

HPCx Quarterly Report

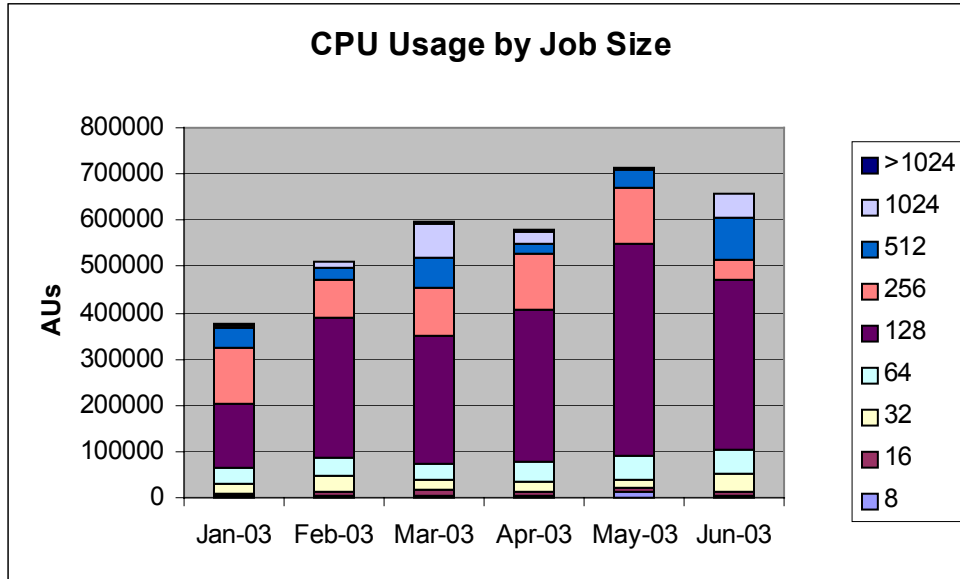
Apr-Jun 2003

1 Executive Summary

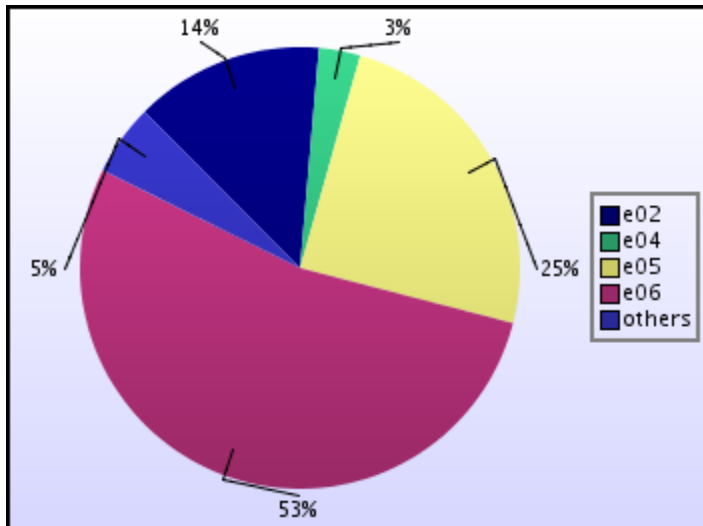
- The numbers of failures and incidents are much lower than in the previous quarter and this is reflected in better MTBF and serviceability figures.
- A 2-frame software development facility was installed towards the end of this quarter. This should allow us to provide a flexible and responsive service while maintaining high MTBF and serviceability.
- During this quarter, utilisation of the service has averaged 75% on the capability region.
- However, looking ahead, it appears that demand is likely to outstrip supply throughout the next year.
- The modal job size remains 128 CPUs and more than a quarter of the utilisation was from jobs of at least 256 CPUs.
- Interactions with the users have been good:
 - the helpdesk is exceeding all its targets;
 - the first user group meeting was held and the first newsletter was distributed;
 - the HPCx annual seminar is being arranged at Daresbury in December;
 - there are now four technical reports available on the web site;
 - the outreach to lifesciences has identified a number of projects due to start within the next quarter.
- We have made good progress in investigating the performance characteristics of the system:
 - in-depth studies of the HPCx IO system;
 - identifying that the LAPI performance problems appear to be associated with the LAPI_Get function.
- The Terascaling team has begun work on a good range of applications codes and has had a number of successes:

- significant speedups have been recorded with the most recent implementations of the NAMD and CASTEP codes, the latter through enhanced treatment of all-to-all collective operations;
- an increasing range of tools have been made available to users of the service, including Vampir (512 CPUs), Total View and libhmd.

2 Utilisation



CPU Usage by Consortium



3 Summary of Performance Metrics

<i>Metric</i>	<i>TSL</i>	<i>FSL</i>	<i>April</i>	<i>May</i>	<i>June</i>
Technology serviceability	80%	99.2%	99.9%	99.8%	100.0%
Technology MTBF (hours)	200	300	732	732	∞
Number of AV FTEs	7.5	10	13.5	11.6	12.9
Number of training days per month	30/12	40/12	7/1	16/2	16/3
Non in-depth queries resolved within 3 days	85%	97%	100.0%	100.0%	100.0%
Number of A&M FTEs	3.75	5.75	5.4	5.4	5.6
A&M serviceability	80%	100%	100.0%	99.9%	99.5%

<i>Colour</i>	<i>Meaning</i>
	Exceeds FSL
	Between TSL and FSL
	Below TSL