



Universidad Tecnológica
del Norte de Guanajuato
Organismo Público Descentralizado del Gobierno del Estado

Facultad de: *Infraestructura de Redes Digitales*

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Materia:

Programación de Redes

Nombre de la Actividad:

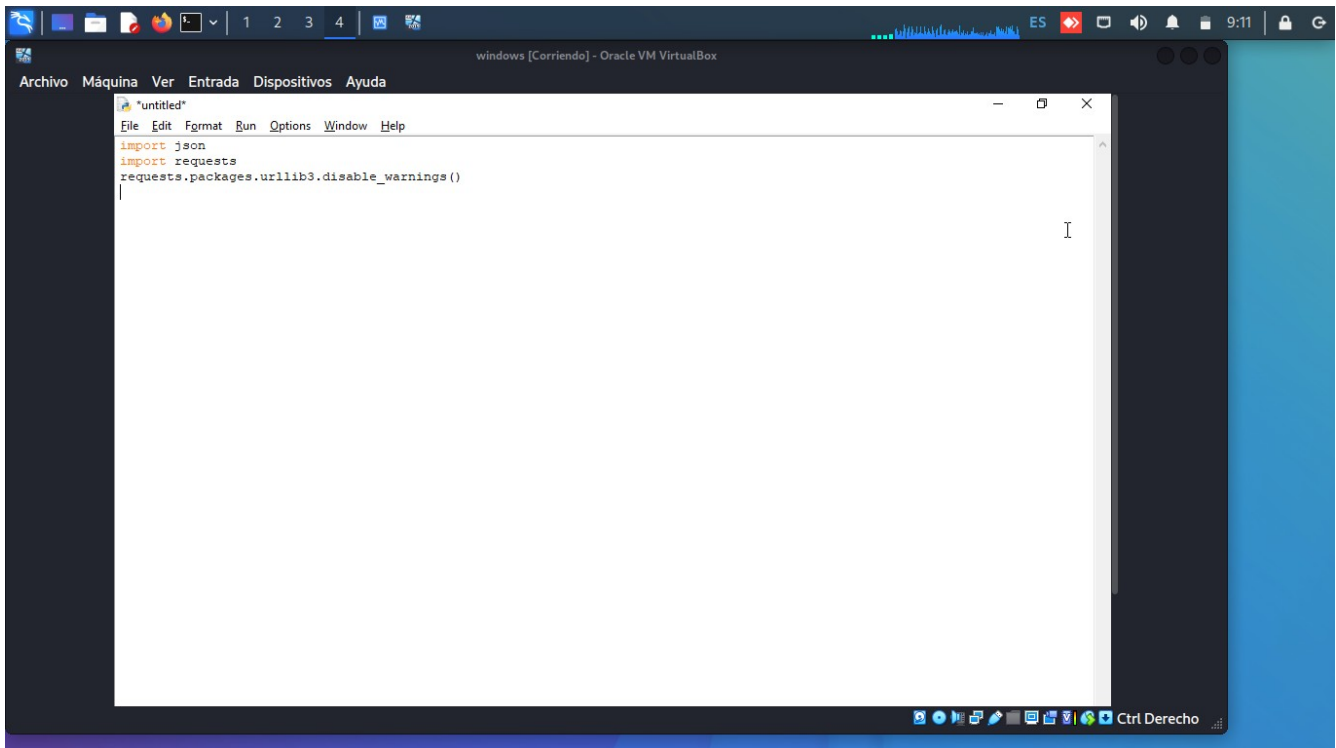
2.5 Lab - RESTCONF with Python

Profesor:

Barron Rodríguez Gabriel

Lugar y Fecha de Presentación: *Dolores Hidalgo C.I.N.*; hoy *6* de *Diciembre* del
2022

