Cambridge Site Report

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Hardware (1)

Worker Nodes

Mix of hardware :

- DELL PE1950 (5150 @ 2.66GHz) (2007)
- Viglen HX2225i (E5420 @ 2.5GHz) (2008)
- SUN Fire X2270 (L5520 @ 2.25GHz) (2010)
- DELL PER410 (E5540 @ 2.5GHz) (2010)
- DELL PER410 (E5620 @ 2.4GHz) (2011)
- DELL PER410 (X5650 @ 2.66GHz) (2012)
- DELL PEC6220 (E5-2660 @ 2.2GHz) (2013)

Recent purchase of DELL PEC6220 (4 M'Boards in 2U – 64 cores in total) was with group funds

Now have 204 CPU cores in 21 servers

Provides 645660 SI2K = 2583 HS06

Running SL5/EMI-2

Hardware (2)

Storage

Pool nodes are again a mix of hardware:

- Viglen HS216a (2007)
- Viglen HS316i (2008)
- Viglen HS224a (2009 and 2010)
- Viglen HX425S-36i (2011)
- DELL PER510 (2012)

All running SL5/EMI-2 (DPM 1.8.6-3)

Total of 278TiB available

So far have been able to manage a smooth and gradual decommissioning of 2007 kit

Hardware (3)

Service Nodes

SE on bare metal PE1950: SL5/EMI-2 (DPM 1.8.6-3). WebDAV and xrootd have been enabled and appear to work as far as I can tell.

perfSonar on PER610 (part of DRI purchase).

Other service nodes on VMs (underlying servers are PER410 or PER610).

Most service nodes running SL5/EMI-2.

Main exception is Site BDII, which is SL6/EMI-2.

ARGUS Server, which is installed but not yet in production, is also SL6/EMI-2.

Hardware (4)

Network

10Gbps local backbone (courtesy DRI).

Most of storage, perfSonar server and latest service VM server connected at 10Gbps

WNs only at 1Gbps at present.

10Gbps connection to University backbone (CUDN) (no throttling!).

CUDN backbone is 10Gbps with fully-redundant mesh.

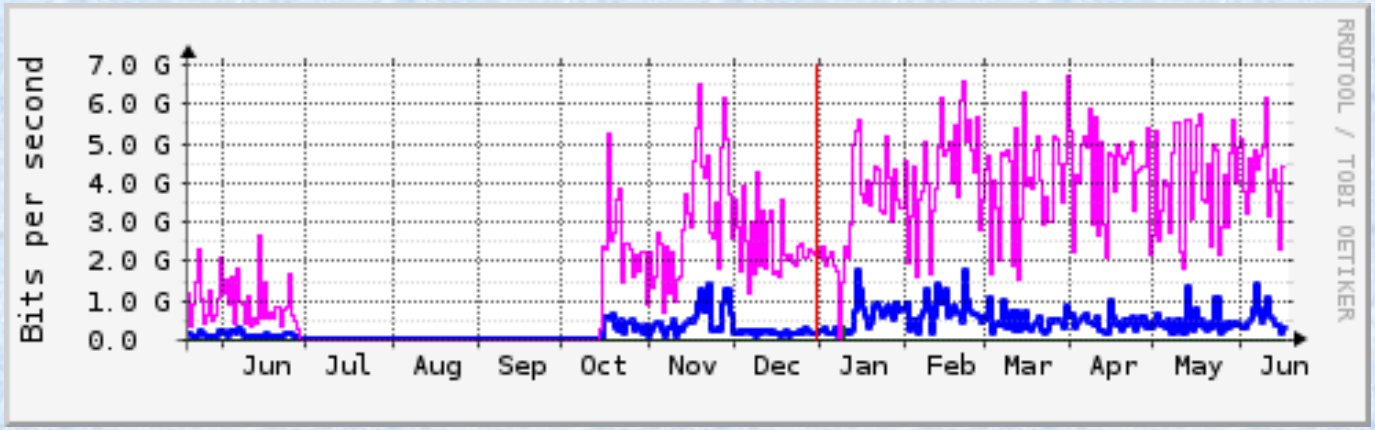
JANET connection is 10Gbps (with a second 10Gbps link acting as fallback).

This summer – plan to upgrade to 20Gbps (via 2x10Gbps bonded).

