

Planemo is a python project, which help you build and publish Galaxy tool.

Here we should you is how to install planemo in centos7.

Install Planemo has two ways: using `pip` or `conda` .

Pip install Planemo

That is our system install enviroment:

- centos 7
- python 2.7
- python 3.5

1.In order no ERROR , I suggest it uses python3 to create virtual environment:

Use following code will auto create a virtual environment `venv_dir` and a folder name `venv_dir` . If you want to hide folder, you add `.` before `venv_dir` .

```
python3 -m venv venv_dir
```

```
[xiaowei@localhost Galaxy]$ python3 -m venv venv_dir
[xiaowei@localhost Galaxy]$ cd venv_dir/
[xiaowei@localhost venv_dir]$ ls
bin  include  lib  lib64  pyenvv.cfg
```

2.Activate this virtual environment:

```
cd venv_dir/

source ./bin/activate
```

After you enable your virtual environment, all your operation will be in this virtual envirment. If you are not in virtual environment, you shall be input `deactivate` to terminal window for end this virtual environment.

3.Update pip

Pip version must be `>=7` before install planemo. If `pip` version not `>=7` , please run this command to update `pip` :

```
pip install "pip>=7"

pip install --upgrade pip
```

```
[xiaowei@localhost venv_dir]$ source ./bin/activate
(venv_dir) [xiaowei@localhost venv_dir]$ pip install "pip>=7"
Requirement already satisfied (use --upgrade to upgrade): pip>=7 in ./lib/python3.5/site-packages
You are using pip version 7.1.2, however version 20.1.1 is available.
You should consider upgrading via the 'pip install --upgrade pip' command.
(venv_dir) [xiaowei@localhost venv_dir]$ python
Python 3.5.0 (default, Jul 2 2020, 04:06:50)
[GCC 4.8.5 20150623 (Red Hat 4.8.5-39)] on linux
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

4. Install planemo

```
pip install planemo
```

When installed this way, planemo can be upgraded use command

```
pip install -U planemo or pip install -U git+git://github.com/galaxyproject/planemo.git .
```

5. ERROR

When you use `pip install planemo`, it maybe show you some ERROR. So you can see the [link \(ERROR when planemo install.ipynb\)](#) to solve your ERROR. This link is some ERROR when I used `pip install planemo`.

Conda install planemo

Conda is an open-source package management system and environment management system that runs on Windows, macOS, and Linux.

Conda quickly install, runs, and updates packages and their dependencies.

Conda easily creates, saves, loads, and switches between environments on your local computer.

Conda play an important role in building Galaxy tools because some Galaxy tools requirment packages are installed by conda. If you are interest in conda, you can see [user guide of conda \(https://docs.conda.io/projects/conda/en/latest/user-guide/index.html\)](#).

1. Install conda

Conda install on linux, you can choose install Miniconda or Anaconda. Here I chose Anaconda to install.

Step1: Download Anaconda:

```
curl -O https://repo.anaconda.com/archive/Anaconda3-2020.02-Linux-x86_64.sh
```

Step2: in your terminal window,run:

