Computational Shared Facility: Summary of the User Group Meeting, Wednesday 1st June 2011

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Summary of presentation by Simon Hood

Dr Hood provided an update about the current status of the CSF which included the existing hardware, installed application software, contributions to date, forthcoming contributions and an overview of usage so far.

The main policies of the CSF were outlined. Access for collaborators from outside the University is possible. SGE is using fairshare for scheduling with shares allocated by group. Within this more fine-grained policies for individual users are possible if a group requires it. The maximum wallclock time is 7 days, but a short queue of 1 hour allows for testing and debugging.

The costs of joining the CSF and what the Centre pays for were highlighted and the issue of small contributions was raised. Existing contributors may be permitted to buy fractions of hardware, but requests from new contributors to do this would be less sympathetically heard. After 5 years compute contributed will be switched off, but a soft landing policy is being discussed and feedback on this is welcome. One suggestion is that reduced access for groups continues for a further 2 years, perhaps with a contribution towards power and cooling.

What a share should consist of was raised for discussion (see below).

Future developments of the CSF include integration with Redqueen2, GPUs and procurement of a small amount of hardware using the University Revolving Green Fund (RGF).

Finally, Simon gave some basic advice on using the CSF and welcomed all feedback about the service.

Summary of presentation by Robin Pinning

Dr Pinning explained that the CSF is now transitioning from a Project to a Service. This includes provision of an email address & helpdesk function (its-research@manchester.ac.uk), user documentation and training courses.

The portfolio of services which it is envisaged will be available to researchers alongside the CSF were presented. In addition indepth Research Funded Support can be provided and the lifecycle of this was illustrated.

The recent RCUK guidance for equipment purchase – only 50% being funded – was highlighted.

Main points arising from discussion

16k contributions and fractions thereof

A number of people indicated that the cost of contributing to the CSF excludes them because their available funds are too small or because some Schools restrict how much can be spent in one transaction. Thought needs to be given to how users with their small amounts of money can join,

rather than focusing on contributions through specific blocks of hardware. The RCUK decision to only fund 50% of future grants will be an additional issue, though it was noted that for the time being EPS plan to contribute the other 50%. An account into which multiple people could contribute to a purchase was suggested. The purchase of blades, which are generally of a lower specification and, therefore, cheaper than C6100s, was raised as a possible point for discussion with the Project Board. It was noted that there is a need to minimise the fragmentation of the system so that it remains manageble.

Contributions at School level are possible if a case is made to the Head of School.

In the future contributors may be asked to provide an outline of their expected usage and research outcomes from use of the system before joining the service. This would be further reported on annually. This helps to ensure sustainability of the service and can be used as input to any future academic cases for central investment. There was some concern expressed by users on this matter as they have already completed bids to get the funds in the first place so it seems unfair to have to provide further justification.

Soft landing

The current policy that contributions last 5 years and will then be switched off with lesser access for at least 2 years was re-iterated. This period would essentially involve using spare capacity on the system. This policy is partly influenced by energy costs and carbon targets.

What is a share?

Discussion revolved around whether to define shares based on hardware (primarily cores) contributed or by financial contribution. Cores was considered an unfair model as some people may have contributed other types of hardware such as Infiniband or GPUs. The University has a standard policy for assessing the value of things, and a model of depreciation. So for example if you buy 200 cores at £x then after one year you still have 200 cores but at value £y.

A consensus was reached that financial contribution should be used as the mechanism for calculating a share.

Current system configuration and usage reporting- user requirements

The main requirements of usage reporting were that PIs could have a summary of their group with a breakdown of individuals within it and for users a command line tool to see their own usage against the overall group usage. It was highlighted that access to usage information helps with grant applications. Information provided via web pages might also be useful.

Clarification was sought on whether it was possible to put a wallclock request on a qsub and whether it was permitted to run in more than one Parallel Environment (PE). The answer to both was yes. User specified wallclock times may help the scheduler, but with only two time limits in place it would not be that influential currently. The CSF webpages had recently been updated to reflect the differences between pes. Overall the current SGE configuration was deemed to be working well, but that it should offer flexibility as the service develops.

<u>Any other business</u>

Improved documenation was requested – more of it, simpler, instructive rather than information based, and with advice on which type of node/PE to use with which software.

How doctoral training centres might fit into the CSF was raised. The response was that users would need to be linked to a contributor or the doctoral centre would need to buy in.