

Lab - PC Setup for Workshop

Objectives

In this lab, you will complete the following objectives in order to prepare your computer for the workshop:

Part 1: Install and Verify Python

Part 2: Install Postman

Part 3: Install JSONView

Part 4: Install Putty

Part 5 Set Up a DevNet Sandbox

Part 6: Install Packet Tracer v 8.0

Computer Requirements

- Windows, MAC, or Linux computer
- Script and data files (Will be provided during the workshop)

Instructions

Part 1: Install and Verify Python

Complete the following steps to install and verify Python.

- 1) Download and install Python.

Go to <https://www.python.org/downloads> and download the most recent version of Python 3.

When installing, make sure you check the "Add Python 3.6 to Path" checkbox.

When setup finishes, click the "Disable path length limit" if this option is available for your installation.

Step 2: Test your Python installation.

For the Windows OS, open a command prompt and enter the **python** command. The interactive interpreter should open. Type **quit()** to exit the Python interactive interpreter.

```
C:\> python
Python 3.6.3 (v3.6.3:2c5fed8, Oct 3 2017, 17:26:49) [MSC v.1900 32 bit (Intel)] on
win32
Type "help", "copyright", "credits" or "license" for more information.
>>> quit()

C:\>
```

For the Mac or Linux OS, open a command prompt and enter the **python3** command. Type **quit()** to exit the Python interactive interpreter.

```
$ python3
Python 3.5.2 (default, Oct 3 2017, 17:48:00)
[GCC 5.4.0 20160609] on linux
Type "help", "copyright", "credits" or "license" for more information.
```

```
>>> quit()
$
```

Step 3: Verify that you can open IDLE.

For the Windows OS, open IDLE from the Programs menu: **Start > Python 3.x > IDLE (Python 3.x xx-bit)**.

For the Mac or Linux OS, open a command prompt and enter the **idle3** command.

The IDLE shell should open.

Step 4: Install Python modules that will be used in the course.

The default Python installation comes with all the standard modules that most programmers would need to create applications. However, there are many more modules available that extend the functionality of Python. To keep the initial installation of Python small, these modules are not included in the default package.

Returning to your command prompt window, use Python Package Index (accessed with the **pip** command) to download the modules `requests` and `tabulate`, as shown for Windows in Example 3. For Linux and Mac, use the **pip3 install *module_name*** command.

```
C:\> pip install requests
Collecting requests
  Downloading requests-2.18.4-py2.py3-none-any.whl (88kB)
    100% |████████████████████████████████████████| 92kB 217kB/s
...
Installing collected packages: ... requests
  Running setup.py install for module ... done
Successfully installed ... requests-2.18.4
```

```
C:\> pip install tabulate
Collecting module
Collecting tabulate
  Downloading tabulate-0.8.1.tar.gz (45kB)
    100% |████████████████████████████████████████| 51kB 71kB/s
Installing collected packages: tabulate
  Running setup.py install for tabulate ... done
Successfully installed tabulate-0.8.1
```

```
C:\> pip install ncclient
Collecting ncclient
  Downloading ...
Installing collected packages: ... ncclient
Successfully installed ... ncclient-0.6.3
```

!IMPORTANT! On Windows, use the "--no-binary pyang" option:

```
C:\> pip install --no-binary pyang pyang
Collecting pyang
  Downloading ...
Installing collected packages: pyang
Successfully installed pyang-1.7.8
```

```
C:\> pip install netmiko
Collecting netmiko
  Downloading ...
Installing collected packages: netmiko
Successfully installed netmiko

C:\> pip install xmltodict
Collecting xmltodict
  Downloading ...
Installing collected packages: xmltodict
Successfully installed xmltodict
```

Part 2: Install Postman

Postman is an application that you will use in this course to make HTTP API requests.

Step 1: Download the Postman application.

Postman is available as an application for Windows, Mac, and Linux operating systems. To install Postman, go to the apps page at <https://www.getpostman.com/apps> and click Download for your OS.

