



UNIVERSIDAD TECNOLÓGICA DEL NORTE DE GUANAJUATO

Tecnologías de la información y Comunicación

Programa educativo:

TSU Infraestructura de redes Digitales

Área académica:

Programación de Redes

Asignatura:

Unidad III: Programación de redes

Grupo: GIR0441

2.1 Lab-Setting Up the lab Environment

Tarea:

Sandra Dania González Manzano

Alumno:

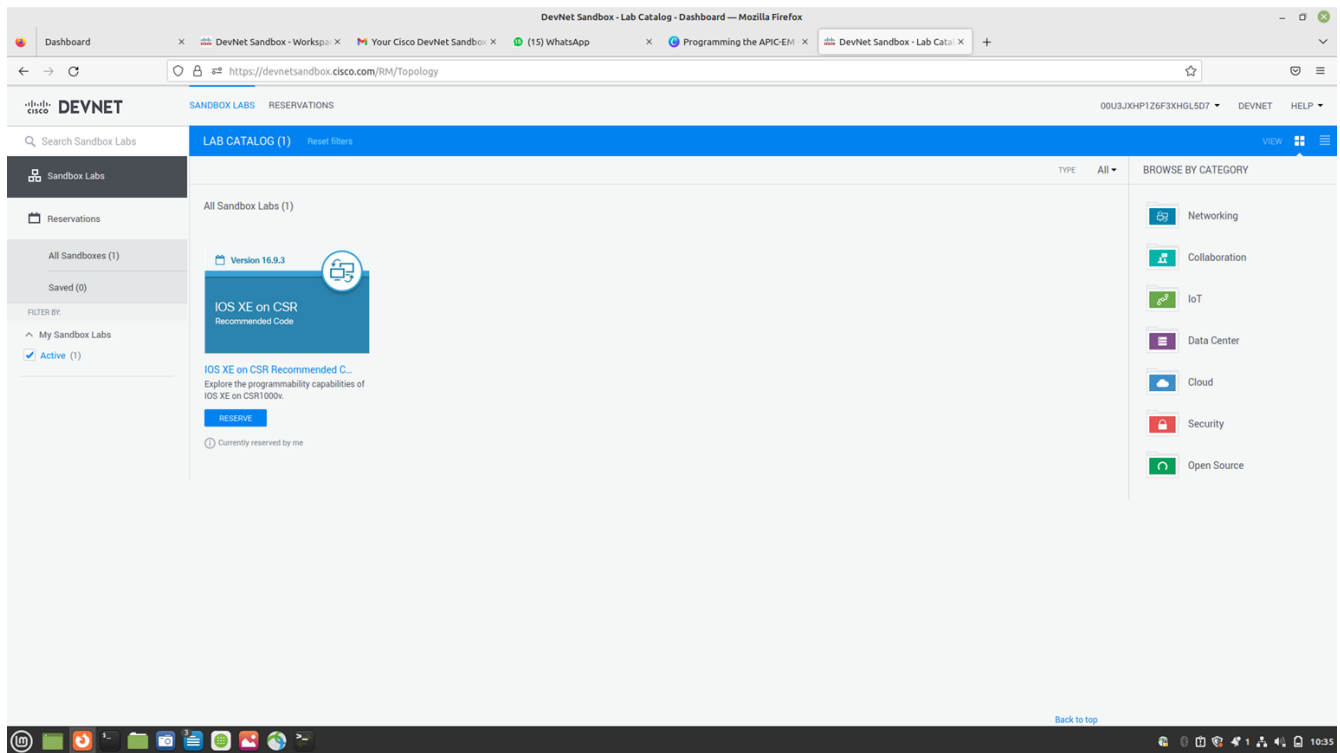
Gabriel Barrón Rodríguez

Docente:

