How to reinstall python@2 from Homebrew?

Asked 2 years, 4 months ago Modified 5 days ago Viewed 100k times

106

33

I have been having issues with openssl and python@2 with brew, which have explained here (unresolved). The documented workaround to reinstall Python and openssl was not working, so I decided I would uninstall and reinstall Python.

The problem is, when you try to install Python 2 with brew, you receive this message:

```
brew install python@2
Error: No available formula with the name "python@2"
==> Searching for a previously deleted formula (in the last month)...
Warning: homebrew/core is shallow clone. To get complete history run:
  git -C "$(brew --repo homebrew/core)" fetch --unshallow

python@2 was deleted from homebrew/core in commit 028f11f9e:
  python@2: delete (https://github.com/Homebrew/homebrew-core/issues/49796)
  EOL 1 January 2020.
  We gave it 1 month more to live so that people had time to migrate.
  All in all, developers had 11 years to do their migration.
  You can use the `brew extract` command and maintain python@2 in your own
  tap if necessary:
  https://docs.brew.sh/How-to-Create-and-Maintain-a-Tap

To show the formula before removal run:
  git -C "$(brew --repo homebrew/core)" show 028f11f9e^:Formula/python@2.rb

If you still use this formula consider creating your own tap:
  https://docs.brew.sh/How-to-Create-and-Maintain-a-Tap
```

Unfortunately I still have a number of brew formulas that depend on Brew's python@2. Those include `awscli`, `letsencrypt`, pr `sshuttle` for example

```
aws
zsh: /usr/local/bin/aws: bad interpreter:
/usr/local/opt/python@2/bin/python2.7: no such file or directory
```

I don't know how to use this `brew extract` command they documented to reinstall Python@2. It needs a formula and a tap. I imagine the formula would be `python@2`. I'm not sure what the tap would need to be.

Additionally reinstalling the taps such as `aws` or `letsencrypt` is not working very well either.

After reinstalling `awscli` (`brew reinstall awscli`), running aws commands still gives errors.

```
aws
/usr/local/Cellar/awscli/2.0.0/libexec/lib/python3.8/site-
packages/jmespath/visitor.py:32: SyntaxWarning: "is" with a literal. Did you
```

```
mean "=="?
  if x is 0 or x is 1:

/usr/local/Cellar/awscli/2.0.0/libexec/lib/python3.8/site-
packages/jmespath/visitor.py:32: SyntaxWarning: "is" with a literal. Did you
mean "=="?
  if x is 0 or x is 1:
/usr/local/Cellar/awscli/2.0.0/libexec/lib/python3.8/site-
packages/jmespath/visitor.py:34: SyntaxWarning: "is" with a literal. Did you
mean "=="?
  elif y is 0 or y is 1:
/usr/local/Cellar/awscli/2.0.0/libexec/lib/python3.8/site-
packages/jmespath/visitor.py:34: SyntaxWarning: "is" with a literal. Did you
mean "=="?
  elif y is 0 or y is 1:
/usr/local/Cellar/awscli/2.0.0/libexec/lib/python3.8/site-
packages/jmespath/visitor.py:260: SyntaxWarning: "is" with a literal. Did you
mean "=="?
  if original_result is 0:
usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:

  aws help
  aws <command> help
  aws <command> <subcommand> help
aws: error: the following arguments are required: command
```

python macos homebrew python-2.x

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edited Oct 13, 2020 at 1:48

Gino Mempin

19.4k 24 79 106

asked Feb 19, 2020 at 10:45

Pauline

2,601 8 21 37

13 Answers

Sorted by:

Trending sort available

Highest score (default)

170

It seems that the homebrew staff really makes it as hard as possible to use Python 2.7 on macOS as they can.

1. The linked `brew extract` link is really not helpful, you need to look for answers here about how to make your own tap from extracted sources.
2. The linked commit: 028f11f9e is wrong, as it contains the already deleted file.
3. The `brew extract` command doesn't even work correctly, because of the @ in the package name.

