

April 2018

ENTERPRISE CAMPUS NETWORKING

Network Automation and Programmability Abstraction Layer
Setup Guide



Jesus Mendez
mendezj@staticoverride.us



Contents

Interpreter 3

Compiler 3

Libraries 3

Netmiko 4

N.A.P.A.L.M 5

Ruckus FastIron N.A.P.A.L.M 5

Importing **Error! Bookmark not defined.**

Appendix..... 6

 Python MACOSX..... 6

 PIP Install Netmiko 6

 PIP Install NAPALM 6

 PIP Install NAPALM-RUCKUS-FASTIRON 6

Installation requirements 6

 Hardware requirements..... 6

Reference..... 6



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
Gzipped source tarball	Source release		ab25d24b1f8cc4990ade979f6dc37883	22994617	SIG
XZ compressed source tarball	Source release		9f49654a4d6f733ff3284ab9d227e9fd	17049912	SIG
macOS 64-bit/32-bit installer	Mac OS X	for Mac OS X 10.6 and later	bf319337bc68b52fc7d227dca5b6f2f6	28093627	SIG
macOS 64-bit installer	Mac OS X	for OS X 10.9 and later	37d891988b6aeedd7f03a70171a8420d	26987706	SIG
Windows help file	Windows		be70202d483c0b7291a666ec66539784	8065193	SIG
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	04cc4f6f6a14ba74f6ae1a8b685ec471	7190516	SIG
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	9e96c934f5d16399f860812b4ac7002b	31776112	SIG
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	640736a3894022d30f7babff77391d6b	1320112	SIG
Windows x86 embeddable zip file	Windows		b0b099a4fa479fb37880c15f2b2f4f34	6429369	SIG
Windows x86 executable installer	Windows		2bb6ad2ecca6088171ef923bca483f02	30735232	SIG
Windows x86 web-based installer	Windows		596667cb91a9fb20e6f4f153f3a213a5	1294096	SIG

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

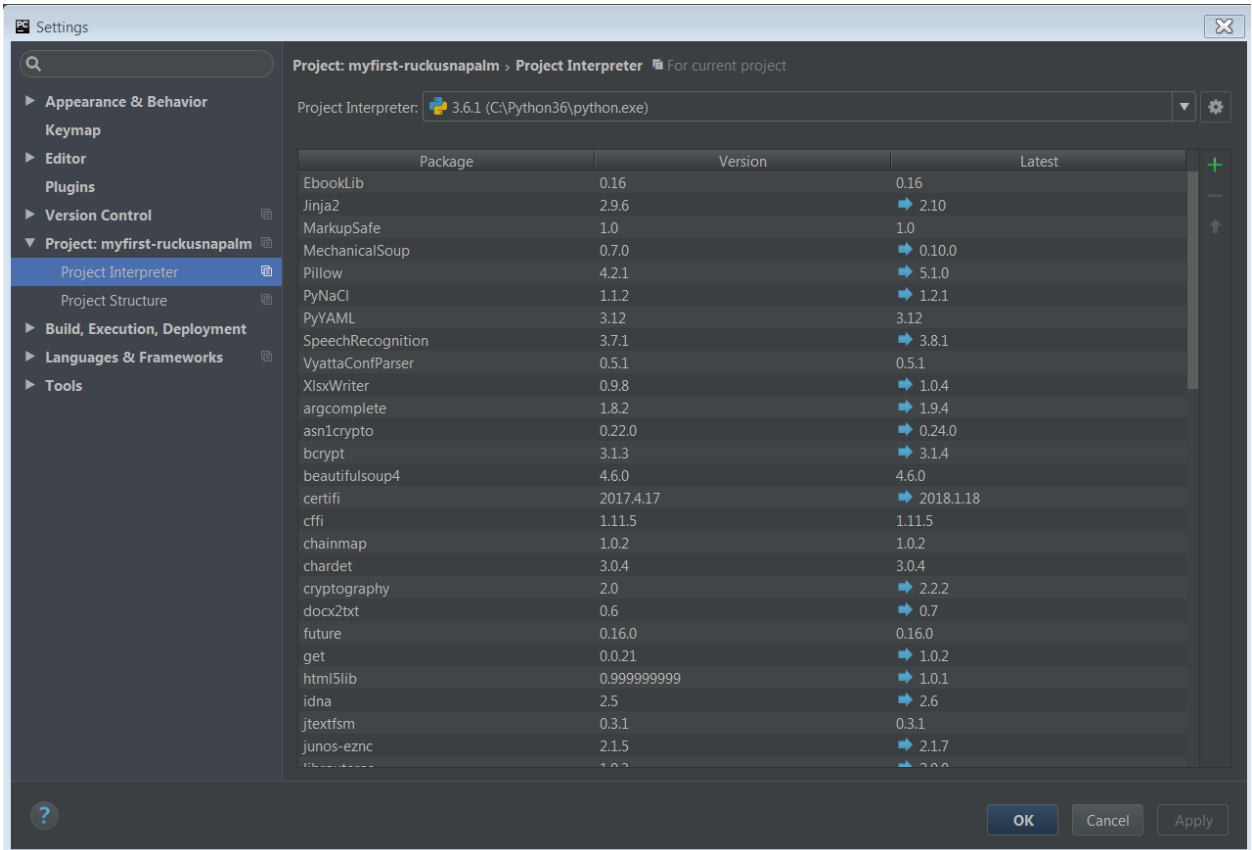
While Python’s standard Library is extensive, it collection continues to grow as individual programs, modules, and plug-ins are created. The following libraries are required for Ruckus FastIron Napalm.



