

Resources: Programming in C++

Installing GoogleTest (Unit Test Framework for C++)

Ubuntu-like Linux (including Windows Subsystem for Linux)

Use `apt` to install the correct packages

```
sudo apt update
sudo apt install libgtest-dev
```

YOU ARE DONE. DON'T DO ANYTHING ELSE.

Mac OS X, or other OS from source code (at a Unix prompt)

These instructions are only for people with Mac OS X, or people who want to do more work and install from source code on Linux. If you did the `sudo apt` installation above, do not do these steps.

Visit the [release page](#). Download the latest release (choose zip or tar.gz). This is currently 1.14.0 (Fall 2023). In the instructions below, replace `1.14.x` with the current release of google test.

C++ Versions: As of Fall 2023, we're still using the 2011 standard of C++, so you should actually use the most recent version that supports C++11, which is `1.12.1`.

Unpack the source code. You must run this command in the directory where the archive file was downloaded.

```
unzip googletest-1.12.1.zip
or
tar -zxf googletest-1.12.1.tar.gz
```

Move into the source tree:

```
cd googletest-1.12.1/googletest
```

Compile the source code, and build a library:

```
g++ -std=c++11 -pthread -g -Wall -Wextra -Werror -I. -I./include -c src/gtest-all.cc
ar rv libgtest.a gtest-all.o
g++ -std=c++11 -pthread -g -Wall -Wextra -Werror -I. -I./include -c src/gtest_main.cc
ar rv libgtest_main.a gtest_main.o
```

Make sure that `sudo` will run as root. This command may prompt you for your password. Then, it should display `root`. If you run it second time, it should not prompt you for your password. Then, you are ready to move on to the next step.

```
sudo whoami
```

Install the library for use:

```
sudo mkdir -p /usr/local/lib
sudo mv libgtest.a /usr/local/lib/libgtest.a
sudo chmod 644 /usr/local/lib/libgtest.a
sudo mv libgtest_main.a /usr/local/lib/libgtest_main.a
sudo chmod 644 /usr/local/lib/libgtest_main.a
sudo mkdir -p /usr/local/include
sudo mv include/gtest /usr/local/include
sudo chmod -R o+r /usr/local/include/gtest
```

For Linux/Windows:

```
sudo chown -R root:root /usr/local/include/gtest
sudo chown root:root /usr/local/lib/libgtest.a
sudo chown root:root /usr/local/lib/libgtest_main.a
```

For MacOS

```
sudo chown -R root:wheel /usr/local/include/gtest
sudo chown root:wheel /usr/local/lib/libgtest.a
sudo chown root:wheel /usr/local/lib/libgtest_main.a
```

Remove the source code, it's no longer needed.

```
cd ../../
rm -r googletest-1.12.1
rm googletest-1.12.1.zip
or
rm googletest-1.12.1.tar.gz
```