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## ENTERPRISE CAMPUS NETWORKING

Network Automation and Programmability Abstraction Layer  
Setup Guide



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### Interpreter

The first step in a fresh environment is to install the Python interpreter on your local device. The responsibility of the interpreter is to understand the Python programs by reading and carrying out its instructions. If your environment is MAC OSX distribution 10.3 or greater your computer may include a version of Python. Please see Appendix item *Python MAC OSX* for further instructions.

1. Go to <https://www.python.org/> and install the latest Python 3.X.X interpreter corresponding to your computers environment.

#### Files

Version	Operating System	Description	MD5 Sum	File Size	GPG
<a href="#">Gzipped source tarball</a>	Source release		ab25d24b1f8cc4990ade979f6dc37883	22994617	<a href="#">SIG</a>
<a href="#">XZ compressed source tarball</a>	Source release		9f49654a4d6f733ff3284ab9d227e9fd	17049912	<a href="#">SIG</a>
<a href="#">macOS 64-bit/32-bit installer</a>	Mac OS X	for Mac OS X 10.6 and later	bf319337bc68b52fc7d227dca5b6f2f6	28093627	<a href="#">SIG</a>
<a href="#">macOS 64-bit installer</a>	Mac OS X	for OS X 10.9 and later	37d891988b6aeedd7f03a70171a8420d	26987706	<a href="#">SIG</a>
<a href="#">Windows help file</a>	Windows		be70202d483c0b7291a666ec66539784	8065193	<a href="#">SIG</a>
<a href="#">Windows x86-64 embeddable zip file</a>	Windows	for AMD64/EM64T/x64	04cc4f6f6a14ba74f6ae1a8b685ec471	7190516	<a href="#">SIG</a>
<a href="#">Windows x86-64 executable installer</a>	Windows	for AMD64/EM64T/x64	9e96c934f5d16399f860812b4ac7002b	31776112	<a href="#">SIG</a>
<a href="#">Windows x86-64 web-based installer</a>	Windows	for AMD64/EM64T/x64	640736a3894022d30f7babff77391d6b	1320112	<a href="#">SIG</a>
<a href="#">Windows x86 embeddable zip file</a>	Windows		b0b099a4fa479fb37880c15f2b2f4f34	6429369	<a href="#">SIG</a>
<a href="#">Windows x86 executable installer</a>	Windows		2bb6ad2ecca6088171ef923bca483f02	30735232	<a href="#">SIG</a>
<a href="#">Windows x86 web-based installer</a>	Windows		596667cb91a9fb20e6f4f153f3a213a5	1294096	<a href="#">SIG</a>

### Compiler

The next step is to install your favorite Compiler. While any Python compiler works just fine, for simplicity sake I recommend Pycharm Community. The main responsibility for a compiler is to take your computer program written in a high level language “Python” and convert it to your computers native language.

1. Install Pycharm Community

<https://www.jetbrains.com/pycharm/download/#section=windows> [Windows]

<https://www.jetbrains.com/pycharm/download/#section=mac> [macOS]

<https://www.jetbrains.com/pycharm/download/#section=linux> [Linux]