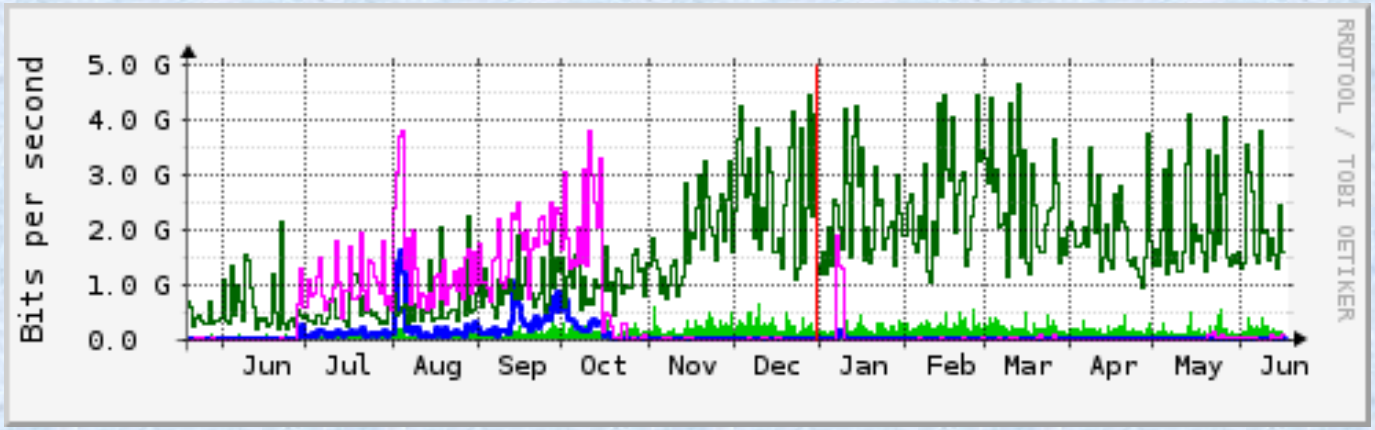
Also this summer – Computing Service moving to West Cambridge (and the main JANET connection is moving with it).

