UMass LIGO Group
Private Working Area

Getting Started

This page collects a set of tutorials and pointers to software to be installed on your computer to work on gravitational wave simulations and data.
There are 4 basic steps which everyone joining our group must follow (details on each step are given below).

1. **Registration** – to view documentation, webpages and access some software, you need to register as a member of our collaboration. This should only take a few minutes.
2. **Computer setup** – the software you will be using is developed inside and designed for use under unix systems (i.e., not windows). You need to get access to a computer you can work on and, hopefully, set up your own laptop so that you can use this software.
3. **LSC data-grid accounts & software** – you will ultimately require access to external computing facilities. In this step, you will install the software to request and use accounts on these.
4. **Tutorials** – we collected a set of tutorials on Unix, how to use an editor (emacs or vim) and how to work on the cluster in the software and tutorials page

1) Register

To register as a LIGO Scientific Collaboration (LSC) member, use this interface: https://my.ligo.org
It should only take a few minutes. You should sign up as an LSC member at the University of Massachusetts Amherst. If you input FIRST as first name and LAST as last name, you will be given an email alias FIRST.LAST@ligo.org (an alias for your regular email account) which you will use to receive email from the various lists and to access the (many) online LIGO documents.
Also send Laura your ID number (if you are signing up for independent study) AND a recent picture for the web site.

2) Computer Setup

To work with gravitational wave simulations and data analysis, you need access to a computer with the necessary tools installed and set up for you to use. There are two imacs in LGRT-1036 which you are encouraged to use – ask about creating an account.
It is also good idea to set up your laptop to work with unix and connect remotely to large computing facilities at other sites, such as Caltech.

Linux users:
you're all set.

MAC users:
you are already set up with unix. However you need to install macports and a suite of packages that will be useful for the rest of the setups. A complete set of instructions for this is available at this link:

https://www.lsc-group.phys.uwm.edu/daswg/docs/howto/macports.html

WINDOWS users:

- to lowest order, you need to install ssh-sftp tools. For instance, the putty tools: http://www.chiark.greenend.org.uk/~sgtatham/putty/. This will let you log into a remote computer which then has all the software you need to proceed. It is not the optimal solution and a little clunky but will let you proceed without exiting windows – consider it the bare minimum.
- The preferred option is to install linux on your laptop. There are many different 'flavours' of linux and various ways to set them up. The simplest option is to follow these instructions: https://wiki.ubuntu.com/WubiGuide. This will set up Ubuntu on your laptop – when you reboot your machine, you will then see an option to choose whether to use windows or Ubuntu.

3) LSC-data-grid (ldg) Tools

This is the software you need to access the various computing facilities you have at your disposal. You can find details of these on this page: https://www.lsc-group.phys.uwm.edu/lscdatagrid/
Please head on over to this: https://www.lsc-group.phys.uwm.edu/lscdatagrid/doc/gettingstarted.html webpage and follow the instructions.

Please note: you can complete steps 1 and most of 2 on that page right away. You will need to wait until you have a grid certificate issued to you before completing everything. This may take a couple of days to arrive.

Checking things have worked
When (and only when) you have completed all these steps – i.e., you have the tools installed, grid certificate retrieved and you have emails telling you you have accounts on various systems, please try logging into caltech by doing the following commands in a terminal (you will see different output from mine):

```
James-Clarks-MacBook:~ jclark$ grid-proxy-init
Your identity: /C=UK/O=eScience/OU=Cardiff/L=WeSC/CN=james clark
Enter GRID pass phrase for this identity:
Creating proxy ..................................................................... Done
Your proxy is valid until: Mon Oct 17 02:51:45 2011
James-Clarks-MacBook:~ jclark$ gsissh ldas-grid.ligo.caltech.edu
```

If your account is valid and you've installed the tools correctly you will then see a welcome message, in which case Congratulations!