The solution is very simple though, you just need to download the latest known commit and install from that file:

```
cd ~
wget https://raw.githubusercontent.com/Homebrew/homebrew-
core/86a44a0a552c673a05f11018459c9f5faae3becc/Formula/python@2.rb
brew install python@2.rb
rm python@2.rb
```

There might be a warning about this being "unstable", which I don't understand as a commit in a Git history is as stable as you can get.

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edited Oct 30, 2020 at 18:32

answered Feb 21, 2020 at 20:40

hyperknot

12.8k 23 92 147

14 Just putting the link to the PR here, where python@2 was removed (merged Feb. 4th 2020) github.com/Homebrew/homebrew-core/pull/49796 – petschki Mar 12, 2020 at 20:14

7 @petschki not the answer we asked for, but the answer we wanted to know! – ThinkBonobo Apr 16, 2020 at 19:47

22 This (`brew install <raw url>`) does not seem to work anymore with the current version of Homebrew, it produces the following error: `Error: Calling Installation of python@2 from a GitHub commit URL is disabled! Use 'brew extract python@2' to stable tap on GitHub instead.` – jvf Sep 3, 2020 at 13:53

7 This is how I did it: `cd ~ - wget https://raw.githubusercontent.com/Homebrew/homebrew-core/86a44a0a552c673a05f11018459c9f5faae3becc/Formula/python@2.rb - brew install python@2.rb` – MrTomRod Sep 19, 2020 at 14:54

10 Not working from the last commit... `==> Downloading https://ghcr.io/v2/homebrew/core/python/2/manifests/2.7.17_1 ##O#- # curl: (22) The requested URL returned error: 404 Error: Failed to download resource "python@2_bottle_manifest" Download failed: https://ghcr.io/v2/homebrew/core/python/2/manifests/2.7.17_1` – Sagar Ranglani Apr 24, 2021 at 12:13

127

You can use `pyenv` to install python with:

```
brew install pyenv
pyenv install 2.7.18
```

Optionally set it to your global default:

```
pyenv global 2.7.18
```

Nice article on why using `pyenv` is better than using `brew` to manage your python installation.

To make `python` binary available globally, add shims to PATH:

```
PATH=$(pyenv root)/shims:$PATH
```

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edited May 5 at 12:16

Borek Bernard

47.4k 54 160 231

answered Apr 26, 2021 at 22:24

donturner

14.7k 8 52 77

1 This worked the best for me after macOS 12.3 Monterey removed python 2.7. – Leon Shaner Apr 13 at 17:34

Thanks for the elegant solution and the link to the article – scottalan Apr 14 at 4:44

4 Sorry for a newbie question but do I get a global `python` or `python2` to work? After following the steps above, `which python` says "python not found". (`which python3` works and it returns `/opt/homebrew/bin/python3`). – Borek Bernard Apr 21 at 15:17

@BorekBernard Yes, this answer completely omits the part where pyenv shims need to be added to your PATH `PATH=$(pyenv root)/shims:$PATH` See stackoverflow.com/a/71620699 – Captain Head May 5 at 2:48

@CaptainHead Thanks! I've edited the answer, hope it's correct. – Borek Bernard May 5 at 12:17

61

For those showing up here **after Apple removed the system python in macOS 12.3**, here's how to install and run python2 and python3.

Python 2

`python`, `python2` -> python 2.7

```
# Download/run the legacy macOS installer (pick which one for your sys)
https://www.python.org/downloads/release/python-2716/

# Add pip for python2.7
curl https://bootstrap.pypa.io/pip/2.7/get-pip.py -o get-pip2.py
python2 get-pip2.py

# Optionally check for pip updates (in case of post-eol patches)
python2 -m pip install --upgrade pip

# Optionally add the helpers like easy_install back onto your path
# In your ~/.zprofile or whatever bash/shell profile equivalent
PATH="/Library/Frameworks/Python.framework/Versions/2.7/bin:${PATH}"
export PATH

# Optionally add some helpers while editing shell profile
alias pip2="python2 -m pip"
alias venv2="virtualenv -p python2"
alias venv3="virtualenv -p python3"

# Optionally some apple-specific std libraries are missing, search
# and download them. Example: plistlib.py
curl https://raw.githubusercontent.com/python/cpython/2.7/Lib/plistlib.py -o
/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/plistlib.py

# Lastly, there is no symlink /usr/bin/python anymore
# /usr/bin is system protected so you can't add one either
#
# Change your programs to use /usr/local/bin/python
# or google how to disable macOS SIP to make a symlink in /usr/bin
```

