

# HPCx Quarterly Report

## April - June 2004

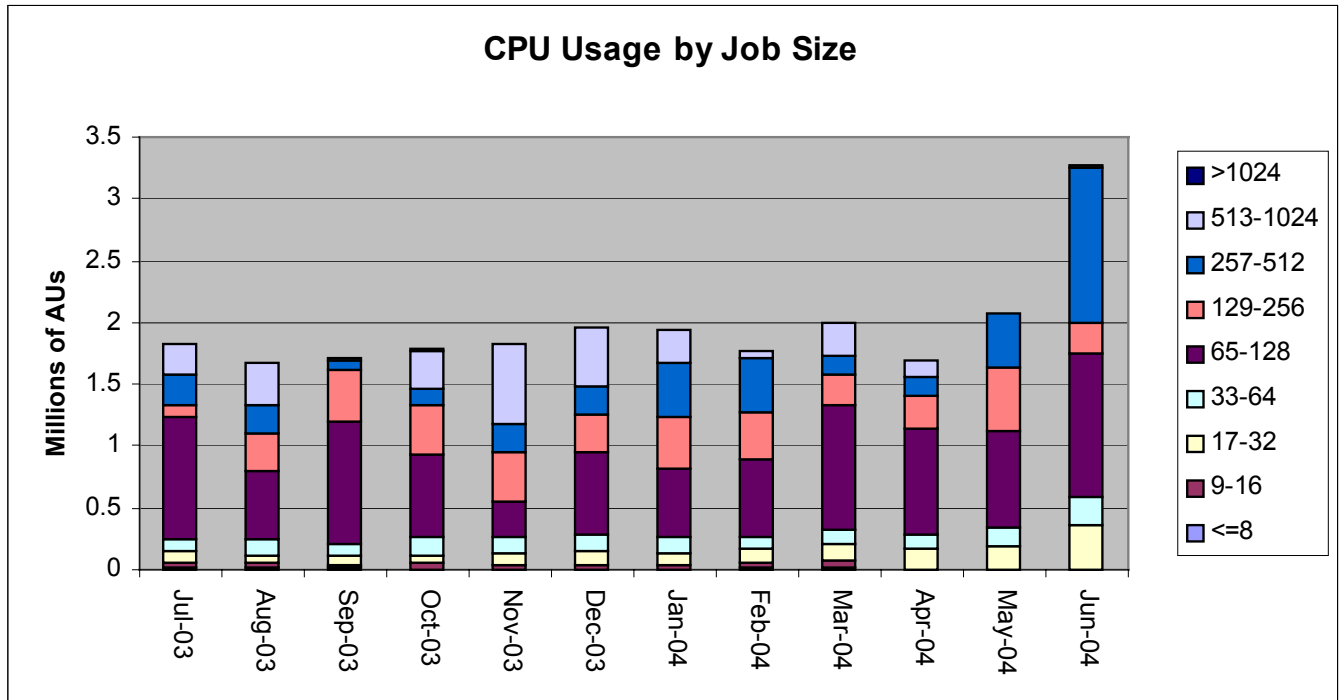
### 1 Executive Summary

- This has been a very busy quarter with the upgrade to Phase 2, high usage of the system and a significant number of events organised.
- The upgrade to Phase 2 was completed on schedule with the Implementation Certificate issued by EPSRC in mid-June. This upgrade involved faster processors, additional frames, the new High Performance Switch, migration of all data and major changes to the system software environment. This was expected to be the major technical challenge of the whole HPCx project and the fact that it was completed on time and with only modest disruption to users is a major source of satisfaction and pride for all involved.
- Utilisation remained around 75% throughout the upgrade and there was significant capability usage. There was minimal lag to the usage as the system increased in performance and we expect the system to remain busy throughout the rest of this year.
- There are currently 34 research groups, which is in excess of the maximum agreed for 2004. HPCx have now submitted a revised options paper to EPSRC.
- The second HPCx Annual Seminar was successfully held in Edinburgh on 9 July. There were more than 60 attendees at the wide range of interesting talks. The user group and new terascaling course, which were held the previous day, were also very well received.
- We also held a user workshop in London discussing initial experiences with Phase 2. This was preceded by a workshop of NERC users so that we could better understand their activities.
- This has also been an active quarter for on Outreach. The Life Sciences projects are beginning to make progress and we held an Industry Day at Daresbury in April.

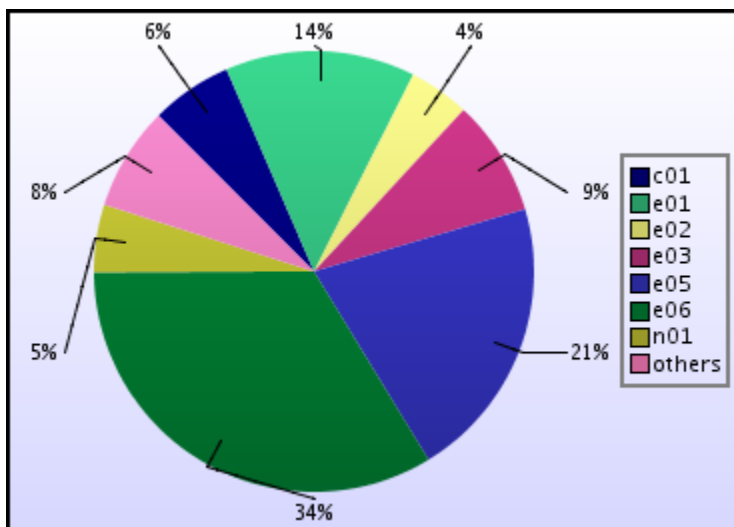
- The updated User Guide was ready in advance of the start of service on the Phase 2 system; the value of this was demonstrated by the lack of additional queries on the Phase 2 system. We also produced 6 technical reports this quarter on topics including the performance of the new switch and the tape archive.
- Most user applications have been ported successfully to Phase 2 and many of these have already received initial performance tuning. Significant improvements have been made to a number of codes including LUDWIG, GAMESS-UK and CASTEP. As shown by the user benchmarks, many users are indeed seeing a factor-of-two performance improvement over Phase 1.

## 2 Utilisation

### 2.1 By Job Size



### 2.2 By Consortium



### 3 Performance Metrics

<i>Metric</i>	<i>TSL</i>	<i>FSL</i>	<i>January</i>	<i>February</i>	<i>March</i>
Technology serviceability	80%	99.2%	100.0%	98.4%	98.0%
Technology MTBF (hours)	200	300	∞	244.0	366.0
Number of AV FTEs	7.5	10	13.9	13.0	15.5
Number of training days per month	30/12	40/12	16/4	21/5	22/6
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	5.8	5.8	6.0
A&M serviceability	80%	100%	100.0%	100.0%	99.3%

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

*Note:* The number of training days is reported as a running total since the start of the year.