Rules and guidelines

The HPC Wales systems are used by a large number of users with a mixed requirement for compute resources. Our fair usage policy is designed to ensure that all of our users receive as fast and reliable a service as possible. Although there are some technical limits imposed to ensure fair usage, we also operate an open system and rely on individual users being aware of the potential impact of their activities on other users' access.

1: The home directory is for code, scripts, and small data sets

The home directories are designed for availability and safety, but not so much for performance. If your job makes a lot of disk access (reading and/or writing files), then it should do so in either a local temporary space on a compute node or a site scratch.

Please do not use the cluster file systems for long-term storage of data. Once data is not being actively used it should be moved elsewhere to free up space for other cluster users. We do not routinely operate a data archive or provide a long-term storage service; this will only be possible in special circumstances[1].

2: The scratch directory is for temporary data created/utilised by a job

The scratch directories are designed to be able to accommodate large amounts of data very rapidly. They are for a job to store temporary data and should be cleaned after the job has finished. They are not for storing data, as scratch directories are subject to arbitrary cleaning at any moment.

3: The login nodes are for compiling, debugging, and file editing activities

The login nodes are intended for interactive SSH sessions, file editing, compiling, debugging and managing jobs in the job scheduler. They are reserved for activities which do not consume lots of processing or memory resource. Any job dedicated to computing must be run on a compute node.

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[1] Users requiring such a service should in the first instance make their requirements known to the appropriate HPC Wales Training and Outreach mentor or the corresponding member of the Technical team.

4: All computations must be submitted through the job scheduler

The job scheduler is designed to allocate resources fairly and efficiently. It makes sure that a job has access, at all times, to the resources it requested. It is unfair to other users, and therefore strictly forbidden, to connect to a compute node that has not been assigned to you by the scheduler (i.e. interactive reservations or a node running your job). Access to the compute node with SSH is only permitted to allow users whose jobs failed/crashed to clean the local temporary space and/or retrieve useful information about the crash (core dumps, logs, etc.) and for users whose jobs are running on the node to monitor CPU and memory usage of their processes.

- Please run all jobs via the job scheduling system.

If you are going to submit a large number of jobs, please be aware of the number of other jobs on the systems and limit the number you submit if necessary. Please do not use' substantial proportions of multiple systems simultaneously - be aware of your usage across all clusters. Doing this will avoid the need for more draconian technical measures.

5: Resources must be used as efficiently as possible

Make sure that if you reserve several cores, your program is able to use them all. Do not request more than one core for a program which cannot run in parallel. Do not request cores across several nodes if your program is not designed for message passing. Do not reserve more memory, or more run time than you need (consider revising the default values in your job scripts). Specifying realistic resource requirements for jobs will leave more resources available for other users, and will also allow your job to be scheduled sooner. Try to minimise data duplication where not necessary.

6: Access is private

The password and/or SSH keys you use to access HPC Wales systems are yours only and must not be shared with anyone. If your collaborators require access, please contact your local HPC Wales representatives. If you suspect your private access has been compromised in anyway, you must report this to the HPC Wales Support Desk immediately.

If you are found to be in breach of HPC Wales' fair use policy, you may be asked to moderate your behaviour. Continued breach of the fair use policy will result in limits or blocks imposed on access to the compute services.

hpcwales.co.uk

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Buddsoddi yn eich dyfodol
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Investing in your future
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