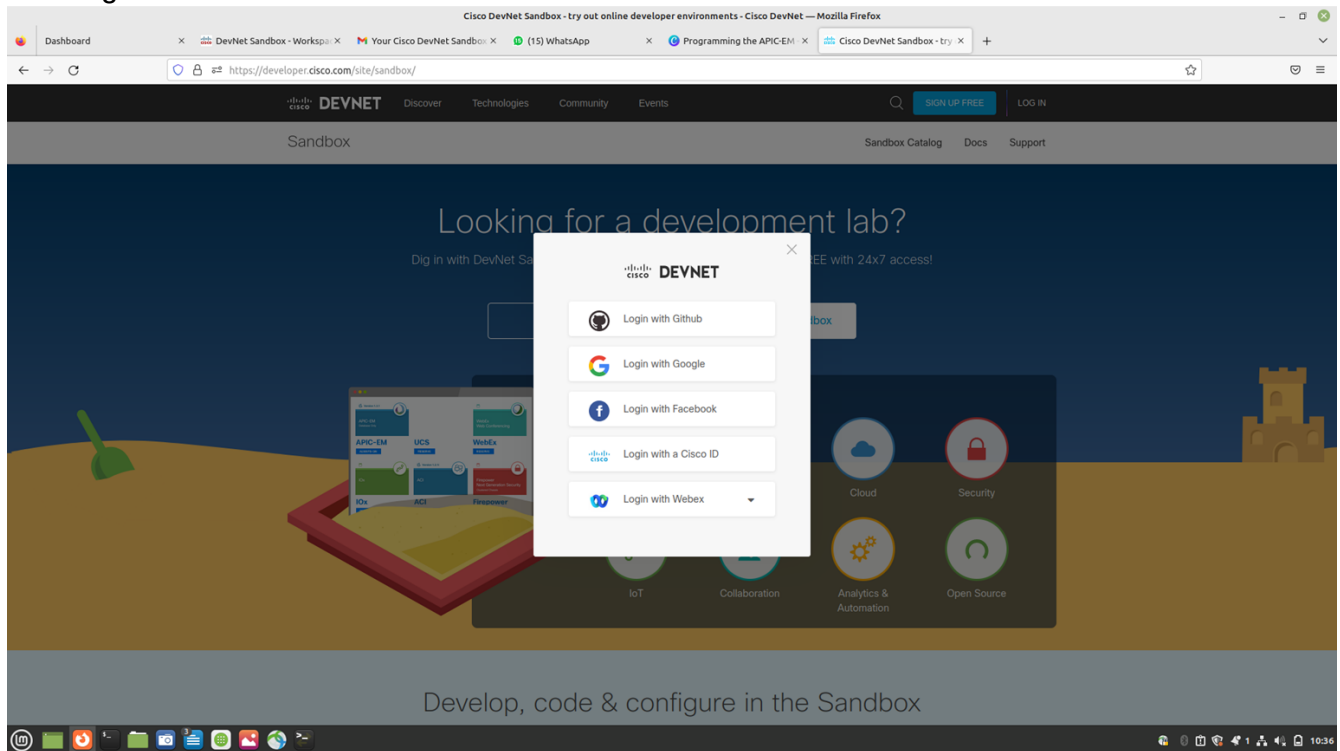
Dolores Hidalgo, C.I.N., jueves 24 de noviembre de 2022