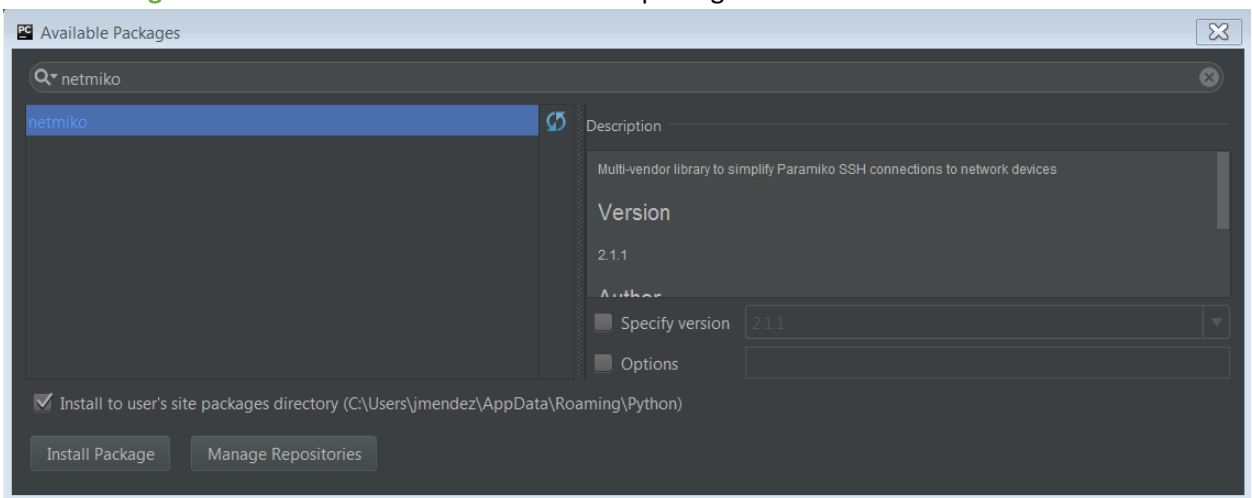
Netmiko

Netmiko is a multi-vender 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.



