

Python Roll Users Guide

6.1.1 Edition

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Preface

The Python Roll installs and configures Python 2.7.6, Python 3.3.4 and NumPy 1.8.0.

Please visit the Python website¹ and the NumPy website² to learn more about these Python and NumPy releases.

Notes

1. <http://www.python.org>
2. <http://www.numpy.org/>

Chapter 1. Installing the Python Roll

1.1. On a New Server

The python roll should be installed during the initial installation of your server (or cluster). This procedure is documented in section 1.2 of the Rocks® usersguide. You should select the python roll from the list of available rolls when you see a screen that is similar to the one below.

Welcome to Rocks

Selected Rolls

Roll Name	Version	Arch
kernel	4.2	x86_64

Selected	Roll Name	Version	Arch
<input checked="" type="checkbox"/>	base	4.2	x86_64
<input checked="" type="checkbox"/>	hpc	4.2	x86_64
<input checked="" type="checkbox"/>	web-server	4.2	x86_64

Submit

1.2. On an Existing Server

The python Roll may also be added onto an existing server (or frontend). For sake of discussion, assume that you have an iso image of the roll called `python.iso`. The following procedure will install the Roll, and after the server reboots the Roll should be fully installed and configured.

```
$ su - root
# rocks add roll python.iso
# rocks enable roll python
# cd /export/rocks/install
# rocks create distro
# rocks run roll python | bash
# init 6
```

Chapter 2. Using the Python Roll

2.1. Environment Modules for Python

As of Rocks 6.2 (Sidewinder), Environment Modules are utilized to control Python path names.

- To see the currently loaded modules:

```
% module list
Currently Loaded Modulefiles:
  1) rocks-openmpi
%
```

- To see available modules:

```
% module avail
----- /usr/share/Modules/modulefiles -----
dot           module-info  null          use.own
module-cvs    modules        opt-python    rocks-openmpi

%
```

- To load the opt-python module:

```
% module load opt-python
% module list
Currently Loaded Modulefiles:
  1) rocks-openmpi  2) opt-python
```

2.2. Using the Python Roll

The Python roll installs Python versions 2.7.6 and 3.3.4. These are installed in `/opt/python`.

The Python roll installs Environment Modules files for Python 2.7.6 and 3.3.4. These are installed in `/usr/share/Modules/modulefiles`.

Numpy 1.8.0 is compiled and installed with Python 2.7.

Tutorials for using Python and its components are available from the Python website¹. Tutorials for using NumPy are available from the NumPy website².

Notes

1. <http://www.python.org>
2. <http://www.numpy.org/>

Chapter 3. Copyrights

3.1. Copyrights

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