

### Linux fundamentals commands

sudo -i	
apt-get <...>	
<command> --help [-H]	Options for the <command> [help]
man <command>	Help for <command>
export LD_LIBRARY_PATH=/usr/local/lib:\$LD_LIBRARY_PATH	Update the path

### Install Anaconda

conda info	Verify if conda is installed (check version number, etc.)
Download anaconda	<a href="https://docs.continuum.io/anaconda/install/">https://docs.continuum.io/anaconda/install/</a>
bash Anaconda3-4.4.0-Linux-x86_64.sh	Install the downloaded package
conda update conda	Update conda to the current version
conda update anaconda	Update all packages in the environment to the versions in the latest release of Anaconda, all of which are tested for compatibility. May not contain the newest versions
conda update --all	Update the environment
conda --version	Verify that conda is installed
conda list	View a list of packages and versions installed in an environment
conda install <package-name>	Install the conda package

### Install FEniCS on Ubuntu

Download FEniCS options	<a href="https://fenicsproject.org/download/">https://fenicsproject.org/download/</a>
sudo add-apt-repository ppa:fenics-packages/fenics	
sudo apt-get update	
sudo apt-get install --no-install-recommends fenics	
sudo apt-get dist-upgrade	

### Install dolfin-adjoint on Ubuntu

Download dolfin-adjoint options	<a href="http://www.dolfin-adjoint.org">www.dolfin-adjoint.org</a>
sudo apt-add-repository ppa:libadjoint/ppa	
sudo apt-get update	
sudo apt-get install python-dolfin-adjoint	

### Install FEniCS on Anaconda

conda config --add channels conda-forge	Installing fenics from the conda-forge channel
conda create -n fenicsproject -c conda-forge fenics	Create an environment
source activate fenicsproject	Activate the environment
conda install fenics	Install the last stable version of FEniCS
source deactivate fenicsproject	To deactivate this environment

### Install dolfin-adjoint on Conda

conda install -c conda-forge dolfin-adjoint	
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### Install IpOpt

Download Ipopt	<a href="http://www.coin-or.org/download/source/Ipopt">http://www.coin-or.org/download/source/Ipopt</a>
tar xvf Ipopt-3.3.1.tar	Decompress the folder
cd \$IPOPTDIR/ThirdParty/Blas	
./get.Blas	
cd ../Lapack	
./get.Lapack	

### Install IpOpt (cont)

cd ../ASL	
./get.ASL	
cd ../Metis	
./get.Metis	
cd ../Mumps	
./get.Mumps	
cd \$IPOPTDIR/	
mkdir build	
cd build	
./configure	
sudo ldconfig	
sudo make	
sudo make test	
sudo make install	

### Install pyIpOpt

git clone <a href="http://github.com/xuy/pyipopt">http://github.com/xuy/pyipopt</a>	Get the latest source code
opt.git	
python setup.py build	
sudo python setup.py install	
python hs071.py	To see if you have Pylpopt ready
Pylpopt is a python module that allows you to use IPOPT in Python <a href="#">Web page</a>	