

HPCx Quarterly Report

October - December 2005

1 Introduction

This report covers the period from 1 October 2005 at 0800 to 1 January 2006 at 0800.

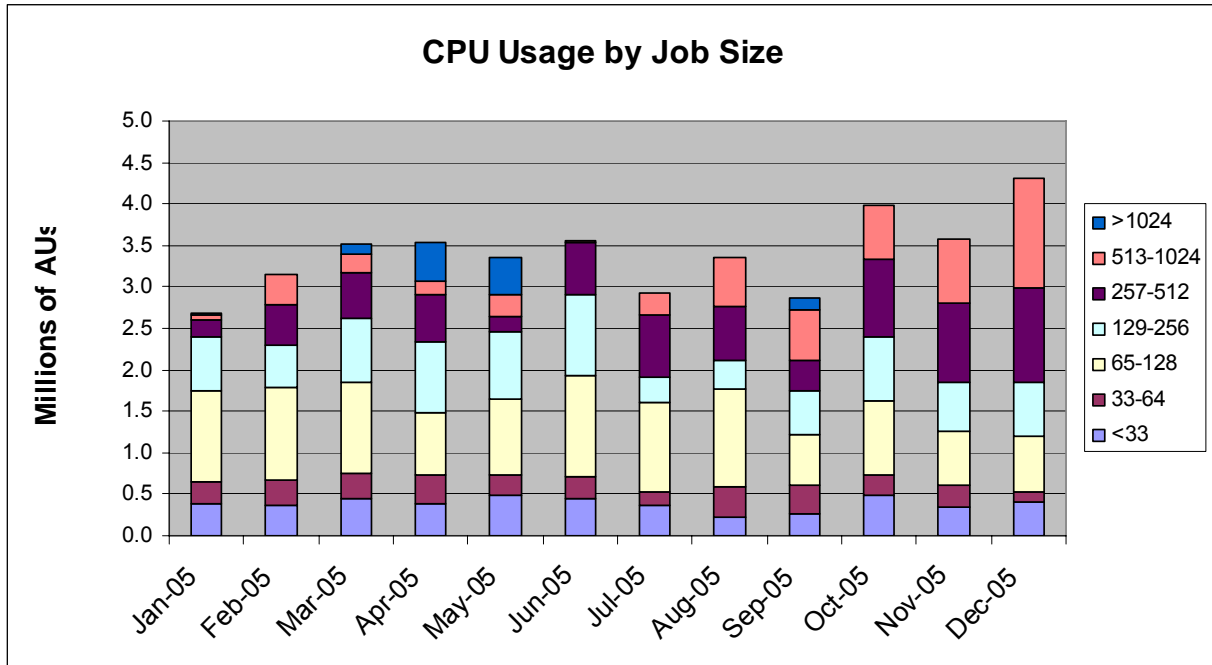
2 Executive Summary

- The Phase 2A upgrade to Power 5 technology went well with less than 48 hours downtime to switch over the service. This was the result of careful planning and hard work by both IBM and the HPCx Systems team. While there were a number of failures subsequent to the upgrade, we are confident that these were due to teething problems that have now been resolved.
- Usage on the system has remained high throughout the quarter; October was a record month for both utilisation and total AUs delivered. This has also been an excellent quarter for capability usage with both November and December being record months. In fact, December was the first month of the service where capability usage exceeded 50%.
- Usage by NERC users has been consistently high this quarter and usage by BBSRC users was particularly high in December.
- Only 1% of the non-indepth queries took longer than the allowed 72 hours.
- The target for training days was met by running five different courses this quarter, including a number of new or updated courses.
- The number of consortia remains high and we expect to be at or above the maximum of 40 during 1Q06; we will continue to monitor this over the next few months.
- QinetiQ completed a security audit of the HPCx system, which identified a number of issues, although the overall security level was good. This was followed by an internal security re-assessment in light of the findings.

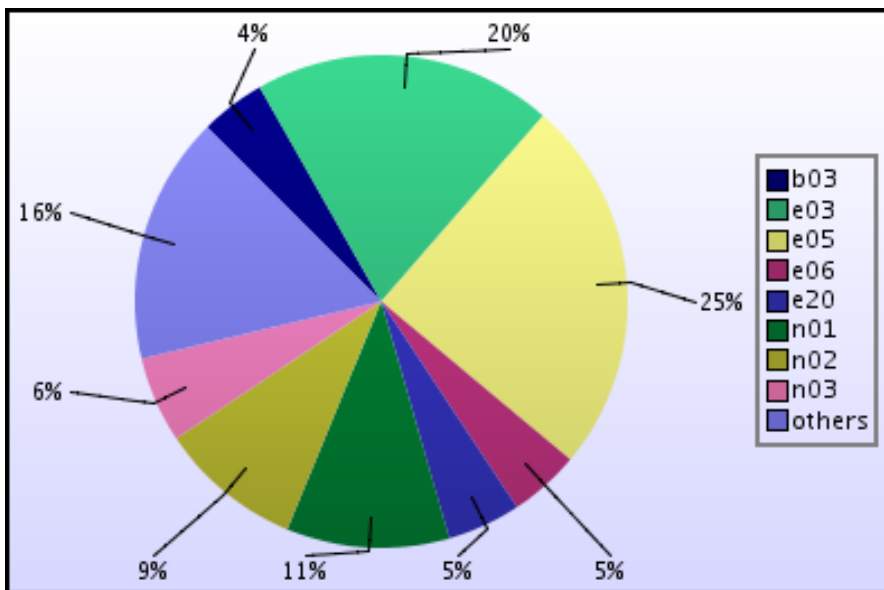
- HPCx had a significant presence at SC05 where we had a display, coordinated between the EPCC and Daresbury research booths, which highlighted the capability science being done in the UK. We provided significant support for the SPICE project that won the HPC Analytics Challenge.
- We also ran a well-attended workshop on Environmental Engineering during November, which was aimed at raising awareness of the potential benefits of using the UK's high-end computing facilities and stimulating discussion between leading research groups in this broad area.
- The HPCx Annual Seminar on *Capability Science on HPCx* was run at Daresbury, immediately before the Annual Machine Evaluation Workshop, and attracted a good audience. The final session included an HPCx User Group meeting.

3 Utilisation

3.1 By Job Size



3.2 By Consortium



4 Summary of Performance Metrics

<i>Metric</i>	<i>TSL</i>	<i>FSL</i>	<i>October</i>	<i>November</i>	<i>December</i>
Technology serviceability	80%	99.2%	100.0%	100.0%	98.3%
Technology MTBF (hours)	200	300	∞	∞	366
Number of AV FTEs	7.5	10	16.4	19.4	11.9
Number of training days per month	22.5/12	30/12	24/10	29/11	30/12
Non in-depth queries resolved within 3 days	85%	97%	98.9%	100.0%	97.2%
Number of A&M FTEs	3.75	5.75	6.0	6.7	5.4
A&M serviceability	80%	99.6%	100.0%	99.5%	97.7%

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

Note 1: The number of training days is reported as a running total since the start of the year.

Note 2: The above table includes the revised FSL targets for *training days* and *A&M serviceability*, which have been provisionally agreed with EPSRC.