Network Traffic to/from site

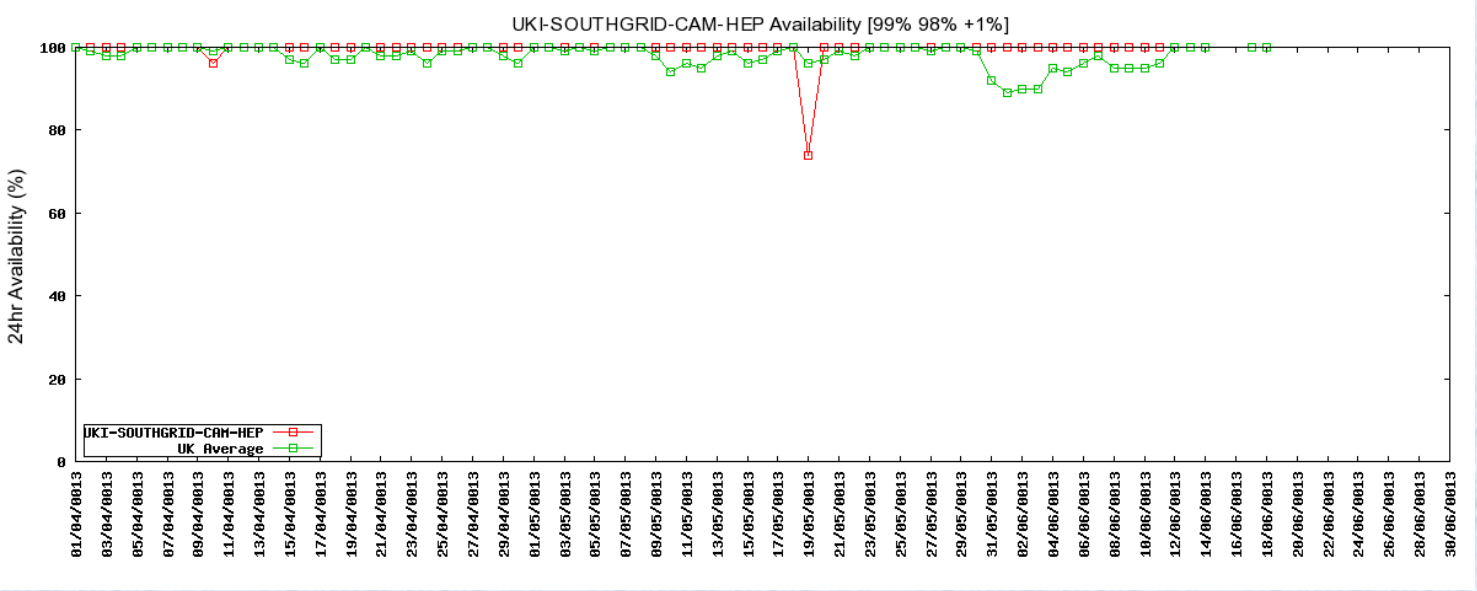
Incoming

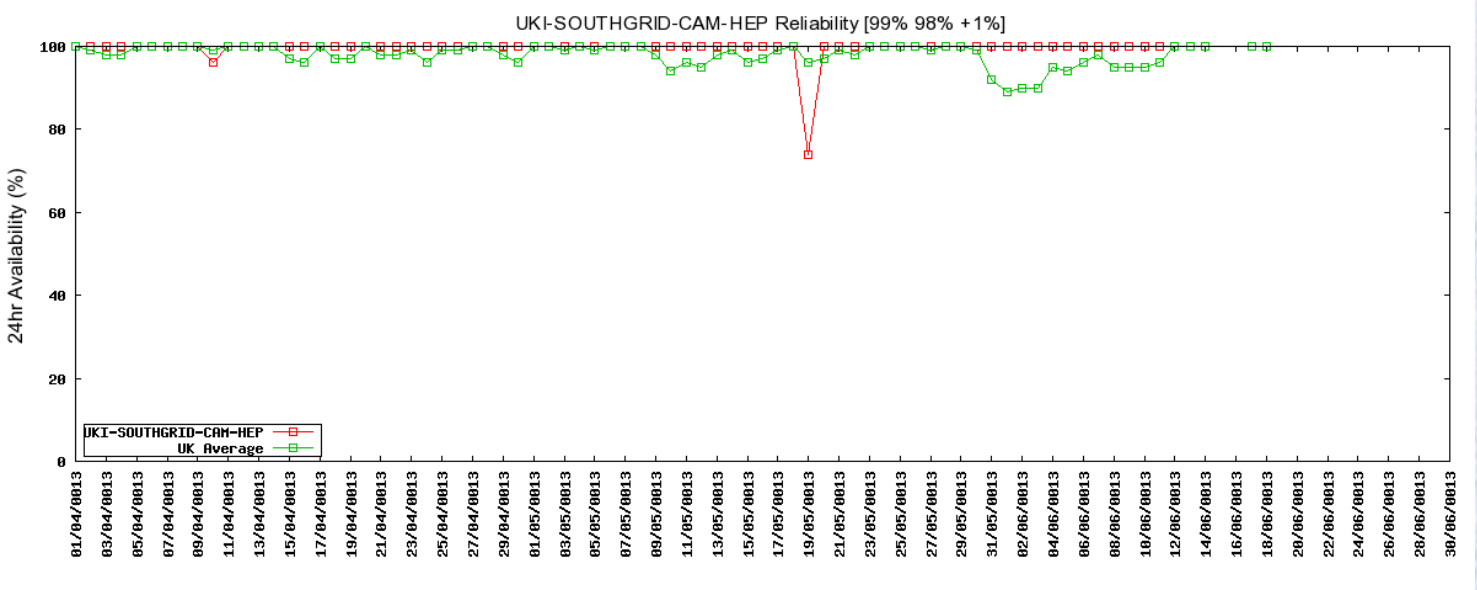


Outgoing



Recent Availability/Reliability





Miscellaneous

VOs

Mainly support ATLAS and LHCb

Also have local “camont” VO:

In the past this supported Camtology and Imense

In the future it might support either or both of the two “older” projects in Computational Radiotherapy the group is involved in: VoxTox and Accel-RT

We also now have some involvement (via Frederic Brochu) in a related project called GHOST (Geant Human Oncology Simulation Tool). The use of CamGrid is being actively investigated - GridPP might be looked at as well.

Also might support ILC VO in future – we have an active local user working on SiW calorimeter simulations who is interested in using the GRID

Staff

Currently 0.5 FTE GridPP funding – used to part-fund me

I’m the only Cambridge person supporting GRID work at present

Future Plans

Upgrade to SL6/EMI-3 when the dust created by the early adopters has settled a little. Also move to using ARGUS/gLExec at the same time.
Already using puppet (set up by Santanu just before he left) to configure and maintain GRID nodes – will need to understand whether what he has set up is appropriate for configuring GRID software as well, or whether it is better to start again from scratch.

Andy Parker becomes Head of Department on 1 August – I don't **expect** this to have an impact on our commitment to GridPP though.

The University is planning to build a new Data Centre on the West Cambridge site (currently scheduled for completion ~end-2014). There will be a lot of pressure on departments to move computing equipment into here – it is already essentially impossible to have an "official" computer room in any new building.

Issues

Obvious manpower questions beyond GridPP4.
If no manpower support in GridPP5 then would **try** to find resources from the consolidated grant (there is no other obvious source at present).
If no or little equipment support in GridPP5 then situation becomes more difficult – we wouldn't wish to put in significant group funds if GridPP5 wasn't prepared to support us financially.

Site-wide power cut to deal with on 20 July.

Computing Service move **may** cause disruption, especially as the primary JANET connection has to move a couple of km. On the positive side, they are moving about 250m away from us (into the old Microsoft Research building). In a sane world, of course, they wouldn't move until the Data Centre was ready…