Lugar y fecha

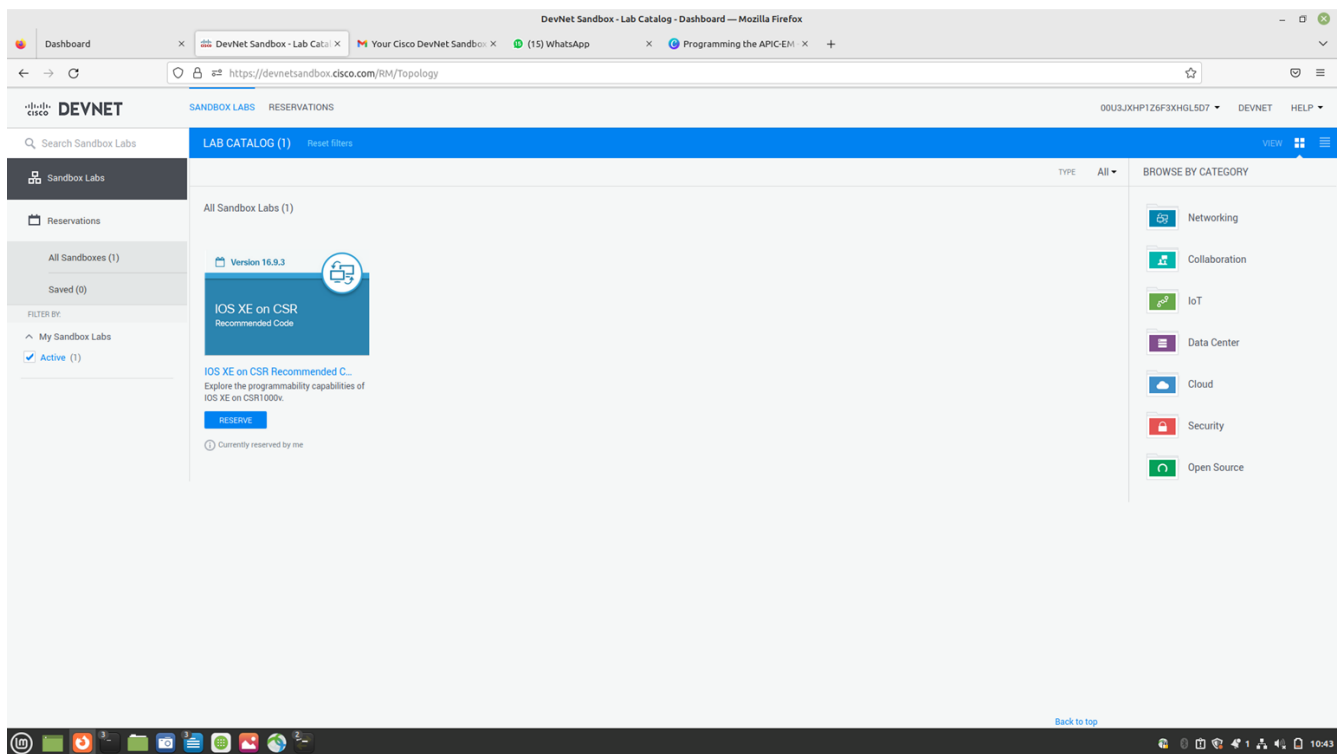
1. Visit <https://devnetsandbox.cisco.com>



2. Login usando mi cuenta de cisco



3. Busque el sandbox de IOS XE Programmability NETCONF-RESTCONF-YANG



4. Haga clic en el título de Sandbox
5. Haga clic en el botón RESERVAR. En la siguiente pantalla, ajuste la sección HORARIO con la fecha y la hora en que desea jugar con el entorno Sandbox
- 6.

RESERVE

Current Timezone: UTC

RESERVE

SCHEDULE

2 hours (From Now until 11/24/2022 11:24 AM)

Requires 10min. setup

Planned End 11/24/2022 11:39 AM

Sandbox maximum duration is 1 week

Start from

Now

For (Duration)

