

Local and Grid Computing Status

Group Meeting, 30th September, 2015
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Grid site running ATLAS, ALICE, LHCb and 10% other VO's

The Birmingham Tier 2 site hardware consists of:

- 1200 cores across 56 machines at two campus locations
- ~470 TB of disk, mostly reserved for ATLAS and ALICE
- Using some Tier 3 hardware to run Vac during slow periods

Status of the site:

- Some very old workers are starting to fail, still have plenty left
- Disks have been lasting surprisingly well, replacing less than expected

Future plans and upcoming changes:

- Replace CREAM and Torque/Maui with ARC and HTCondor
- Get some IPV6 address from central IT and start some tests

Over the last 6 months there have been a number of changes to the local system

The current state of what we have is below:

- Batch Cluster Farm, 8 nodes, 32 (logical) cores, 48GB per node
- 160TB 'New' Storage + 160TB 'Old' Storage
- Fedora 21 Desktops
- SL5 and SL6 images
- Two F21 login nodes
- Two Web servers
- DHCP, Mail and LDAP servers

Please let me know if anything is missing/not working or there's some software or service that you want!

General service changes in the last 12 months include:

- All system now under the Puppet cluster management software
- All machines upgraded to Fedora 21
- Transferred to new Home Area
- Setup up backup service
- Installed Lustre Distributed Files system
- Reinstalled DHCP and mail server
- Switched batch system to use Condor

Worker Nodes + Batch System

The workers purchased last year are working well. I have changed the batch system from Torque to Condor and have setup the cluster to accept jobs of ~any size, i.e. job slots are created dynamically when jobs come in and request the resources. This means you can run large jobs that take up a lot of memory but please specify only what you need so as not to hog resources!

Mass Storage

In the last 6 months I've introduced the Distributed File System 'Lustre' that covers the 160TB of 'New' storage. I can now add to this very easily and also keep track of quotas across the group. Find it at `/disk/lustre`

Backup System

There is now an automatic back service on the old home area disk that can be found at /disk/backupdisk/. Two backups are kept from the night before and two nights previous with a 2MB limit on the home areas. Two additional backups are kept of the previous weekend and the weekend before with a 50MB limit on the home area.

Windows Services

After discussion, I shifted those who were interested to using the Citrix server hosted by the Medical School and retired our old system

Home Area

With the installation of the new home area I also put in place quotas to ensure people didn't fill up the space and block other users. You get 60GB with a grace period of a week allowing up to 120GB use. This is negotiable :)

All logins are now authenticated remotely via LDAP (Thanks Matt!) and so you can now change your password at anytime from any machine using 'passwd'

The mailing lists will remain as before but be automatically updated. This includes 'newstud' (PG) and 'st-plist' (UG) lists.

Accounts are now very easy to create at short notice. Temporary accounts will now have the tag 'userXXXX' and be unique

Leavers will now be under the new (and negotiable!) account policy:

- *After 6 months your account will be locked*
- *If you provide me with a forwarding address I'll keep this in place for 2 years*
- *After that, mails won't get forwarded but a bounce giving this address will be sent*
- *After 4 years, this will stop and your home area will be tarred up and archived*
- *Temporary accounts are locked after 3 months and archived after 6 months.*

Users will also be able to use the email addresses:

- <First Name>.<Last Name>@hep.ph.bham.ac.uk*
- <First Initial>.<Last Name>@hep.ph.bham.ac.uk*
- <All Initials>.<Last Name>@hep.ph.bham.ac.uk*