```
bash Anaconda3-2020.02-Linux-x86_64.sh
```

```

[xiaowei@localhost bin]$ conda
bash: conda: command not found...
[xiaowei@localhost bin]$ cd ~
[xiaowei@localhost ~]$ ls
aalab  Galaxy  jkey.key  nohup.out  Public  rstudio-server-rhel-1.3.959-x86_64.rpm  WuXing_File
desktop  java  Music  Pictures  Python-3.5.0  Templates  xiaYingJie
documents  jcert.pem  neo4j  pip-8.0.2  R  test
downloads  jdk-11.0.7_linux-x64_bin.tar.gz  new_tool  pip-8.0.2.tar.gz  R_project  Videos
[xiaowei@localhost ~]$ curl -O https://repo.anaconda.com/archive/Anaconda3-2020.02-Linux-x86_64.sh
% Total    % Received % Xferd  Average Speed   Time    Time     Current
                                 Dload  Upload   Total   Spent    Left     Speed
100 521M 100 521M    0     0  706k      0  0:12:35  0:12:35 --:--:-- 2397k
[xiaowei@localhost ~]$ ls
aalab  Galaxy  jkey.key  nohup.out  Public  rstudio-server-rhel-1.3.959-x86_64.rpm  WuXing_File
desktop  java  Music  Pictures  Python-3.5.0  Templates  xiaYingJie
documents  jcert.pem  neo4j  pip-8.0.2  R  test
downloads  jdk-11.0.7_linux-x64_bin.tar.gz  new_tool  pip-8.0.2.tar.gz  R_project  Videos
[xiaowei@localhost ~]$ bash
[xiaowei@localhost ~]$ bash Anaconda3-2020.02-Linux-x86_64.sh
Welcome to Anaconda3 2020.02

In order to continue the installation process, please review the license
agreement.
Please, press ENTER to continue
>>>
=====
End User License Agreement - Anaconda Individual Edition
=====

```

Step3: Activate conda before use conda

```

cd /anaconda3/bin/          #go to Anaconda installed directory

source activate              #activate Anaconda

```

```

[xiaowei@localhost ~]$ ls
aalab  Downloads  jkey.key  Pictures  R
anaconda3  Galaxy  Music  pip-8.0.2  R_project
Anaconda3-2020.02-Linux-x86_64.sh  java  neo4j  pip-8.0.2.tar.gz  rstudio-server-rhel-1.3.959-x86_64.rpm
Desktop  jcert.pem  new_tool  Public  Templates
Documents  jdk-11.0.7_linux-x64_bin.tar.gz  nohup.out  Python-3.5.0  test
[xiaowei@localhost ~]$ cd anaconda3/
[xiaowei@localhost anaconda3]$ ls
bin  condaabin  doc  etc  lib  LICENSE.txt  mkspecs  pkgs  qml  sbin  shell  translations  x86_64-co
compiler_compat  conda-meta  envs  include  libexec  man
[xiaowei@localhost anaconda3]$ cd bin
[xiaowei@localhost bin]$ ls
2to3  fc-cat  iptest  pcretest  rst2s5.py
2to3-3.7  fc-conflist  iptest3  pep8  rst2xetex.py
activate  fc-list  ipython  pip  rst2xml.py
anaconda  fc-match  ipython3  pixeltool  rstpep2html.py
anaconda-navigator  fc-pattern  isort  pkgdata  runxldr.py
anaconda-project  fc-query  isql  pkginfo  s3put
asadmin  fc-scan  isympy  pngfix  samp_hub
assistant  fc-validate  iusql  png-fix-ixt  sclient

```

Step4: check whether conda install

just input `conda` in your terminal:

```
conda
```

```

[xiaowei@localhost bin]$ source activate
(base) [xiaowei@localhost bin]$
(base) [xiaowei@localhost bin]$ conda
usage: conda [-h] [-V] command ...

conda is a tool for managing and deploying applications, environments and packages.