0 Weeks

0 Days

2 Hours

0 Minut...

NAME

IOS XE on CSR Recommended Code

SANDBOX LAB

IOS XE on CSR Recommended Code

Reserve

Cancel

Instalación del **Cisco AnyConnect VPN**

```
sdania@GMSD: ~/Documentos/ciscovpn/anyconnect-linux64-4.6.01098/vpn
Archivo Editar Ver Buscar Terminal Ayuda
sdania@GMSD:~$ cd Documentos/
sdania@GMSD:~/Documentos$ mkdir ciscovpn
sdania@GMSD:~/Documentos$ cd ciscovpn
sdania@GMSD:~/Documentos/ciscovpn$ curl -O https://cdn.auckland.ac.nz/assets/auckland/students/academic-information/postgraduate-students/Postgraduate%20support%20and%20services/anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
myuser@ubuntu:~/ciscovpn$ tar xzf anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
% Total % Received % Xferd Average Speed Time Time Current
Dload Upload Total Spent Left Speed
100 18.3M 100 18.3M 0 0 3473k 0 0:00:05 0:00:05 --:--:-- 4428k
bash: myuser@ubuntu:~/ciscovpn$: No such file or directory
sdania@GMSD:~/Documentos/ciscovpn$ myuser@ubuntu:~/ciscovpn$ tar xzf anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
bash: myuser@ubuntu:~/ciscovpn$: No such file or directory
sdania@GMSD:~/Documentos/ciscovpn$ sdania@GMSD:~/ciscovpn$ tar xzf anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
bash: sdania@GMSD:~/ciscovpn$: No such file or directory
sdania@GMSD:~/Documentos/ciscovpn$ curl -O https://cdn.auckland.ac.nz/assets/auckland/students/academic-information/postgraduate-students/Postgraduate%20support%20and%20services/anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
% Total % Received % Xferd Average Speed Time Time Current
Dload Upload Total Spent Left Speed
100 18.3M 100 18.3M 0 0 8394k 0 0:00:02 0:00:02 --:--:-- 8397k
sdania@GMSD:~/Documentos/ciscovpn$ tar xzf anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
% Total % Received % Xferd Average Speed Time Time Current
Dload Upload Total Spent Left Speed
100 18.3M 100 18.3M 0 0 10.1M 0 0:00:01 0:00:01 --:--:-- 10.1M
sdania@GMSD:~/Documentos/ciscovpn$ tar xzf anyconnect-linux64-4.6.01098-predeploy-k9.tar.gz
sdania@GMSD:~/Documentos/ciscovpn$ cd anyconnect-linux64-4.6.01098/vpn
sdania@GMSD:~/Documentos/ciscovpn/anyconnect-linux64-4.6.01098/vpn$ sudo ./vpn_install.sh
[sudo] password for sdania:
Installing Cisco AnyConnect Secure Mobility Client...
Supplemental End User License Agreement for AnyConnect(R) Secure Mobility Client v4.x and other VPN-related Software

IMPORTANT: READ CAREFULLY

