



FEniCS Course

Lecture 1: Installation of FEniCS

Contributors

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Installation alternatives



☞ Docker images on Linux, Mac, Windows



☞ Build from source with Hashdist (fenics-install.sh)



☞ PPA with apt packages for Debian and Ubuntu



☞ Drag and drop installation on Mac OS X

<http://fenicsproject.org/download/>

Installation using Docker

Follow instructions to install Docker on linux, mac, or windows:

<https://docs.docker.com/linux/> or [mac/](https://docs.docker.com/mac/), [windows/](https://docs.docker.com/windows/)

Download and open a terminal in a clean FEniCS environment:

Bash code

```
$ docker run -ti quay.io/fenicsproject/dev
```

More instructions on using FEniCS Docker images here:

<http://fenics-containers.readthedocs.org>

Installation using Debian / Ubuntu packages

For latest Debian / Ubuntu release (currently 1.3):

Bash code

```
$ sudo apt-get update
$ sudo apt-get install fenics
```

For most recent FEniCS release (currently 1.5):

Bash code

```
$ sudo add-apt-repository
    ppa:fenics-packages/fenics
$ sudo apt-get update
$ sudo apt-get install fenics
$ sudo apt-get dist-upgrade
```

Installation using Mac packages

Download the Apple Disk Image (.dmg), click the image and then drag FEniCS into the Applications folder.



Installation from source

Automated installation from source:

Bash code

```
$ curl -s http://fenicsproject.org/fenics-install.sh | bash
```

Manual installation from source:

Bash code

```
<download and build Boost, MPI, PETSc, NumPy, SymPy, ...>  
$ git clone git@bitbucket.org:fenics-project/ffc.git  
$ cd ffc && sudo python setup.py install && cd ..  
$ git clone git@bitbucket.org:fenics-project/dolfin.git  
...  
$ cd dolfin && cmake .. && make && sudo make install
```

For developers:

Bash code

```
$ git clone  
    git@bitbucket.org:fenics-project/fenics-developer-tools.git  
$ cd fenics-developer-tools  
$ sudo python setup.py install  
$ fenics-install-all.sh
```

The FEniCS challenge!

Install FEniCS on your laptop!

<http://fenicsproject.org/download/>

Does it work?

Python code

```
from fenics import *  
  
mesh = UnitCubeMesh(16, 16, 16)  
plot(mesh)  
interactive()
```