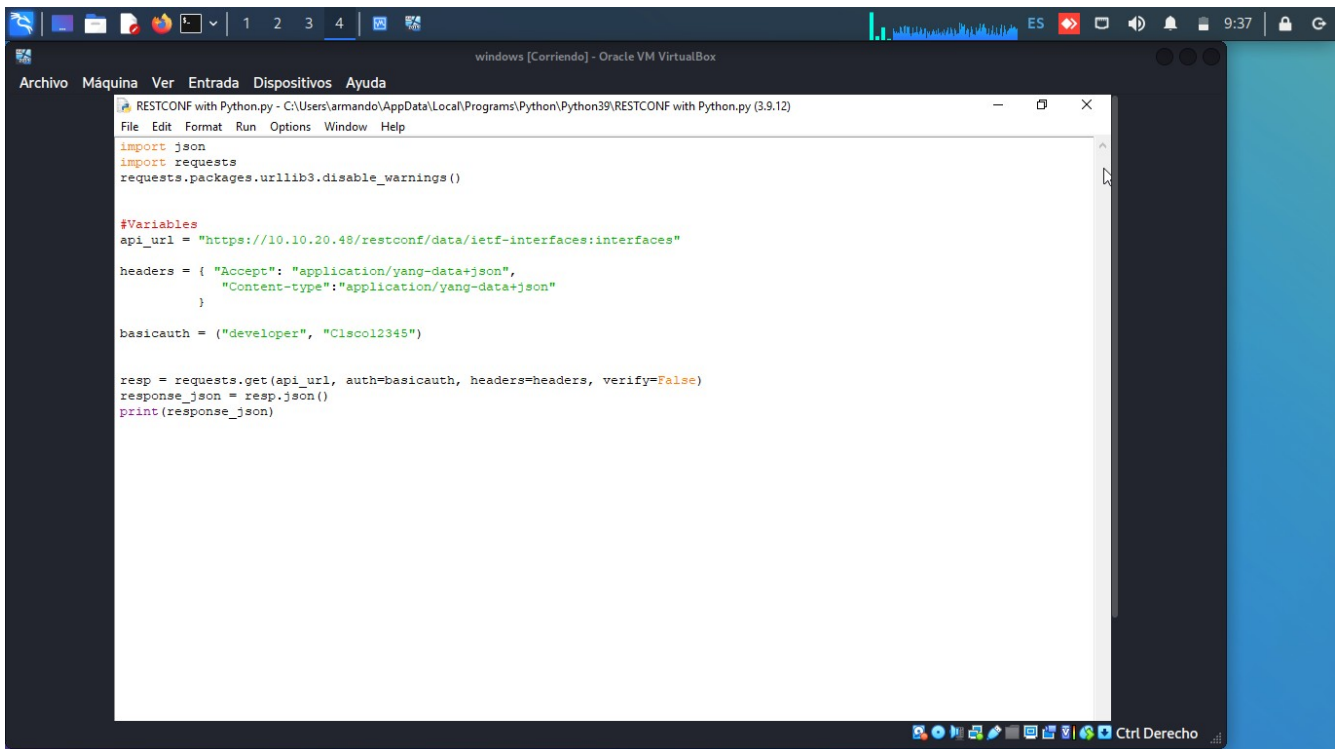
Paso 1. Importa los modulos y deshabilita las advertencias SSL.



The screenshot shows a Windows VirtualBox environment with a Python IDE. The menu bar includes 'Archivo', 'Máquina', 'Ver', 'Entrada', 'Dispositivos', and 'Ayuda'. The code editor contains the following Python code:

```
import json
import requests
requests.packages.urllib3.disable_warnings()
```

Paso 2. Construye los componentes del request.



The screenshot shows the same Windows VirtualBox environment with the Python IDE. The code editor now contains the following Python code:

