begin +28

print(device['ip']+"=>" +output[begin:end])

py

2. Modify this script to extract the Configuration Register of the devices

from netmiko import Netmiko

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=Netmiko(\*\*device)

output=net\_connect.send\_command("show version")

net\_connect.disconnect()

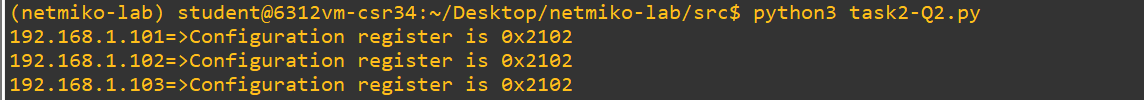
#print(output,'\n')

result=output.find('Configuration register')

begin=int(result)

end=begin +32

print(device['ip']+"=>" +output[begin:end])



Task 3:

1. Modify your script to *show the interface description* of all the routers in the topology.

from netmiko import ConnectHandler

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=ConnectHandler(\*\*device)

output=net\_connect.send\_command("show interface description")

net\_connect.disconnect()

print("-"\*100)

print(output)

print("-"\*100)

Text

Description automatically generated

1. Modify your script to print any other show commands that you can think of.

from netmiko import ConnectHandler

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=ConnectHandler(\*\*device)

output=net\_connect.send\_command("show ip int brief")

net\_connect.disconnect()

print("-"\*100)

print(output)

print("-"\*100)

Graphical user interface, chart

Description automatically generated

Task4:

1. Modify your script to find all the interface of all the routers in the topology

from netmiko import Netmiko

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=Netmiko(\*\*device)

output=net\_connect.send\_command("show ip int brief",use\_textfsm=True)

net\_connect.disconnect()

print(type(output))

print(f'{device["ip"]} interfaces:')

for interface in output:

print(interface['intf'])

Text

Description automatically generated

1. Inspect the cloned TextFSM folder and see the accept commands that can be parsed with TextFSM.

Text

Description automatically generated

3. Modify your script to parse the “show ip route” command. Print the “protocol”,

“network”, “distance” and “metric” from the output

from netmiko import Netmiko

devices=[]

for i in range (3):

ip=f"192.168.1.{101+i}"

device={"device\_type":"cisco\_ios","ip":ip,# R1 mgmt Interface

"username":"student",

"password":"Meilab123",

"port":"22",

"secret":"cisco",

}

devices.append(device)

for device in devices:

net\_connect=Netmiko(\*\*device)

output=net\_connect.send\_command("show ip route",use\_textfsm=True)

net\_connect.disconnect()

print(f'{device["ip"]} ip route:')

for route in output:

print(f'network:{route["network"]} ',end='')

print(f'protocol:{route["protocol"]} ',end='')

print(f'distance:{route["distance"]} ',end='')

print(f'metric:{route["metric"]} ')

Timeline

Description automatically generated with low confidence