Introduction

Your project supervisor may ask you to use the facilities provided by the Centre for Scientific Computing (CSC) for your project work. CSC is primarily an inter-disciplinary research centre which also runs a graduate training programme and some short courses. It is not a teaching service for undergraduates, and is not associated with IT Services. You should think of the CSC computer network as you would an expensive piece of research equipment, used by hundreds of researchers, like a big nuclear magnetic resonance machine, or an atomic force microscope. These computers must be treated with respect and common sense. If not, the consequences for others may be very disruptive, and the consequences for you may be serious (ranging from the suspension of your account to disciplinary action).

Getting Started

Almost all interaction with CSC is handled electronically. The main web page is

$$\texttt{http://go.warwick.ac.uk/csc/}$$

You can learn about the facilities by following the "User Services" link on the navigation panel of that page (you will need to be signed in to Sitebuilder with your ITS username). Your first step is to navigate to "Desktop Computing" and apply for an account on the centrally managed Linux system: your account name will be the same as your ITS username. Creation of your account is confirmed by email to you. You should read that email, and click on the link within it, so as to subscribe to the `csc-linux-user` mailing list, which is the primary means of alerting users to important developments (such as system downtime, network incidents etc).

The "Desktop Computing" page also has some useful sub-pages including a "Getting Started" guide. Useful information about how to connect to CSC computers from ITS machines running Windows, or from your own laptops, can be found on the "Remote Access" page. Usually, connecting from outside is done through a central server called `godzilla.csc.warwick.ac.uk` or `godzilla` for short. All the CSC desktop machines are attached to the same file system, and run the same software so it really makes no difference which machine you are logged into, but `godzilla` is set aside especially for remote access.

Running Calculations

The most common cause of trouble is when students start to run substantial calculations interactively on CSC computers. Your CSC account will give you access to all computers on the system, but this does *not* mean that you can run calculations anywhere you please, even if a particular machine is idle.

The CSC desktops are part of a Cluster of Workstations, or CoW for short. This system accepts requests to run calculations in the form of a job script, and then assigns that script to the first available PC. More details can be found on the "Using the COW" page. You should run all non-trivial computation via the CoW.

You should not run long or CPU intensive calculations directly on any of the CSC managed desktop computers, apart from very short test runs of just a few seconds. If you are in any doubt as to what constitutes an intensive or non-trivial calculation, consult your supervisor.

There are some limitations about the kind of jobs that can be run on the CoW: they must not demand too much memory, or do too much input/output (because they are being run in the background on a desktop machine, and might have a big impact on the work of the person using that machine). If in

doubt about this, please consult your project supervisor as to the most suitable way of tackling your problem. *Some* dedicated high-memory compute nodes are available on the CoW via the `taskfarm` queue, and it may be appropriate to use these for some projects. A few projects may involve access to high-performance computing facilities such as `minerva` or `tinis`, but this must definitely be discussed with, and explicitly approved by, your supervisor, even if you already have an account for PX425.

> ⚠️ **Important:** You must not run *any* calculations (of any length) on `godzilla`. This can disrupt the work of large numbers of people and hence the rule is subject to a strict 'three strikes' policy. This includes calculations via Matlab or Mathematica worksheets.

Help and Support

There are plenty of books and online references to Linux, the operating system used throughout CSC. Don't expect CSC support staff to sort out basic questions concerning Linux commands. Some research groups have a nominated CSC mentor who will be able to advise and point you toward further information. You should find out who performs this role in your research area. Needless to say, any difficulties getting your own programmes and software to work should be discussed with your project supervisor, not with CSC.

Sometimes there are genuine cases of problems with the system, installed software that doesn't seem to work properly, bugs that need reporting and so on. These are handled through the "Bugzilla" system, which is again fully described on the "Getting Started" page. You need to register with this system in order to use it. A key aspect of using the system is searching for your problem first, to see if it has already been raised (and perhaps answered) already. (Actually, the first step is to read any error messages that may have been generated, and see if you can understand them. Pasting them into Google sometimes leads to an answer).

Read the Documentation

In the end, it is your responsibility, nobody else's, to be familiar with CSC's rules and usage policy. You must pay special attention to the pages dealing with the CSC desktop, the Cluster of Workstations (CoW), and remote access via the server `godzilla`.

- `http://go.warwick.ac.uk/csc/local/`

- `http://go.warwick.ac.uk/csc/local/desktop/`

- `http://go.warwick.ac.uk/csc/local/desktop/cow/`

- `http://go.warwick.ac.uk/csc/local/desktop/remote/`

Sanctions will be applied against students who abuse the CSC system. In the worst case scenario your account will be suspended and you may not be able to complete your project. The department cannot absolve you of responsibility for your use of the system, or bail you out if you suffer any consequences of abusing it.