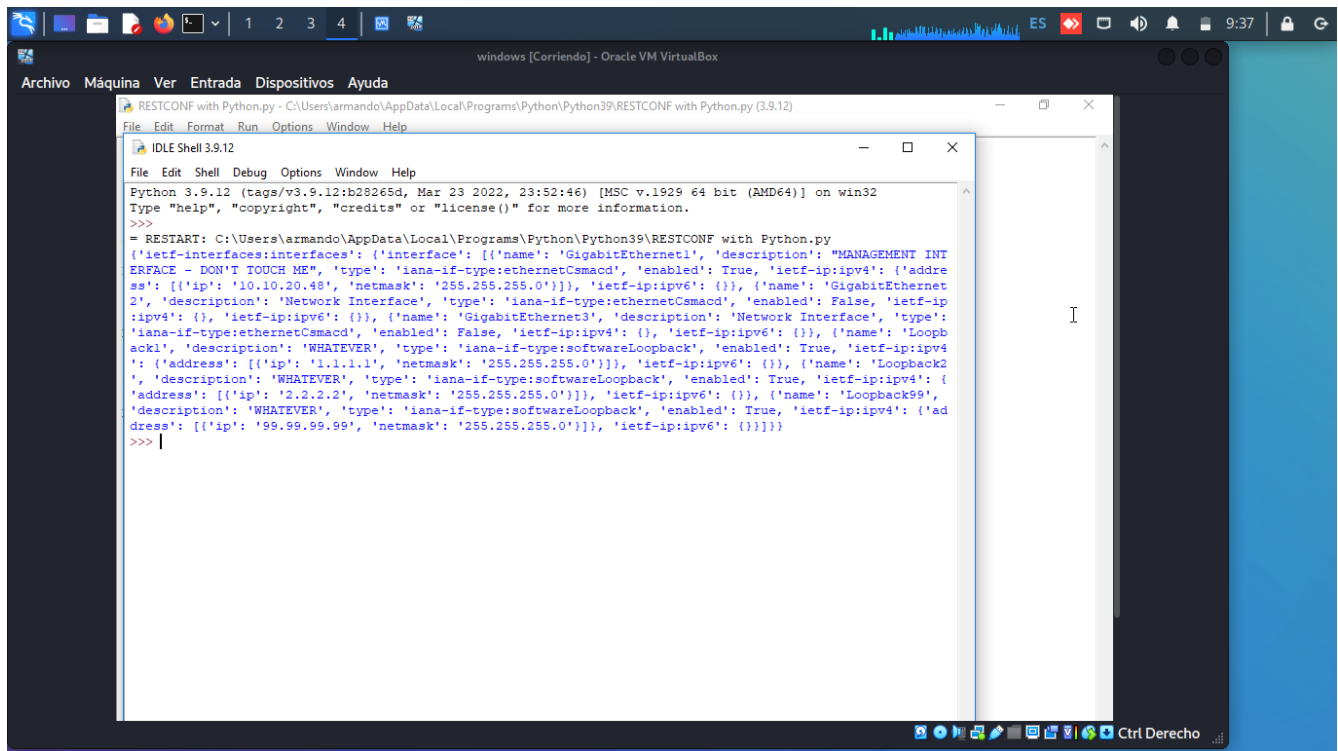
```
import json
import requests
requests.packages.urllib3.disable_warnings()

#Variables
api_url = "https://10.10.20.48/restconf/data/ietf-interfaces:interfaces"
headers = { "Accept": "application/yang-data+json",
            "Content-type": "application/yang-data+json"
          }

basicauth = ("developer", "Cisc012345")

resp = requests.get(api_url, auth=basicauth, headers=headers, verify=False)
response_json = resp.json()
print(response_json)
```