This Supplemental End User License Agreement ("SEULA") contains additional terms and conditions for the Software Product licensed under the End User License Agreement ("EULA") between You ("You" as used herein means You and the business entity you represent) and Cisco (collectively, the "Agreement"). Capitalized terms used in this SEULA but not defined will have the meanings assigned to them in the EULA. To the extent that there is a conflict between the terms and conditions of the EULA and this SEULA, the terms and conditions of this SEULA will take precedence.
In addition to the limitations set forth in the EULA on your access and use of the Software, You agree to comply at all times with the terms and conditions provided in this SEULA. DOWNLOADING, INSTALLING, OR USING THE SOFTWARE CONSTITUTES ACCEPTANCE OF THE AGREEMENT, AND YOU ARE BINDING YOURSELF AND THE BUSINESS ENTITY THAT YOU REPRESENT (COLLECTIVELY, "CUSTOMER") TO THE AGREEMENT. IF YOU DO NOT AGREE TO ALL OF THE TERMS OF THE AGREEMENT, THEN CISCO IS UNWILLING TO LICENSE THE SOFTWARE TO YOU AND (A) YOU MAY NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE, AND (B) YOU MAY RETURN THE SOFTWARE (INCLUDING ANY UNOPENED CD PACKAGE AND ANY WRITTEN MATERIALS) FOR A FULL REFUND, OR, IF THE SOFTWARE AND WRITTEN MATERIALS ARE SUPPLIED AS PART OF ANOTHER PRODUCT, YOU MAY RETURN THE ENTIRE PRODUCT FOR A FULL REFUND. YOUR RIGHT TO RETURN AND REFUND EXPIRES 30 DAYS AFTER PURCHASE FROM CISCO OR AN AUTHORIZED CISCO RESELLER, AND APPLIES ONLY IF YOU ARE THE ORIGINAL END USER PURCHASER.

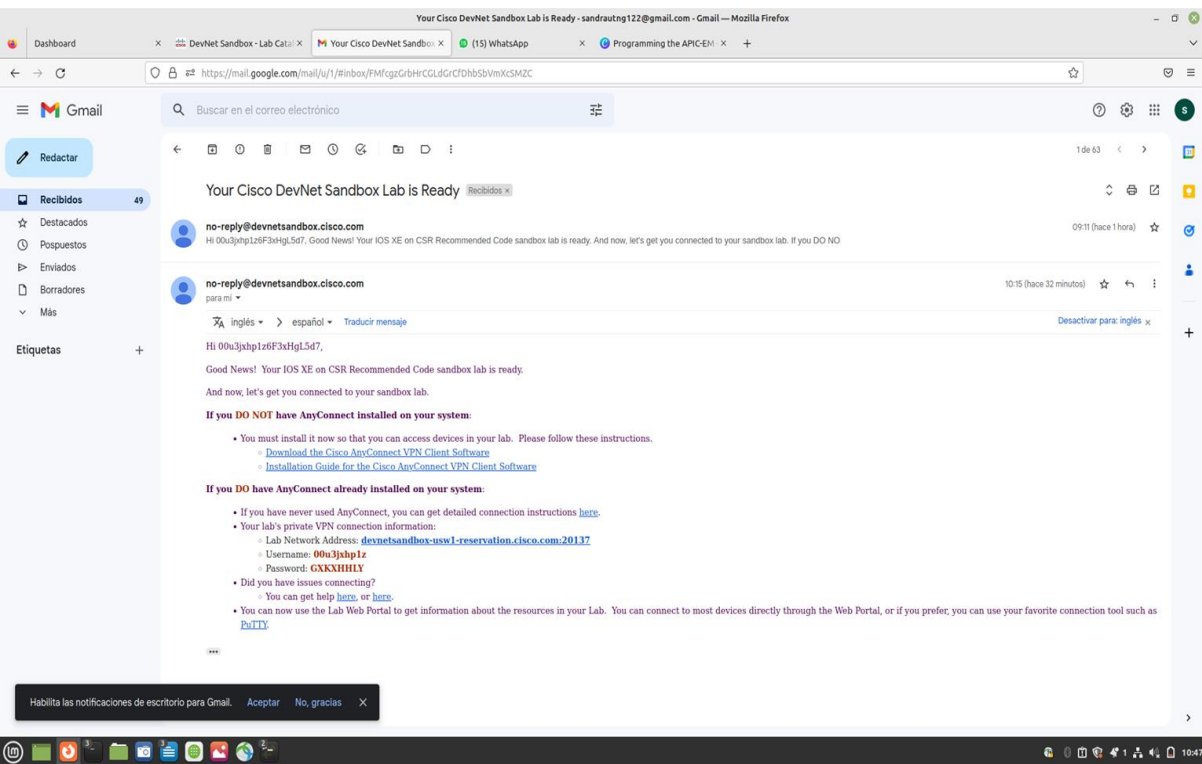
For purposes of this SEULA, the product You have ordered or enabled is any of the following software products and/or the referenced functionality (the "Software"):
Cisco AnyConnect:
- Cisco AnyConnect Secure Mobility Client v4.0 or above, all modules, all operating systems, with
  - Cisco AnyConnect Apex License, and/or
  - Cisco AnyConnect Plus License
- Cisco AnyConnect Profile Editor
- Cisco AnyConnect Enterprise Application Selector

Cisco ASA:
- Cisco Adaptive Security Appliance IPsec IKEv2 Remote Access VPN functions
- Cisco Adaptive Security Appliance Clientless SSL VPN functions, including
  - Browser-based SSL VPN
  - Smart Tunnels
  - Port Forwarding
  - Additional SSL VPN delivered applets

Definitions
```

```
Do you accept the terms in the license agreement? [y/n] y
You have accepted the license agreement.
Please wait while Cisco AnyConnect Secure Mobility Client is being installed..
Starting Cisco AnyConnect Secure Mobility Client Agent...
Done!
sdania@GMSD:~/Documentos/ciscovpn/anyconnect-linux64-4.6.01098/vpn$
```

