HPSC

High Performance Scientific Computing

Vector systems – installed and running

The SX-6 systems are fully installed and have now entered acceptance testing. They are expected to become available for general CSIRO use by the end of March.

The SX-5 systems will continue until about May and will then be decommissioned. HPSC would like users to migrate during April as an early shutdown of the SX-5s will shorten the period during which we bear the cost of running two large scale computer systems in two different buildings.

A training day for CSIRO SX-6 users is available on 29th March in Melbourne, contact Len.

Data store – goes live

All the pieces pictured last month are now assembled and operational, together with a small SGI Altix front end. The "data" was successfully moved on the weekend of the 21st of February and the system went live the following Monday.

Some problems were encountered but these related to other changes introduced at the same time.

All new HPSC systems will use Nexus authentication. The old HPCCC accounts will discontinue as the SX-5's phase out.

Unfortunately this means that many of the scripts developed over the last decade or so suddenly had to be updated.

In addition, while the new Altix goes by the same name as the old Datastore front end (Cherax) it does have a different IP number – we discovered that many routers and firewalls needed to be updated to allow access to the system.

Finally, all data was migrated out of the caches prior to the transfer. As a result, access times are longer than expected as all data comes from tape. We expect significant reductions in retrieval times as the new 4 Tbyte disk cache fills with data over the next few weeks.

Clusters – Workshop

As the HPSC intends to acquire a large cluster for general use, we are sponsoring a 'cluster' workshop on 30th March in Melbourne. Some divisions now have several years relevant experience in operating clusters, and the aim of the workshop is to bring together that wisdom to share best practice in acquiring, using, supporting, sharing and continuously upgrading clusters.

March 2004

The workshop is intended to benefit existing cluster owners and those, like the HPSC, that intend to buy and operate a cluster for science computing. All interested staff are welcome, and HPSC will support the travel costs of one person associated with each existing cluster or division with an interest in cluster facilities. Contact Erika should you wish to attend.

MSC Software Licence Scheme

One of the global trends in software is a move away from bespoke programming to a greater use of packages. This is true in general and increasingly true in scientific computing. Consequently, HPSC is negotiating with MSC software (http://www.mscsoftware.com/) for a CSIRO wide commercial licence for MSC applications (eg. NASTRAN) to be available for all CSIRO staff.

The arrangement proposes a volume (ie user cap) limit implemented through a licence server. Essentially HPSC can buy a set of licence tokens, and users then need to be granted the number of tokens required to execute specific software. Each package has its own token cost, and parallel use of an application usually requires further tokens. While the tokens would be granted centrally, the MSC applications could be installed and run anywhere in CSIRO.

While very significant savings are available through this scheme, we need to asses the level of interest in the variety of MSC applications. To express your interest, please contact Len.

Scientific DeskTOP – New Staff

The development of a downloadable tool to support single-signon and seamless access to HPSC facilities continues with King Chiu joining our implementation team. While providing general development support, King will particularly focus in security and authentication.

In addition, Gareth is now the Scientific DeskTOP project leader and would welcome input from those interested in its development; in particular we are looking for willing beta testers.

HPSC Seminar

Guy Robinson, formerly of the Arctic Region Supercomputing Centre will be visiting HPSC on Tuesday 9th March, and will give a seminar at 2:30pm, at the Victorian Partnership of Advanced Computing, 110 Victoria Street Carlton South, VIC.

He will speak on the current state of the art in high performance computing and what is needed for computers to be a productive part of the research process. Discussion points will include:
- Can a cluster be as productive as a classical supercomputer: what are the real differences?
- Is supercomputing all flops; are there other things to do with computers?
- What will the future supercomputing applications be, and what skills will users need?

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