Options:
positional arguments:
  command
  clean                Remove unused packages and caches.
  config               Modify configuration values in .condarc. This is modeled
                        after the git config command. Writes to the user .condarc
                        file (/home/xiaowei/.condarc) by default.
  create               Create a new conda environment from a list of specified
                        packages.

```

2. Conda install planemo

Input following codes in terminal:

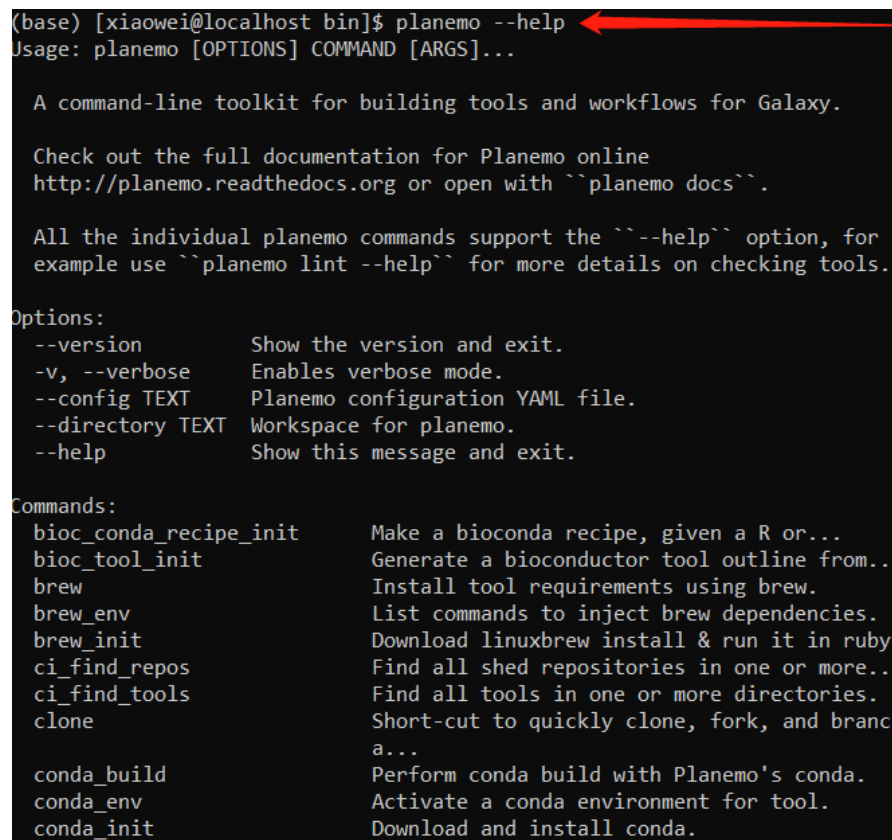
```
localhost:8888/notebooks/install Planemo.ipynb
```

```
conda config --add channels bioconda  
conda config --add channels conda-forge  
conda install planemo
```

Check whether it install planemo

Just run:

```
planemo --help
```



```
(base) [xiaowei@localhost bin]$ planemo --help  
Usage: planemo [OPTIONS] COMMAND [ARGS]...  
  
A command-line toolkit for building tools and workflows for Galaxy.  
  
Check out the full documentation for Planemo online  
http://planemo.readthedocs.org or open with ``planemo docs``.  
  
All the individual planemo commands support the ``--help`` option, for  
example use ``planemo lint --help`` for more details on checking tools.  
  
Options:  
  --version          Show the version and exit.  
  -v, --verbose      Enables verbose mode.  
  --config TEXT      Planemo configuration YAML file.  
  --directory TEXT   Workspace for planemo.  
  --help             Show this message and exit.  
  
Commands:  
  bioc_conda_recipe_init  Make a bioconda recipe, given a R or...  
  bioc_tool_init          Generate a bioconductor tool outline from...  
  brew                   Install tool requirements using brew.  
  brew_env               List commands to inject brew dependencies.  
  brew_init              Download linuxbrew install & run it in ruby.  
  ci_find_repos           Find all shed repositories in one or more...  
  ci_find_tools           Find all tools in one or more directories.  
  clone                  Short-cut to quickly clone, fork, and branch  
                        a...  
  conda_build            Perform conda build with Planemo's conda.  
  conda_env              Activate a conda environment for tool.  
  conda_init             Download and install conda.
```

reference

1. [conda](https://docs.conda.io/projects/conda/en/latest/index.html) (https://docs.conda.io/projects/conda/en/latest/index.html).
2. [planemo project description](https://pypi.org/project/planemo/) (https://pypi.org/project/planemo/).
3. [planemo installation](https://planemo.readthedocs.io/en/latest/installation.html) (https://planemo.readthedocs.io/en/latest/installation.html).