**Compiling CPython (Linux)**

For Linux, the first step is to download and install make, gcc, configure, and pkgconfig.

For Fedora Core, RHEL, CentOS, or other yum-based systems:

$ sudo yum install yum-utils

For Debian, Ubuntu, or other apt-based systems:

$ sudo apt install build-essential

Then install the required packages, for Fedora Core, RHEL, CentOS or other yum-based systems:

$ sudo yum-builddep python3

For Debian, Ubuntu, or other apt-based systems:

$ sudo apt install libssl-dev zlib1g-dev libncurses5-dev \

libncursesw5-dev libreadline-dev libsqlite3-dev libgdbm-dev \

libdb5.3-dev libbz2-dev libexpat1-dev liblzma-dev libffi-dev

Now that you have the dependencies, you can run the configure script, enabling the debug hooks --with-pydebug:

$ ./configure --with-pydebug

Review the output to ensure that OpenSSL support was marked as YES. Otherwise, check with your distribution for instructions on installing the headers for OpenSSL.

Next, you can build the CPython binary by running the generated Makefile:

$ make -j2 -s

During the build, you may receive some errors, and in the summary, it will notify you that not all packages could be built. That’s okay if you aren’t planning on developing against those packages. If you are, then check out the [dev guide](https://devguide.python.org/) website for more information.

The build will take a few minutes and generate a binary called python. This is the debug binary of CPython. Execute ./python to see a working REPL:

$ ./python

Python 3.8.0b4 (tags/v3.8.0b4:d93605de72, Aug 30 2019, 10:00:03)

[Clang 10.0.1 (clang-1001.0.46.4)] on darwin

Type "help", "copyright", "credits" or "license" for more information.

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