

Download

- Binaries
- Source Code
- Developer Zone

Help

- CC3D User Forum
- Manuals
- Tutorials
- F.A.Q.

Demos

- Simulation Movies
- Screenshots
- Model Repository

Publications

- Publications
- Theses
- Talks and Posters

Events

- Workshops

About

- People
- Contact Us
- Mailing List

Search Site

Building CompuCell3D on Linux

This writeup presents easy-to-follow instructions on how to build CC3D on Linux using CompuCell3D channel of Anaconda. Anaconda is a cloud-based system that provides easy-to-use cross-platform system for managing software packages and dependencies

Prerequisites

- conda installation - use python 2.7 installer for linux from this webpage <https://conda.io/miniconda.html>
- git
- c++ compiler

On Ubuntu all items (except conda - it has to be installed manually) can be installed automatically using the following command:

```
sudo apt-get install g++ build-essential git libglu1-mesa libxi-dev
libxmu-dev libglu1-mesa-dev
```

Important For this tutorial to work you need to make sure that **libGLU.so** is in the **/usr/lib64**. On Ubuntu this library will be installed in **/usr/lib/x86_64-linux-gnu** In this case you may have to create symbolic link (you have to be **sudo** to do that)

```
ln -s /usr/lib/x86_64-linux-gnu /usr/lib64
```

If you are on **CentOS 7.x** or **RedHat 7.x** you may have more work to do but it is fairly straightforward because you will need to create more symbolic links for completeness we are listing the commands necessary to accomplish this task:

```
cd /usr/lib64

ln -s libXt.so.6 libXt.so
ln -s libGLU.so.1 libGLU.so
ln -s libGL.so.1 libGL.so
ln -s libXext.so.6 libXext.so
ln -s libX11.so.6 libX11.so
ln -s libICE.so.6 libICE.so
ln -s libSM.so.6 libSM.so
```

Of course you need to do it as super user and keep in mind that the library numbers (.so.x) may vary depending on your system version

Important: You may need to apply additional fix apply on newer linuxes (Ubuntu 18.04 RedHat 7.5) This is related to the issue of that shows up during the compilation and is related to SWIG complaining that it is unable find "swig.swg" file (and few others). The temporary solution is to uninstall system swig and install swig from source by following download links from www.swig.org

CC3D_BUILD_SCRIPTS repository

Get main cc3d repository by running from your home directory the following command

```
mkdir ~/CC3D_GIT
cd ~/CC3D_GIT
git clone https://github.com/CompuCell3D/CompuCell3D.git .
```

Get cc3d_build_scripts repository by running from your home directory the following command

```
git clone https://github.com/CompuCell3D/cc3d_build_scripts.git
```

Once the cloning process is complete go to the directory where the **build.py** script for the current version of cc3d is located:

```
cd cc3d_build_scripts/linux/376
```

To run the build/install script run the following command:

```
python build.py --prefix=~/.cc3d_376 --source-root=~/.CC3D_GIT --build-dir=~/.cc3d_376_build --version=3.7.6 --cores=2 --conda-env-name=cc3d_python
```

After last command completes few things will happen:

1. new conda environment (**cc3d_python**) will be created (**build.py** script will do this automatically for you)
2. the dependencies needed to build CC3D will be downloaded
3. CC3D will be installed will be installed in **~/cc3d_376** . Temporary compilation files will get stored in **~/cc3d_376_build**

Now all you have to do is to go the the installation directory and run CC3D:

```
cd ~/.cc3d_376
./compuCell3d.sh
```