Step 2: Sign up to use Postman or choose to create an account at another time.

Step 3: Verify that the Postman application is installed.

Part 3: Install JSONView

JSONView is a Chrome extension that you will use in this course to better view JSON data.

Step 1: Install the JSONView Chrome extension.

Click [here](#) to access the JSONView extension and add it to Chrome. After installation, you should see the JSONView icon in the top right corner of your Chrome browser.

Note: If the link does not work, search for “Chrome JSONView extension” to locate it.

Step 2: Test the JSONView extension.

Use the Google Map Geocoding link below verify that your JSONView extension is working properly. You should be able to collapse and expand sections of the JSON data.

<http://maps.googleapis.com/maps/api/geocode/json?address=sanjose>

Part 4: Installing Putty

Step 1: Download Putty.

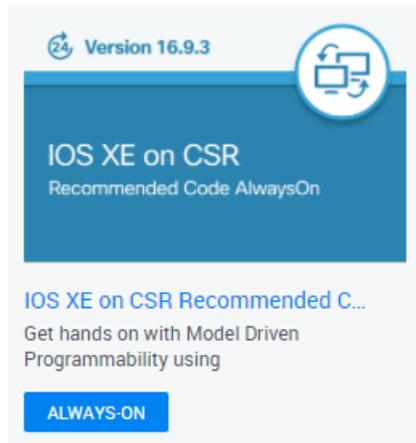
- a. Go to the Putty terminal emulator homepage: <https://www.chiark.greenend.org.uk/~sgtatham/putty/>
- b. Download and install the Putty terminal emulator client.

Part 5: Set Up a DevNet Sandbox with Cisco IOS-XE

In this part , you can create your own remotely-accessible, virtualized Cisco IOS-XE device in the DevNet Sandbox.

Step 1: Create a DevNet Sandbox reservation.

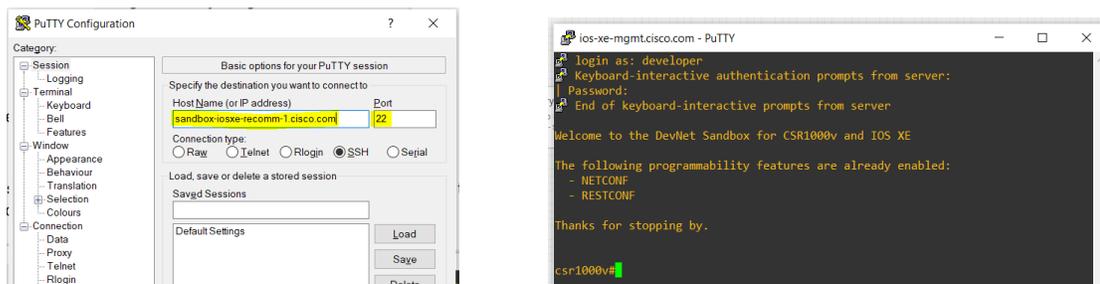
1. Visit <https://devnetsandbox.cisco.com>
2. Login using the NetAcad login option.
3. Search for the IOS XE on CSR sandbox shown below
4. Click the Sandbox Title:



** This sandbox requires no reservation

Step 2: Connect to the DevNet Sandbox

1. Click on the Instructions tab, localize the 'Access Details' section, in the putty tool enter the credentials to connect via SSH to the remote csr1000v router.



2. Once you have accessed the remote router, you are ready to perform the workshop demonstrations.

Part 6: Download and install Packet Tracer, version 8.0.1

In this part you must access your Netacad account to download and install the latest version of Packet Tracer.

Step 1: Download Packet Tracer.

1. Enter <https://www.netacad.com/portal/resources/packet-tracer> with your username and password.
2. Go to 'Download',
3. Download version 8.0 according to your operating system and install it.

Step 2: Verify Packet Tracer's settings for external access.

1. Click Options > Preferences > Miscellaneous. Under External Network Access, verify that Enable External Access for Network Controller REST API is checked.
2. Close the Preferences window