Basic IT

• Email
  • If you were a masters/undergrad – set up forwarding!!!
  • People will mistakenly send email to it so keep it monitored!
  • Sign up to Met Social!!
  • http://www.met.reading.ac.uk/intramet/home/lists/subscribe.php
IT Help/FAQ pages

- [https://uor.topdesk.net/tas/public/ssp/content/page/knowledgebase](https://uor.topdesk.net/tas/public/ssp/content/page/knowledgebase) (useful stuff on met-cluster)
- [https://research.reading.ac.uk/meteorology/intranet/it/](https://research.reading.ac.uk/meteorology/intranet/it/)
- [https://research.reading.ac.uk/act/](https://research.reading.ac.uk/act/)
Personal webpage

• You all have a personal web page

• There is guidance on IT Met as to how to set this up and edit it: https://research.reading.ac.uk/meteorology/intranet/it/met-webpages/
How to use UNIX
Step 1: Getting there

• So, nowadays you all have windows machines.

• There are two ways of getting on UNIX:
  • No machine (you all have instructions)
  • Moba Xterm
Terminal

Welcome to MobaXterm
Press <return> to start a local terminal or type a remote server name
Terminal
Getting around Linux

• ls, ls –l
• mkdir
• rm
• cd
• rmdir
• pwd
• man
• Many many more...
.kshrc and .bashrc

• These are files that get executed every time you open a shell
• This is a good place to put in alias commands
• You can also e.g. put a “module add python/canopy” command in here to setup python
• Be careful, if you put something in here it can problems down the line
met-cluster

• This is where you (probably) will run all your code
  • `ssh -Y met-cluster`
• `qrsh -l project -P scenario`
• **Or:** `qrsh -l shared -P shared`
• Read IT documentation on batch job submission if you are running a long job or want parallel processes
• Ask supervisor!!
• Coming soon: free cluster [https://research.reading.ac.uk/act/free-cluster-available-for-testing/](https://research.reading.ac.uk/act/free-cluster-available-for-testing/) (older PhDs will not be able to help you with this!)
Remote access

- You can access the University Network from your home computer using a Virtual Private Network (VPN):
- Under some circumstances, you can get ssh access to a linux computer. This is not recommended though – use the VPN unless this is not possible. Contact Met Dept IT if you need to do this.
Mapping network drive

- If you need to map your Linux home dir to your Windows file system:
  - Open file explorer
  - Right click computer -> “Map network drive…”
  - Pick a drive letter
  - Add `\unixhome.act.rdg.ac.uk\homes`

- If your N drive is missing you can map this using `\dfs.rdg.ac.uk\homes<username>`
If your M drive disappears suddenly...

- Don’t panic, it’s not your fault!
- It will come back eventually, you haven’t lost anything
- Head to the coffee area to grumble
Linux command resources

• https://diyhacking.com/linux-commands-for-beginners/
• http://www.ee.surrey.ac.uk/Teaching/Unix/
• https://www.cheatography.com/davechild/cheat-sheets/linux-command-line/
Copying files

- You often need to copy files from one computer to another
  - You can use `scp` to copy individual files
  - `rsync` can be very handy, although it is more complicated
Killing processes

ps –u USERNAME
kill XXXXXX

Very useful for some programming things!
Aliases

• Some commands are stupidly long.
• And you will do them a lot
• Can add commands to .bashrc
  • alias short_command="long command"
  • alias data_storage="/gluster/.../"
Text editors

• vim, emacs, gedit, nedit, notepad++, gVim .....  
• There are others  
• It’s worth exploring and picking what you prefer.  
• Syntax highlighting etc.  
• Spell check?
Viewing things

- PdFs: evince and acroread
- Images: eog, xv, gv ....
Background and foreground

- Add & to end to run in background
- Or ctrl+z and then bg/fg
Using Python

• module add python/canopy
• ipython /spyder/PyCharm
• Can then run in terminal or as you choose.
• See a list of modules using module avail
• Resources:
  • http://www.johnny-lin.com/index.shtml
  • https://software-carpentry.org/lessons/
Using matlab

- Using UI slows down the servers
- Write in a text document and set it to run in a terminal
- setup matlab
- matlab -nodesktop
Saving stuff

• You only have limited space in your home directory
• You will probably have storage elsewhere
• Your home directory is backed up – the rest is not.
• Do not save to .temp.
LaTeX vs Word

• There is no right answer. LaTeX is extremely useful. PhD students often hold strong opinions on this.

• Pick what works for you. Most journals will accept either, and thesis and other reports are fine in either.

• Pick referencing software to go with it. Use from beginning.

• People in office will have templates – in particular we will send around a LaTeX template for your first monitoring committee report when it’s time for us all to start writing them.
Printing (1)

• Managed print service – tap card against printer and print!
• Black and white or colour (FollowMe)
• Printing is free but monitored – don’t print too much in colour.
• Print direct from terminal
  • `lp -f FollowMe-Colour filename.pdf`
Printing (2)

• FollowMe-BW/FollowMe-Colour weren't set up for some. You can add them by going to Home->Devices and Printers, then:
  • Add a printer
  • Add a network, wireless or Bluetooth printer
  • The printer that I want isn't listed
  • Choose "Select a shared printer by name" and enter: \uorprint\FollowMe-BW
  • Repeat for Colour.

• and you should be able to print again.
Loads of other things

• xconv, ncview, ncdump...
• grep
• Shell scripting
• Git (version control), use this!!!
• Explore!
Git

• Why use git?
  • Save complete history of your code/text files
  • Helps back up code remotely
  • Lets you collaborate with other people
  • Looks good on your CV
Git

• On met system use: /usr/bin/git
• Or use IDE with integrated Git (e.g. PyCharm)
• Tutorials:
  • Interactive: https://try.github.io/levels/1/challenges/1
  • Github: https://guides.github.com/activities/hello-world/
• Docs:
  • Official: https://git-scm.com/doc
Random points...

• You can install Dropbox on them without admin rights
• You can install PyCharm
• You can install Spotify
• LaTeX: Machines have TeXworks, or use Overleaf online
• On nomachine:
  If your display looks slightly blurry, try going into the nomachine settings (Ctrl+Alt+0) and display settings, and put quality to max
  Capture keyboard makes Alt+tab work (in settings)
Who to contact

• Your buddy
• Your office mates
• Google (technical problems)
• Met-phd mailing list
• Maria or Eric
• Central IT support (raise a ticket)
• Bill Collins (not for technical problems, if you need to request more storage etc.)
Timetables/blackboard

• You can access your personal timetable here:
  • https://timetable.reading.ac.uk/CMISGo/Web/Timetable
  • This will fill up with times when you start modules!

• Many modules make heavy use of blackboard – your module convener will let you know about this
  • https://www.bb.reading.ac.uk/
RISIS

• You will use this to:
  • Re-enrol every year
  • Choose your RRDPs
  • Update your personal details (so you can get paid!)
Social Stuff!

- Sappo – sign up to met-social!
- Runners – Aga: Agnieszka.Walenkiewicz@pgr.reading.ac.uk
- Squash
- Croquet
- Book group
- Cakes/ baking/ viva cake
- Prayer group
- Badminton – Ross: r.j.herbert@reading.ac.uk
- Panto, Met ball, BBQ
- Football – Javier: j.amezcuaespinoso@reading.ac.uk
- Cricket - Jon: j.beverley@pgr.reading.ac.uk
- Met choir – Kaja: k.m.milczewska@pgr.reading.ac.uk