

Code01 (replacing Code and Olin)

Assistance with installed software on Code01?

Package help

Most software has a man(ual) page associated with it. Type **man <package name>** at the shell prompt.

Environment Modules

Environment Modules is a software environment management system which allows multiple versions of packages to be available to users.

Common commands

- **module avail** - to list available modules. Modules with (default) will be loaded if a version is not specified.
- **module load <module name>** - to load a module.
- **module help <module name>** - to view module specific help.
- **module unload <module name>** - to unload a module.
- **module list** - to list loaded modules.
- **module --help | -H** - display module command help.

Examples - Using Python and Pip with Environment Modules

Python

Several versions of Python are available using **Environment Modules**, in addition to the default package versions. You can determine what version is available by appending the --version switch to your python command.

NOTE: By default the command "**python**" runs the Python 2.x interpreter and the command "**python3**" runs the Python 3.x interpreter.

Python example:

- List current modules.

```
~ $ module list  
No Modulefiles Currently Loaded.
```

- Show current Python and Python3 versions. Since no Python modules are loaded, they are the OS provided versions.

```
~ $ python --version  
Python 2.7.5  
~ $  
~ $ python3 --version  
Python 3.4.5
```

- List available Python modules. Default module is indicated with (default).

Page 1 / 4

Code01 (replacing Code and Olin)

```
~ $ module avail python
----- /opt/software/modules/ -----
python/2.7.9 python/3.4.2 python/3.5.1(default)
```

- Load default Python module.

```
~ $ module load python
```

- Show Python and Python3 versions. Since only the Python 3.5.1 module was loaded, it was the only version that changed.

```
~ $ python --version
Python 2.7.5
~ $
~ $ python3 --version
Python 3.5.1
```

- Unload Python module.

```
~ $ module unload python
```

Pip and Virtualenv

[Pip](#) can also be used with python to install python packages. [Virtualenv](#) is available to isolate your packages.

As with Python, pip has different commands for different versions:

- **pip**, **pip2**, and **pip2.7** - to install OS maintained Python 2.7 pip packages, or a Python 2.7.x module if loaded.
- **pip3** - to install OS maintained Python 3.4 pip packages.
- **pip3.4** - to install OS maintained Python 3.4 pip packages, or a Python 3.4 version python module is loaded.
- **pip3.5** - to install Python 3.5 pip packages, if a Python 3.5.x module has been loaded.

Pip examples:

- List current modules.

```
~ $ module list
```

Code01 (replacing Code and Olin)

No Modulefiles Currently Loaded.

- Display pip3 and pip3.4 versions. With no Python modules loaded, they use the OS provided version.

```
~ $ pip3 --version
pip 9.0.1 from /usr/lib/python3.4/site-packages (python 3.4)
~ $
~ $ pip3.4 --version
pip 9.0.1 from /usr/lib/python3.4/site-packages (python 3.4)
```

- Load Python 3.4.2 specific module.

```
~ $ module load python/3.4.2
```

- Display pip3 and pip3.4 versions. Now they show the version from the loaded Python 3.4.2 module.

```
~ $ pip3 --version
pip 9.0.1 from /opt/software/python/python-3.4.2/lib/python3.4/
site-packages (python 3.4)
~ $
~ $ pip3.4 --version
pip 9.0.1 from /opt/software/python/python-3.4.2/lib/python3.4/
site-packages (python 3.4)
```

- Display the pip3.5 version. Since a Python 3.5 module is not loaded, the command fails.

```
~ $ pip3.5 --version
-bash: pip3.5: command not found
```

- Unload Python 3.4.2

```
~ $ module unload python/3.4.2
```

- Load the default python module, which currently is Python 3.5.1.

```
~ $ module load python
```

- Display the pip3 and pip3.5 versions. Now they show the version from the loaded 3.5.1 Python module.

Code01 (replacing Code and Olin)

```
~ $ pip3 --version
pip 9.0.1 from /opt/software/python/python-3.5.1/lib/python3.5/
site-packages (python 3.5)
~ $
~ $ pip3.5 --version
pip 9.0.1 from /opt/software/python/python-3.5.1/lib/python3.5/
site-packages (python 3.5)
```

- Install a pip module into your userspace. Be sure to specify the version of Pip you want to use.

```
~ $ pip3.5 install --user <pip_module>
Collecting <pip_module>
  Downloading <pip_module>.whl (43.1MB)
    100% |????????????????????????????????????????????????????????| 43.1MB 12kB/s
```

For more information, please see the official web page for [Environment Modules](#) or [Wikipedia article](#).

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