Python 3

`python3` -> python 3

```
brew update
brew install python3

# Add pip for python 3 in case it is missing
curl https://bootstrap.pypa.io/get-pip.py -o get-pip.py
python3 get-pip.py

# Check for pip updates
python3 -m pip install --upgrade pip

# Optionally add a helper in ~/.zprofile
alias venv3="virtualenv -p python3"
```

Test it out

```
~ % python --version
Python 2.7.16

~ % python2 --version
Python 2.7.16

~ % python3 --version
Python 3.9.10

# Running older python2
python2 -m pip install...
python2 ...

# Testing the venv2 alias from above
venv2 foo
source foo/bin/activate
pip -V # pip 20... from... python2.7
pip install -y -r req.txt
pip uninstall -y -r req.txt
pip freeze
deactivate

# Testing the venv3 alias from above
venv3 foo3
source foo3/bin/activate
pip -V # pip22... from ...python3.9
pip install -y -r req.txt
pip uninstall -y -r req.txt
pip freeze
deactivate
```

Troubleshooting via uninstall / reinstall

```
# Credit to https://www.macupdate.com/app/mac/5880/python/uninstall
# for many of the tips in this section.

# Sometimes there are problems related to accepting xcode
# tool agreement. Open XCode to make sure it finished
# installing its tool updates.

# Remove old python Application installs
# open the apps dir and delete Python 2, 3 via Finder
open /Applications
```

```
# Remove old brew installs
brew list | grep python

brew uninstall python
brew uninstall python3

# find/remove lingering unlinked kegs
ls /usr/local/Cellar/ | grep python

# Cleanup binaries
sudo rm -rf /Library/Frameworks/Pyth*
rm /usr/local/bin/pip*

# Cleanup symlinks
which -a python # check results, and rm each one
which -a python2 # check results, and rm each one
which -a python3 # check results, and rm each one

brew cleanup # prunes symlinks
```

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edited Mar 22 at 12:55

answered Mar 17 at 13:36

Josh Hibschman

2,206 23 23

11 You sir, deserve a medal. Thanks much! – Rajiv Mar 18 at 6:46

I don't think you need to install pip separately: it comes with the python.org installer. Also, I have the python Framework in my $PATH, and I'm sure I didn't do it manually, so I think that gets done, too. – benwiggy Mar 20 at 12:32

You sir, are a genius – Insane_ banda Apr 18 at 5:20

59

How to install `python@2` from a local tap

The following method works with the current version (`c9b8a3ef6`) of `brew` :

```
$ brew tap-new <user>/homebrew-python2
$ brew extract python@2 <user>/homebrew-python2
$ brew install /usr/local/Homebrew/Library/Taps/<user>/homebrew-
python2/Formula/python@2.7.17.rb
```

The `brew tap-new` command creates a new local tap template in `/usr/local/Homebrew/Library/Taps/<user>/homebrew-python2` . The tap name needs a `<user>` and a `<repo>` component separated by a `/` . The actual values are arbitrary. The naming above follows the conventions from How to Create and Maintain a Tap. If you wanted to push the tap to GitHub you would use your GitHub username as user. Pushing to GitHub is not necessary (and was not performed in the instructions above).

The `brew extract` commands extracts the recent version of formula from the repos history into the given (local) tap. In our case `python@2.7.17.rb` is extracted.

The `brew install` command finally installs the formula.

Why is this necessary?

Why is this necessary?