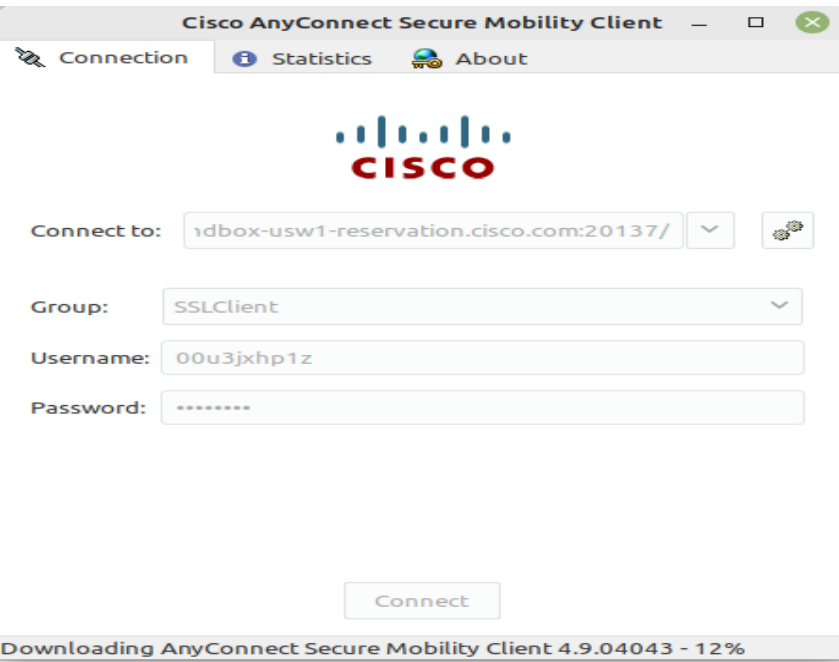
8. Después de crear una nueva reserva de Sandbox, debería recibir inmediatamente una notificación por correo electrónico confirmando la reserva. Notificación de Gmail