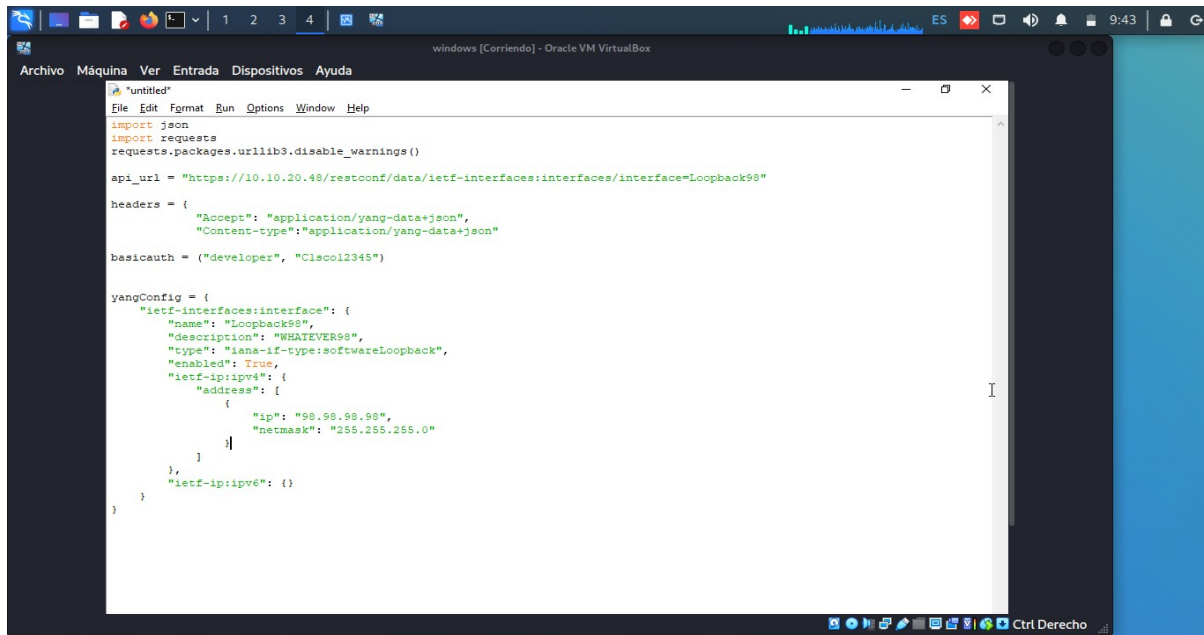
Paso 3. Envía y evalúa el request.



```
RESTCONF with Python.py - C:\Users\armando\AppData\Local\Programs\Python\Python39\RESTCONF with Python.py (3.9.12)
File Edit Shell Debug Options Window Help
Python 3.9.12 (tags/v3.9.12:b28265d, Mar 23 2022, 23:52:46) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\armando\AppData\Local\Programs\Python\Python39\RESTCONF with Python.py
({'ietf-interfaces:interfaces': {'interface': [{'name': 'GigabitEthernet1', 'description': 'MANAGEMENT INT
ERFACE - DON'T TOUCH ME', 'type': 'iana-if-type:ethernetCsmacd', 'enabled': True, 'ietf-ip:ipv4': {'addre
ss': [{'ip': '10.10.20.48', 'netmask': '255.255.255.0'}]}, 'ietf-ip:ipv6': {}}, {'name': 'GigabitEthernet
2', 'description': 'Network Interface', 'type': 'iana-if-type:ethernetCsmacd', 'enabled': False, 'ietf-ip
:ipv4': {}, 'ietf-ip:ipv6': {}}, {'name': 'GigabitEthernet3', 'description': 'Network Interface', 'type':
'iana-if-type:ethernetCsmacd', 'enabled': False, 'ietf-ip:ipv4': {}, 'ietf-ip:ipv6': {}}, {'name': 'Loopb
ack1', 'description': 'WHATEVER', 'type': 'iana-if-type:softwareLoopback', 'enabled': True, 'ietf-ip:ipv4
': {'address': [{'ip': '1.1.1.1', 'netmask': '255.255.255.0'}]}, 'ietf-ip:ipv6': {}}, {'name': 'Loopback2
', 'description': 'WHATEVER', 'type': 'iana-if-type:softwareLoopback', 'enabled': True, 'ietf-ip:ipv4': {
'address': [{'ip': '2.2.2.2', 'netmask': '255.255.255.0'}]}, 'ietf-ip:ipv6': {}}, {'name': 'Loopback99',
'description': 'WHATEVER', 'type': 'iana-if-type:softwareLoopback', 'enabled': True, 'ietf-ip:ipv4': {'ad
dress': [{'ip': '99.99.99.99', 'netmask': '255.255.255.0'}]}, 'ietf-ip:ipv6': {}}]}}}
>>> |
```

PARTE 2. Modifica la interface de configuración con RESTCONF en Python.

Paso 1. Crea un Python HTTP PUT request.



```
untitled
File Edit Format Run Options Window Help
import json
import requests
requests.packages.urllib3.disable_warnings()

api_url = "https://10.10.20.48/restconf/data/ietf-interfaces:interfaces/interface=Loopback98"

headers = {
    "Accept": "application/yang-data+json",
    "Content-type": "application/yang-data+json"
}

basicauth = ("developer", "Cisc0ol2345")

yangConfig = {
    "ietf-interfaces:interface": {
        "name": "Loopback98",
        "description": "WHATEVER98",
        "type": "iana-if-type:softwareLoopback",
        "enabled": True,
        "ietf-ip:ipv4": {
            "address": [
                {
                    "ip": "98.98.98.98",
                    "netmask": "255.255.255.0"
                }
            ]
        },
        "ietf-ip:ipv6": {}
    }
}
}
```

Paso 2. Envía el requests y verifica.