The method discussed above (installing an old version of the formula from a GitHub commit URL) does not work anymore for `python@2` with the current version of `brew` (`c9b8a3ef6`), it produces the following error:

```
$ brew install https://raw.githubusercontent.com/Homebrew/homebrew-
core/86a44a0a552c673a05f11018459c9f5faae3becc/Formula/python@2.rb
Updating Homebrew...
==> Auto-updated Homebrew!
Updated Homebrew from 88f17b8b6 to c9b8a3ef6.
...
Error: Calling Installation of python@2 from a GitHub commit URL is disabled!
Use 'brew extract python@2' to stable tap on GitHub instead.
```

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edited Sep 7, 2020 at 11:15

answered Sep 3, 2020 at 14:00

jvf
856 7 13

This was helpful as I was trying to install an old version of openssl. One note: `<user>` in the example above is your Github username. – heyrolled Sep 3, 2020 at 16:44

Thank you for the updated answer. <user> does not have to be your github username; it can be anything or nothing. Using your login name on your local machine is a good way to not have it collide with other users on your computer, if any. – sirdodger Sep 4, 2020 at 20:23

4 This should be the answer since the accepted answer is no longer working. – KTU Sep 9, 2020 at 1:27

2 These instructions don't work for me unfortunately. When attempting `brew extract python@2 <user>/homebrew-python2` , I get: *Error: python@2: undefined method `[]' for nil:NilClass* – P A N Oct 29, 2021 at 11:58

11

Please check following command (I am using it on macOS 10.13, it is possible that for a newer macOS it will work without source compilation):

```
brew install pr0d1r2/python2/python@2.7.17 --build-from-source
```

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answered Jun 25, 2020 at 5:50

Marcin Nowicki
587 5 4

4 This worked but this also reinstalled my Python3. Which means it removed all the packages I had installed with it. Thanks though. – DSM Sep 14, 2020 at 15:51

4

For posterity, working on macOS 10.15 (May/2021):

```
/usr/local/bin/brew tap-new ${USER}/homebrew-python2

/usr/local/bin/brew extract python@2 ${USER}/homebrew-python2
```

```
/usr/local/bin/brew install /usr/local/Homebrew/Library/Taps/${USER}/homebrew-
python2/Formula/python@2.7.17.rb

# https://github.com/Homebrew/brew/issues/5734#issuecomment-464705002
/usr/local/bin/brew untap ${USER}/python2
```

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answered May 26, 2021 at 16:27

ab77
821 11 14

2

Not about using Homebrew, but `asdf-python` worked for me flawlessly as I was able to install and use Python `2.7.18` from it. (The top-voted answer seems to fail on my system, M1 Max MBP with MacOS 12.3. A few other answers also seem convoluted and didn't work.)

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edited Jun 11 at 11:17

answered Mar 28 at 23:19

xji
5,935 4 33 55

1

None of the answers on this page worked for me[1] in MacOS Monterey. In case this helps anyone, here is an alternative solution, *which is not technically installed directly via Homebrew* – just indirectly.

A simple solution for me, that works, is to install **Anaconda** via Homewbrew, and then create a virtual environment for Python 2.7.

Note: Installing Anaconda will take up some space on your computer, moreso than just simply installing Python 2.7 via Homebrew or Pyenv:

> Anaconda is a distribution of the Python and R programming languages for scientific computing (data science, machine learning applications, large-scale data processing, predictive analytics, etc.), that aims to simplify package management and deployment. The distribution includes data-science packages suitable for Windows, Linux, and macOS.
> https://en.wikipedia.org/wiki/Anaconda_(Python_distribution)

Very basically, the steps are as follows – but you may want to refer to a full install guide for more details.

Install Anaconda from Homebrew:

```
brew install --cask anaconda
```

When installed, create a virtual environment for Python 2.7 in a folder of your choice, in this case for Python 2.7.18:

```
conda create --prefix=/MY_FOLDER/NAME_OF_ENVIRONMENT python=2.7.18
```

You can list the environments:

```
conda env list
```

Activate the environment via:

```
conda activate NAME_OF_ENVIRONMENT
```

Now you can install packages, etc, as usual, using `pip install <package>` or alternatively `conda install <package>`.

