

# How to Install Python 2 on Debian 12

Learn how to install Python 2 on Debian 12 with our step-by-step guide. Follow these instructions to get Python 2 running on your Debian 12 system quickly and easily.

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# Introduction

Python 2 was widely used for many years before reaching its end-of-life (EOL) on January 1, 2020. While Python 2 is no longer maintained, some legacy applications still use it.

This article shows how to install Python 2.7.18 and PIP from source on a Debian 12 instance, verify the installation, and run a Python script to confirm that Python 2 works as expected.

## ⚠ Warning

Python 2 is no longer maintained and should not be used for new development. Use it only if a legacy application requires it.

# Prerequisites

Before you begin:

- Have access to a [Debian 12](#) based Linux instance as a non-root sudo user.

# Install Python 2

Debian 12 does not include Python 2 in its default repositories. To install it, compile Python 2.7.18 from source.

1. Update the APT package index.

CONSOLE

```
$ sudo apt update
```

2. Upgrade installed packages.

CONSOLE

```
$ sudo apt upgrade -y
```

3. Install required dependencies.

CONSOLE

```
$ sudo apt install libreadline-dev libbz2-dev libsqlite3-dev  
libssl-dev -y
```

4. Download the Python 2.7.18 source code.

CONSOLE

```
$ wget https://www.python.org/ftp/python/2.7.18/  
Python-2.7.18.tgz
```

5. Extract the archive.

CONSOLE

```
$ tar xzf Python-2.7.18.tgz
```

6. Switch to the Python source folder.

CONSOLE

```
$ cd Python-2.7.18
```

7. Run the `configure` script to set up the build system.

CONSOLE

```
$ ./configure --prefix=/usr/local --enable-optimizations
```

In the command above:

- `--prefix=/usr/local`: Installs Python in the `/usr/local` directory.

- `--enable-optimizations`: Enables performance optimizations such as LTO and PGO.

#### 8. Compile the build files.

CONSOLE

```
$ make
```

#### 9. Install Python 2 from the built source.

CONSOLE

```
$ sudo make install
```

#### 10. Verify the installation.

CONSOLE

```
$ python2 --version
```

Output:

```
Python 2.7.18
```

## Install PIP for Python 2

PIP is the package manager for Python. For Python 2, install PIP 2 using the `get-pip.py` script.

#### 1. Download the installation script.

CONSOLE

```
$ curl -O https://bootstrap.pypa.io/pip/2.7/get-pip.py
```

#### 2. Install PIP 2 using Python 2.

## CONSOLE

```
$ python2 get-pip.py
```

3. If you see the following warning in your output:

```
WARNING: The scripts pip, pip2, and pip2.7 are installed in '/home/your-user/.local/bin', which is not on PATH.
```

1. Add the directory to your `PATH`.

## CONSOLE

```
$ echo 'export PATH=$PATH:$HOME/.local/bin' >> ~/.bashrc
```

2. Update your shell environment's `PATH` variable.

## CONSOLE

```
$ source ~/.bashrc
```

4. Verify the installation.

## CONSOLE

```
$ pip2 --version
```

Example output:

```
pip 20.3.4 from /home/your-user/.local/lib/python2.7/site-packages/pip (python 2.7)
```

# Test and Use Python 2 and PIP

To test your Python 2 installation, follow the steps below.

1. Create a Python script for testing purposes.

CONSOLE

```
$ nano hello.py
```

2. Add the following contents to the file:

PYTHON

```
print "Hello from Python 2"
```

Save and exit the file.

3. Run the script.

CONSOLE

```
$ python2 hello.py
```

Output:

```
Hello from Python 2
```

This validates your Python 2 installation.

4. Try installing a PIP package, such as the `lxml` package.

CONSOLE

```
$ pip2 install lxml
```

If the command works and installs the package, your PIP 2 is working.

## Conclusion

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In this article, you installed Python 2.7.18 and PIP 2 on a Debian 12 instance from the source and tested them. This setup enables legacy Python 2 applications to run on modern systems. Avoid using Python 2 for new development and migrate to Python 3 to ensure continued support and security.



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