portfolio_5

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High Performance Computing (HPC)

In this document we will be going over what HPC is

What is a HPC?

Logging in to bristol HPC

First lets specify the login details for both the HPC's avaliable at Bristol. For BlueCrystal Phase 4:

- Username: Your UoB username
- Password: Your UoB password
- Hostname: bc4login.acrc.bris.ac.uk

For BluePebble:

- Username: Your UoB username
- Password: Your UoB password
- Hostname: bp1-login.acrc.bris.ac.uk

We use **ssh** to log in. For BlueCrystal Phase 4 we use: **ssh -X @bc4login.acrc.bris.ac.uk** , and for BluePebble: **ssh -X @bp1-login.acrc.bris.ac.uk**.

#TODO: workflow, queing system

Software

To check what software is available on the HPC you can type **module avail** which will list all the software available. If you want to search for a certain piece of software you can use **module spider** . If software you need isn't available you can either try compiling from source, pip installing (or whatever equivalent for the language you are using) or you can contact the HPC team to get them to perform the installation.

Now some commands for managing the software in your environment, to add software: **module add** , to remove software: **module del** , to list all currently added software: **module list**.

#TODO: user spaces

~mw16387/quota for better view of user space

#TODO: submitting jobs **sacct -X** instead of squeue add monitoring jobs

#TODO: When Your Job is Finished

Job scripts

#SBATCH –account= should be added using nano include example script where you compile and run a programme in c++ and python

Parallel

include array jobs here

Downloading data

use the scp command, eg. for BluePebble **scp @bp1-login.acrc.bris.ac.uk: .** will copy from BluePebble to your current directory.

Example

Create example using non running code chunks for running a DL model on it, then fill out stuff above to get number of pages up