NB: If your Anaconda install is fresh,

1. You may be prompted to run `conda init` once before you can activate the virtual environment.
2. You may have to run the below in order to be able to find the virtual environment (e.g. via `conda list env`) which will add a line in `~/.condarc`:

   ```
   conda config --append envs_dirs /MY_FOLDER/NAME_OF_ENVIRONMENT
   ```

3. If you are annoyed by the text which may say "Py base" whenever you open Terminal, do the following per this answer, which will add a line in `~/.condarc`:

   ```
   conda config --set auto_activate_base false
   ```

4. Once you have activated the environment, to shorten the path to it that appears in Terminal whenever it is active, add this row to `~/.condarc`:

   ```
   env_prompt: ({name})
   ```

[1] I am not sure if it is because something relating to Python installs is broken on my Mac – so you may not have the same issues. But I was running into problems with all the solutions: everything from installing `virtualenv` for the native MacOS Python install did not succeed, build error when attempting to install 2.7.18 via `pyenv`, the `brew extract` method also failed, etc.

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edited Oct 30, 2021 at 11:44

answered Oct 30, 2021 at 11:37

P A N
5,050 13 46 90

1

this work for me on m1(12.3.1):
dont use brew, download from python official website directly.
This question has tortured me for a long time :(

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answered Apr 28 at 15:15


user18044937
11 1

1 @Dos This nonetheless provides an answer to the *underlying problem*; please see What is the XY problem?. – awwright May 23 at 23:15

0

I used methods from this page to install Python 2.7 on Mac for a year. But May 2021 I tried most suggestions on this page and they all failed.

Maybe Python 2.7 is getting harder to install or maybe my new macOS Big Sur 11.4 is causing the problem.

I was able to setup a working Python 2.7 environment in this way by reusing the native Python 2.7.16

- Install pip manually
- Setup a virtual environment
- Install dependencies with pip in virtual environment

Here are the install steps:

```
wget https://bootstrap.pypa.io/pip/2.7/get-pip.py
python get-pip.py
pip install virtualenv
~/Library/Python/2.7/bin/pip  install virtualenv
virtualenv --python=/usr/bin/python venv
source venv/bin/activate
```

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edited May 28, 2021 at 21:32

answered May 28, 2021 at 11:16


Sami Badawi
829 1 9 20

Where does `virtualenv` get installed using this method? I get `command not found: virtualenv` although it appears to have been installed somewhere. – P A N Oct 30, 2021 at 8:18

0

This should work!!!

```
wget https://bootstrap.pypa.io/pip/2.7/get-pip.py
python get-pip.py
pip install virtualenv # This will not work, use below
~/Library/Python/2.7/bin/pip  install virtualenv
~/Library/Python/2.7/bin/virtualenv --python=/usr/bin/python venv_twisted
source venv_twisted/bin/activate
```

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answered Mar 9 at 19:07


user3396549
1 2

2 There are **seven existing answers** to this question, including a top-voted, accepted answer with

2 There are **seven existing answers** to this question, including a top-voted, accepted answer with over **one hundred fifty votes**. Are you *certain* your solution hasn't already been given? If not,

why do you believe your approach improves upon the existing proposals, which have been validated by the community? Offering an explanation is *always* useful on Stack Overflow, but it's *especially* important where the question has been resolved to the satisfaction of both the OP and the community. Help readers out by explaining what your answer does different and when it might be preferred. – Jeremy Caney Mar 10 at 0:28

@JeremyCaney Highly voted answers may become obsolete over time and prompt the need for new, entirely different answers. The "there's already a highly upvoted answer" argument is generally a poor one. – awwright May 23 at 23:22

@awwright: Reread my critique. It's not that the highly voted answer must be correct. It's that this answer was submitted to a question without any explanation. If the top-voted answer is out-of-date, and this addresses that, then this answer should state that clearly. – Jeremy Caney May 24 at 0:48

0

I was getting errors using brew and not able to install.

Error: Installation of python@2 from a GitHub commit URL is unsupported! brew extract python@2 to a stable tap on GitHub instead.

You can direct download python from their site version 2.7.18 and for list of available version click here

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answered May 31 at 5:34

R7G

812 1 9 13

0

If you just want make python2 work on Mac the most effective way is access https://www.python.org/downloads/ and download the pkg of this version of python.

Seems that homebrew doesn`t support python2 anymore.

best regards.

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answered Jun 18 at 21:01

Milton Jacomini Neto

380 2 9