

1. Simple UNIX commands

1.1 How to use Maths computers

1.1.1 Logging in

As per when you did ‘apply’, choose a host by clicking on it (better to choose one with a lighter load) then type the user name you chose, press *return*, type the password you chose when you ‘applied’, then *return* again.

The first time you log in, you will get to choose some KDE setups. Probably best to choose ‘Windows’ look and feel. (You can try changing to another look later.)

1.1.2 Logging OUT

The default setup in the Mathematics department is a to use KDE as the desktop. If you don’t change that (which you can do) the ‘Logout..’ menu item in the ‘K’ menu does log you out.

1.1.3 Terminal window

The idea of a terminal window (Xterminal or Konsole window) is that you can type commands for the system to execute (rather than doing things with a mouse and menus).

By default you will have one terminal window when you log into the Maths system. You can open more if you like to do two things at once.

At the bottom of the screen there should be an icon of a computer screen. If you move the mouse over it the word ‘Konsole’ will show. Click this to open a window.

Alternatively, under the ‘K’ menu, ‘Utilities’, ‘X-utilities’, you should find a menu item *X Terminal (Terminal Program)*. This item starts a different application to Konsole, though they do similar things.

Yet another way is to type `xterm &` (followed by the *return* key) in a terminal window. `xterm` is the name of the program and the `&` at the end allows the window you begin from to be used even while the `xterm` window is still doing stuff.

1.1.4 Password

A standard UNIX command called `passwd` changes your password, in case you want to do that. On our system, this will only work if you are on the host called *salmon*. If you are logged into another host, type `salmon` in a terminal window and a window connected to the server called *salmon* will pop up.

On *salmon*, type `passwd` (followed by the *return* key). You need your old password, and then to type your new password the same way twice. The passwords are case-sensitive and should have numbers as well as letters.

When you give your password (meaning type it), it should not be appearing on the screen as you type. What is kept by the system is an encrypted form of the password and you need to type the original. The system managers can see the encrypted form but not the original. If you

forget your password, the system people can set your password afresh, but they cannot find out the original one.

Send email to `ops@maths.tcd.ie` about problems with things not working. Might be best to ask your lab tutor first.

1.2 Some useful commands and concepts

Here are some things you can type in a terminal window, and roughly what effect they have. In the 'K' menu, there are many options. All those options and more can be controlled by commands you type in a window.

In the UNIX world the inventors were apparently not such good typists because they tried to use 2-letter commands for everything. Some of the abbreviations are maybe hard to guess, and there are by now many things with longer names that two letters.

ls 'List sorted'. Shows you a list of the file names and subfolder names in the current working directory (or folder). Depending on how things are set up, you may see different colours on the names of different types of things.

ls -l Shows you a list of the file names together with dates and some other 'protection' and size information.

`x` marks programs, `r` and `w` marks readable and writable. There are 3 lots of `rw` places, the first group is for the owner of the file (also shown), the next for the group the file (also shown) belongs to and the last for every other user on the system. If there is a `d` at the start it is a directory (folder).

ls -al Same as `ls -l` but also shows files and folders that are normally hidden (begin with a dot).

ls -F Same as `ls` but shows programs with a `*` after them and subfolders with a `/` at the end of their names.

pwd 'Path way of the directory'. All the files on the computer are organised into folders. The one at the top is called `/` (slash). You might be used to something similar in Windows where you might see a drive `C:` in 'My Computer' and there could be a `C:\` directory (or folder).

The command `pwd` tells you where you are.

date Date now.

cal Calendar for this month.

cal nov 1992 Calendar for the month you were born?

man cal Manual page for the `cal` command — tells you loads of details you might not want to know.

faq Open a list of “Frequently asked questions” (and answers) about the Maths system in a web browser. [It would be great if these answers were all up to date, but they are not.]

less /www/local/admin/faq.html Show the (text) file named in a literal way. That file contains a list of some ‘frequently asked questions’ about the maths computer system. Rather than looking at the raw HTML code, you could open `http://www.maths.tcd.ie/local/admin/faq.html` in a browser where it would be easier to read.

mutt Mail reading and sending programme (in text windows)

firefox is the web browser we use most. *opera* is another one.

In *firefox*, our network requires proxies to be set. If you can’t reach external websites, go to Edit → Preferences → Advanced → Network → Settings → Advanced. Click the button beside “Automatic proxy configuration url” and enter `http://wpad.maths.tcd.ie` in the box.

1.2.1 How to access your maths account from home

Sometimes people want to read their email or access their maths account from home or from elsewhere in College. There are quite a few options.

- There is a web method to access your mail in maths at `https://webmail.maths.tcd.ie`. [We should have a proper security certificate but we do not.]
The facilities should be very vaguely similar to those for dealing with mail on `http://myzone.tcd.ie`.
- From windows computers in College there is a utility called *ssh* installed and you can get to your maths account (in text mode) by connecting to (for example) `walton.maths.tcd.ie`
The windows *ssh* also offers a file window (where you can see your files on the local and remote computers) and copy files from one place to the other by dragging them across with the mouse.
- There is a free version of the *ssh* utility for windows called `putty.exe` and you could download it to your computer at home. It is not big and does not take long to download. You should be able to find it with *Google*.
- There is a version of *ssh* available for web use at `http://www.maths.tcd.ie/ssh` and you could possibly use that from home or an internet cafe. However, it requires java and can be difficult to get to work.
- Many mail programs can be configured to read mail via a protocol called *imap*. There is an *imap* server at host `imap.maths.tcd.ie`
Thunderbird is a program that can work in this way.