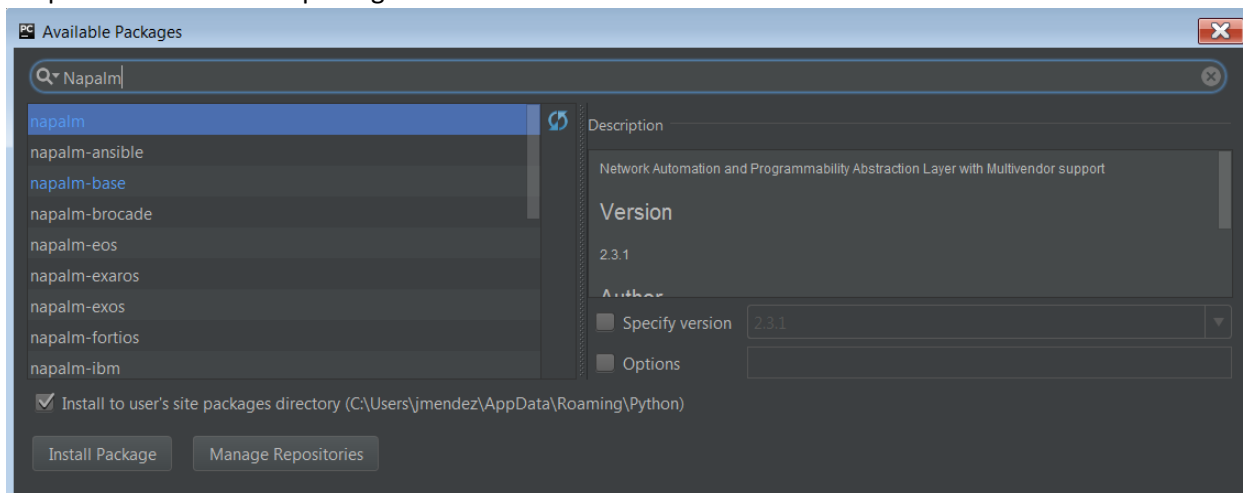
2. Click on the **green +** and search “netmiko” and install package.



N.A.P.A.L.M

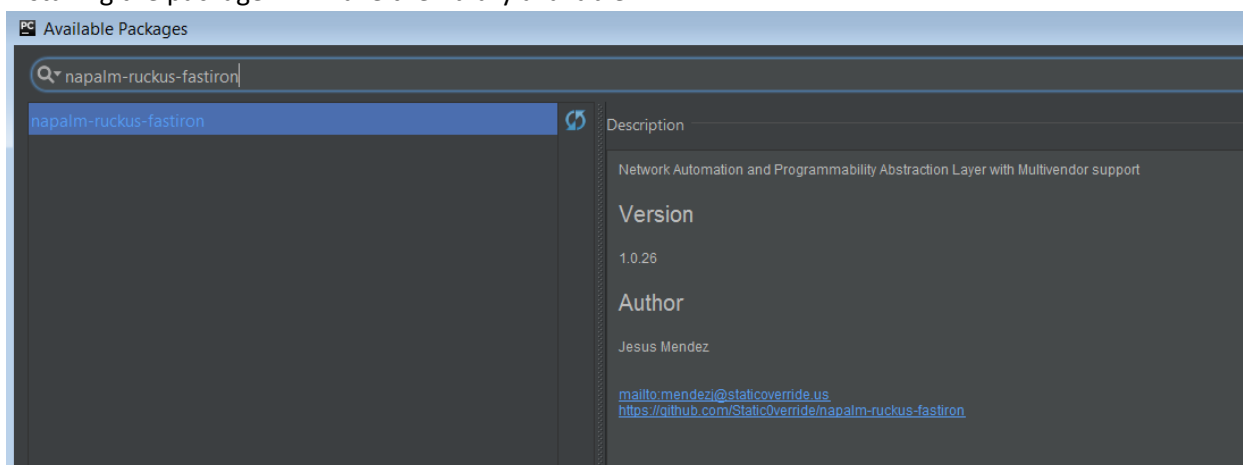
NAPALM is a python library that implements a set of functions to interact with different router vendor devices using a unified API. Ruckus FastIron is currently a plug-in and uses Napalm's base.

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

1. Typing in “napalm-ruckus-fastiron” in the available packages will display the Ruckus FI plug in. Installing the package will make the library available.



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>