### Libraries

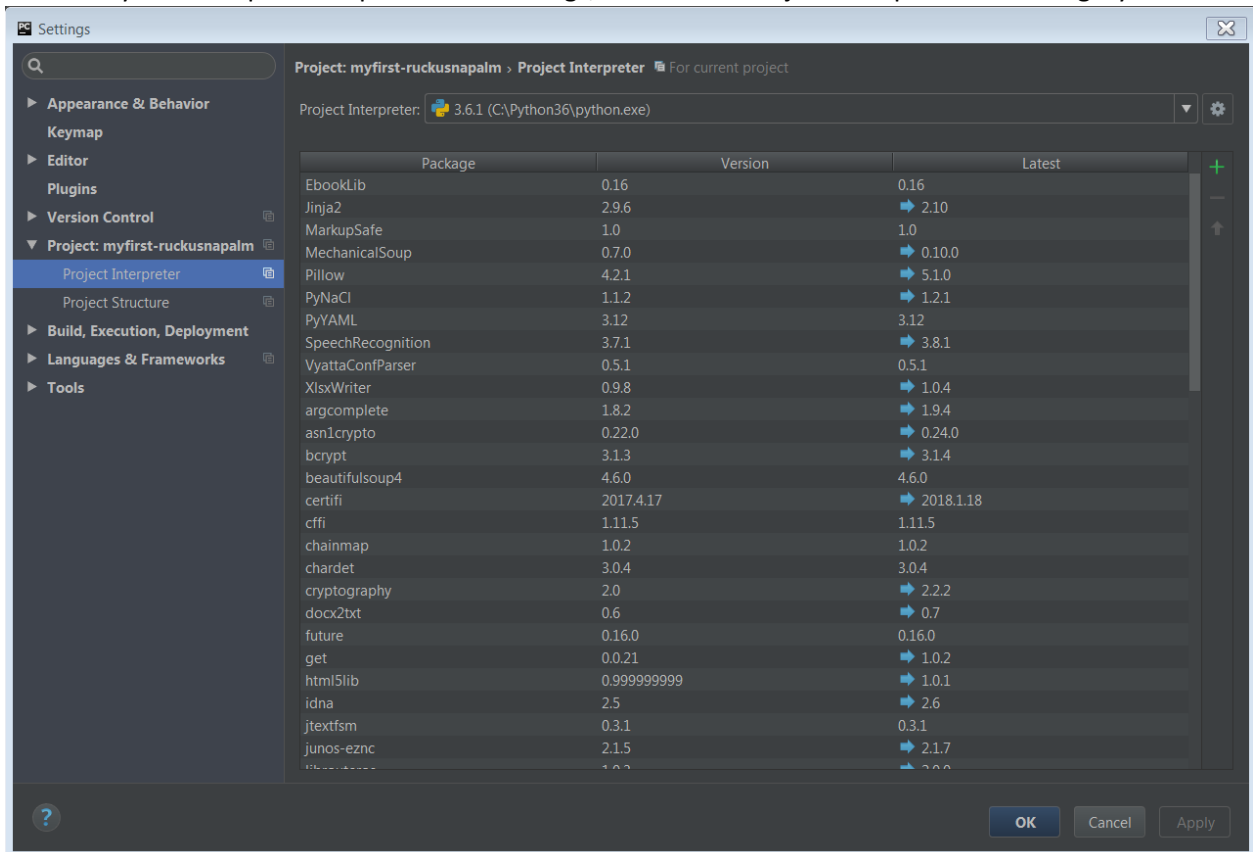
While Python’s standard Library is extensive, it collection continues to grow as individual programs, modules, and plug-ins are created. The following libraries are required for Ruckus FastIron Napalm.



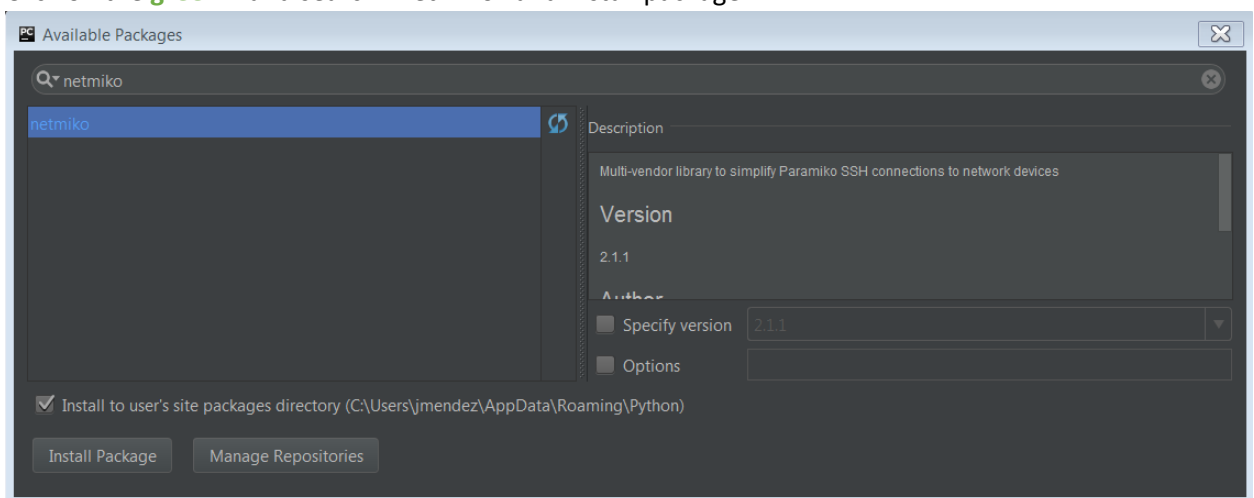
### Netmiko

Netmiko is a multi-vendor library to simplify Paramiko SSH connections to network devices. To run Napalm Ruckus FastIron, Netmiko v 2.0.2 or higher is required. As this is the first version that supports FastIron.

