

HPCx Quarterly Report

April – June 2006

1 Introduction

This report covers the period from 1 April 2006 at 0800 to 1 July 2006 at 0800.

2 Executive Summary

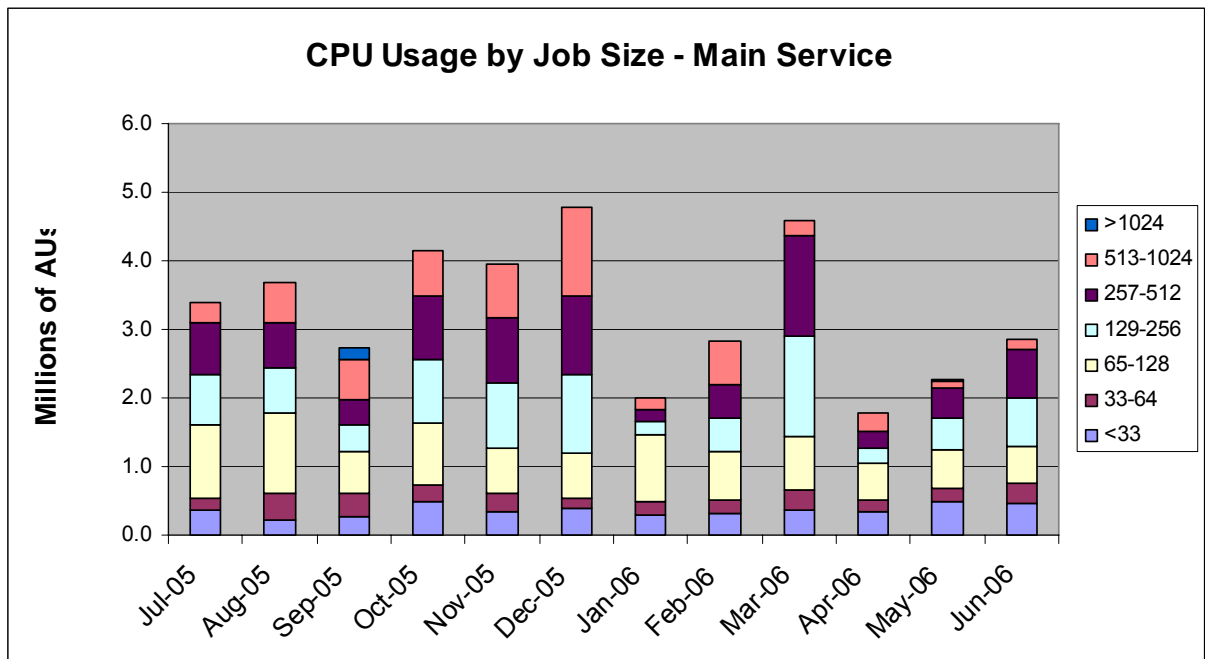
- The system continues to be reliable, with only four failures this quarter. Preparations for the upgrade to Phase 3 are still on track and IBM has carried out some preliminary work.
- Although there was a sharp fall in utilisation in April, it is recovering. Utilisation of the capacity region is very high; utilisation of the reserved development region continues to increase.
- Thanks to collaboration between IBM and HPCx staff, the Simultaneous Multi-Threading (SMT) facility of the POWER5 processors is now available to users. A technical report on this has been published.
- Following authorisation by EPSRC, twelve CSAR projects were moved to HPCx in the period leading up to the closure of the CSAR service. A joint workshop with CSAR was held in Manchester in May to help CSAR users make the transition.
- There are now 53 projects on HPCx, including the former CSAR projects, with another approved by EPSRC for access. This leaves one spare place within the new maximum of 55.
- Six courses were run this quarter over a total of 20 days. This now puts our training activity well ahead of the targets.
- We are continuing to progress well against the Key Objectives in the Annual Plan. Another capability incentive was awarded. Six out of ten Technical Reports planned for the year have been completed. We met all the helpdesk targets and performance metrics continue to be good.

- David Henty's talk at the Edinburgh International Science Festival, *Supercomputing: Rise of the Machines*, which strongly featured HPCx, was well attended.
- The latest edition of *Capability Computing* is being mailed to nearly 4,000 people and is available online. A meeting of the User Group was held via Access Grid, with 11 users taking part; topics included SMT.
- This year's annual conference, *Moving Science Forward*, will take place in the National e-Science Centre in Edinburgh on 4 October and a number of speakers have already been confirmed. A workshop on Materials Modelling will be held on the preceding day, also in Edinburgh.
- The number of packages and libraries supported is now approaching 60.
- We have enhanced our support for Grid middleware, allowing users of Globus to run MPI programs as metacomputing jobs across multiple sites --- a Technical Report has been published discussing this.