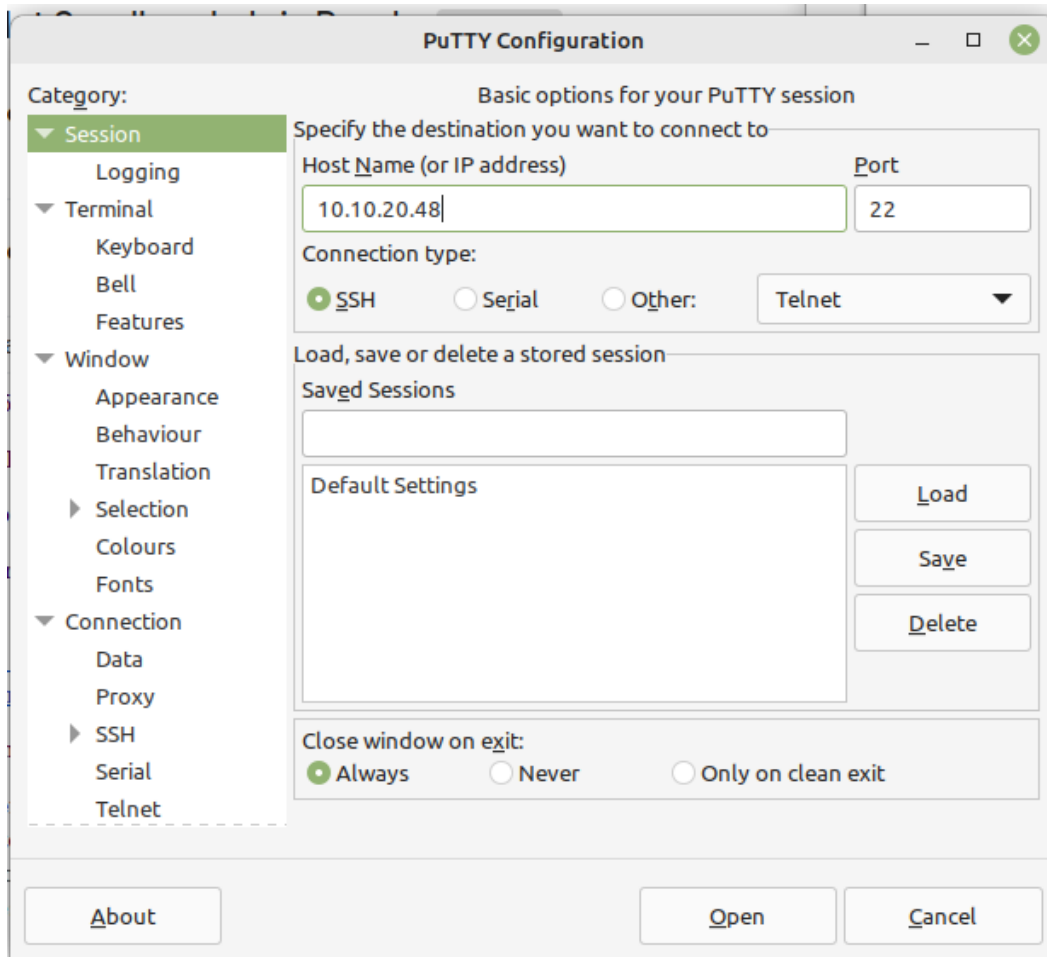
9. Con
sus

credenciales de VPN del correo electrónico, use el cliente Cisco AnyConnect VPN para conectarse al entorno remoto de DevNet Sandbox:

10. La siguiente tabla resume los servicios de red y sus respectivos números de puerto que se ejecutan en el enrutador Cisco IOS-XE remoto:

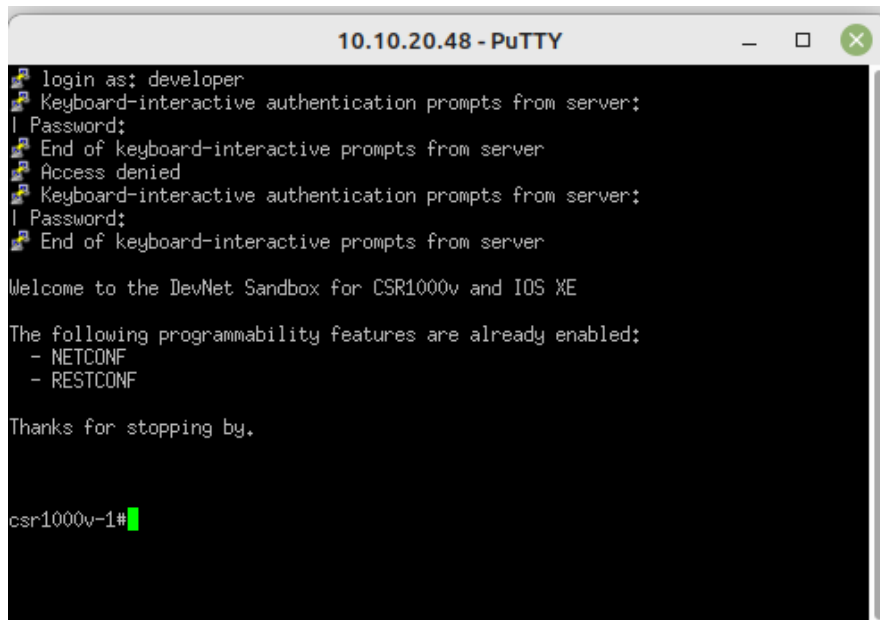


11. Conecte su computadora al servicio SSH de Cisco IOS-XE en el enrutador remoto. Use Putty para conectar su computadora a la dirección IP 10.10.20.48 del enrutador al puerto 22:



El enrutador

12. Cisco IOS-XE en DevNet Sandbox viene con una configuración inicial que permite actividades de laboratorio de programabilidad de red. Por ejemplo, las interfaces API NETCONF y RESTCONF están preconfiguradas de forma predeterminada. El nombre de usuario de nivel 15 de privilegio preconfigurado predeterminado es cisco con cisco_1234. clave



```
10.10.20.48 - PuTTY
login as: developer
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Access denied
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server

Welcome to the DevNet Sandbox for CSR1000v and IOS XE

The following programmability features are already enabled:
- NETCONF
- RESTCONF

Thanks for stopping by.

csr1000v-1#
```