1. Run the Python compiler and proceed to settings, then locate Project Interpreter sub-category.



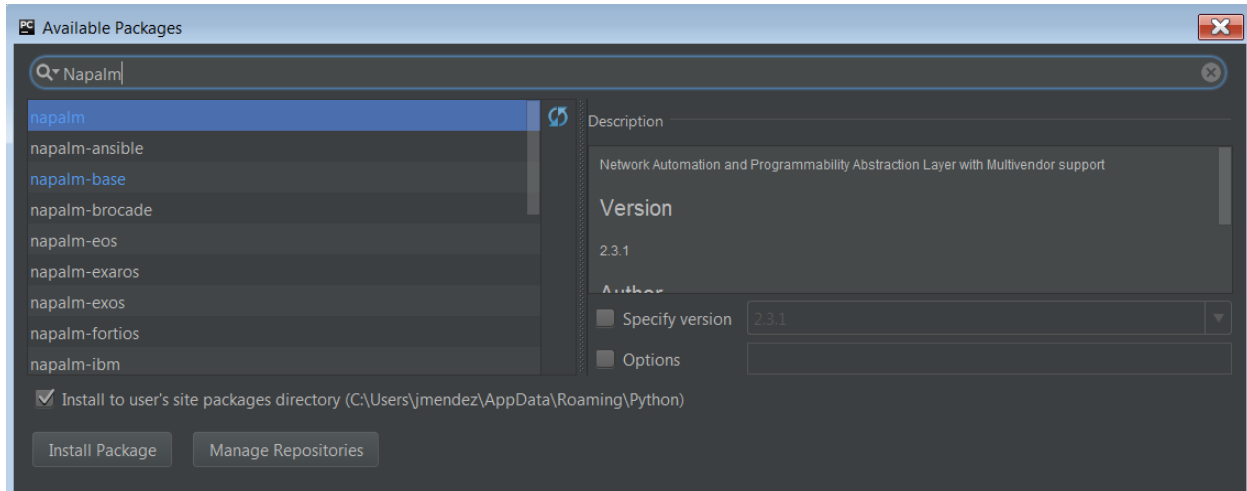
2. Click on the **green +** and search “netmiko” and install package.



### N.A.P.A.L.M

NAPALM is a python library that implements a set of functions to interact with different router vendor devices using a unified API. Ruckus FastIron is currently a plug-in and uses Napalm's base.

1. Repeat the same steps as in the previous Netmiko section with the exception of searching for "napalm" and install the package.



### Ruckus FastIron N.A.P.A.L.M

Now for the moment we have been waiting for, installing Napalm Ruckus FastIron. At the time of writing this document Ruckus FastIron is a standalone plug-in. Work is being done so it is published and installed similarly as how the previous two libraries were installed. However, today we have two work arounds on how to use the library will be explained in the next section, but first let's download the file.

1. Download the latest version: <https://github.com/StaticOverride/napalm-ruckus-fastiron>

## Importing

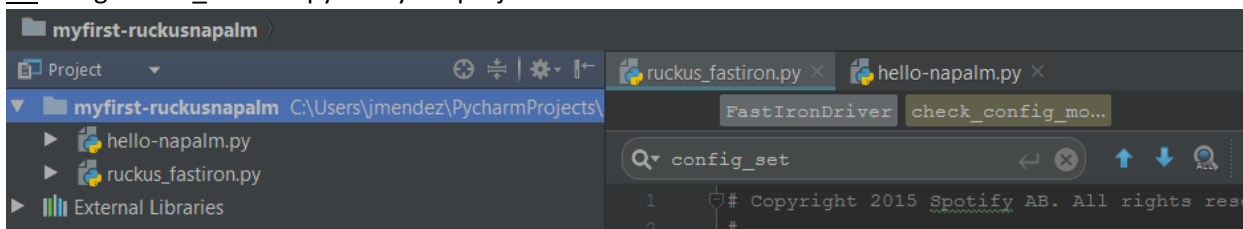
Now the last step is to import the previously downloaded file so your program may use it. We have one of two options on how to import.

- 1A.** Point to the path that contains the ruckus\_fastiron.py that we downloaded in an early step.

```
# some_file.py
import sys
sys.path.insert(0, '/path/to/application/app/folder')
```

```
import ruckus_fastiron.py
```

- 1B.** Drag ruckus\_fastiron.py into your project folder



### Appendix

#### Python MACOSX

Coming soon 😊

#### PIP Install Netmiko

Coming soon 😊

#### PIP Install NAPALM

Coming soon 😊

#### PIP Install NAPALM-RUCKUS-FASTIRON

Coming soon 😊

### Installation requirements

#### Hardware requirements

- 4 GB RAM minimum, 8 GB RAM recommended [PyCharm]
- 1.5 GB hard disk space + at least 1 GB for caches
- 1024x768 minimum screen resolution [PyCharm + Netmiko]

### Reference

<https://www.python.org/downloads/release/python-365/>

<https://www.jetbrains.com/pycharm/download/#section=windows> [Windows]

<https://www.jetbrains.com/pycharm/download/#section=mac> [macOS]

<https://www.jetbrains.com/pycharm/download/#section=linux> [Linux]

<https://pynet.twb-tech.com/blog/automation/netmiko.html>

<http://netmiko.readthedocs.io/en/stable/index.html>

<https://github.com/StaticOverride/napalm-ruckus-fastiron>