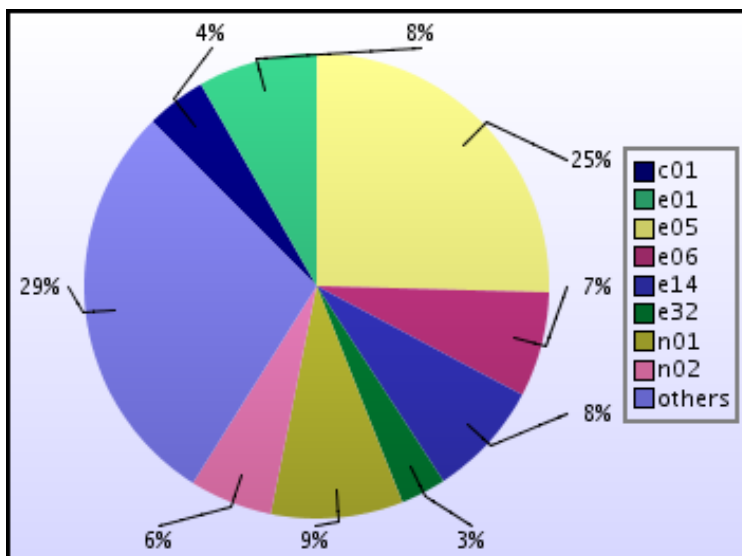
3 Utilisation

Main Service

3.1.1 By Job Size

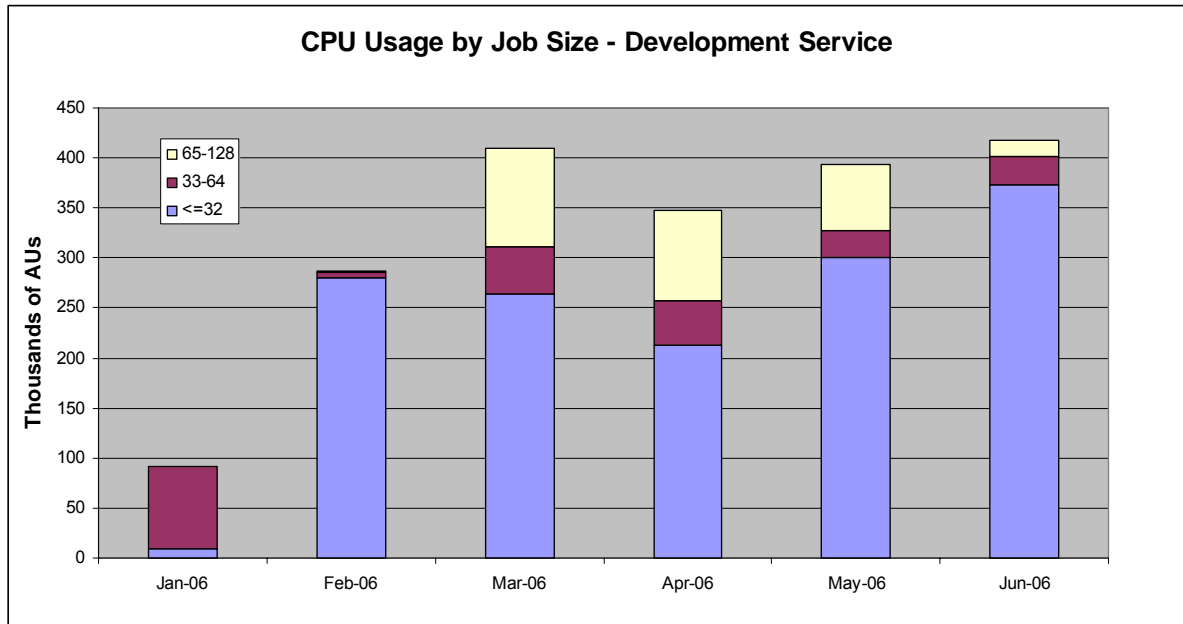


3.1.2 By Consortium

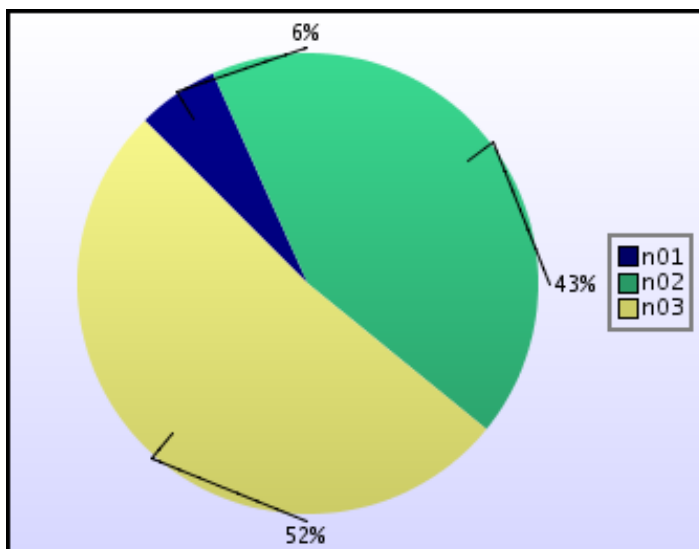


Development Service

3.1.3 By Job Size



3.1.4 By Consortium



4 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%	99.7%	99.3%	100.0%
Technology MTBF (hours)	200	300	732	732	∞
Number of AV FTEs	7.5	10	11.8	13.1	12.8
Number of training days per month	22.5/12	30/12	7/4	20/5	20/6
Non in-depth queries resolved within 3 days	85%	97%	98.6%	100.0%	99.1%
Number of A&M FTEs	3.75	5.75	5.2	6.2	5.8
A&M serviceability	80%	99.6%	100.0%	100.0%	100.0%

<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.