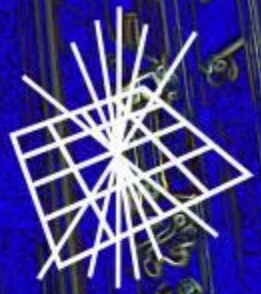

GridPP

UK Computing for Particle Physics

Tier-2 Site Survey

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April 2017

Object of the exercise

- Try to establish the level of interaction between the Grid Tier-2 clusters and other computing infrastructures at sites such as Tier-3 or University wide services.

Batch Systems in Use on Grid Clusters

- ARC + HTCondor — 8 sites with 2 testing
- CREAM + SGE — 3 sites (Various types of Grid Engine)
- CREAM + Torque — 3 sites (2 testing ARC/HTCondor 1 VAC)
- ARC + SLURM — 1 site
- CREAM + SLURM — 1 site
- ARC + SGE — 1 site

Is the batch system shared?

- Can jobs be submitted without the Grid CE?

- NO – 11 sites (2 sites occasional other access)
- YES – 6 (4 are part of a University High End computing facility)

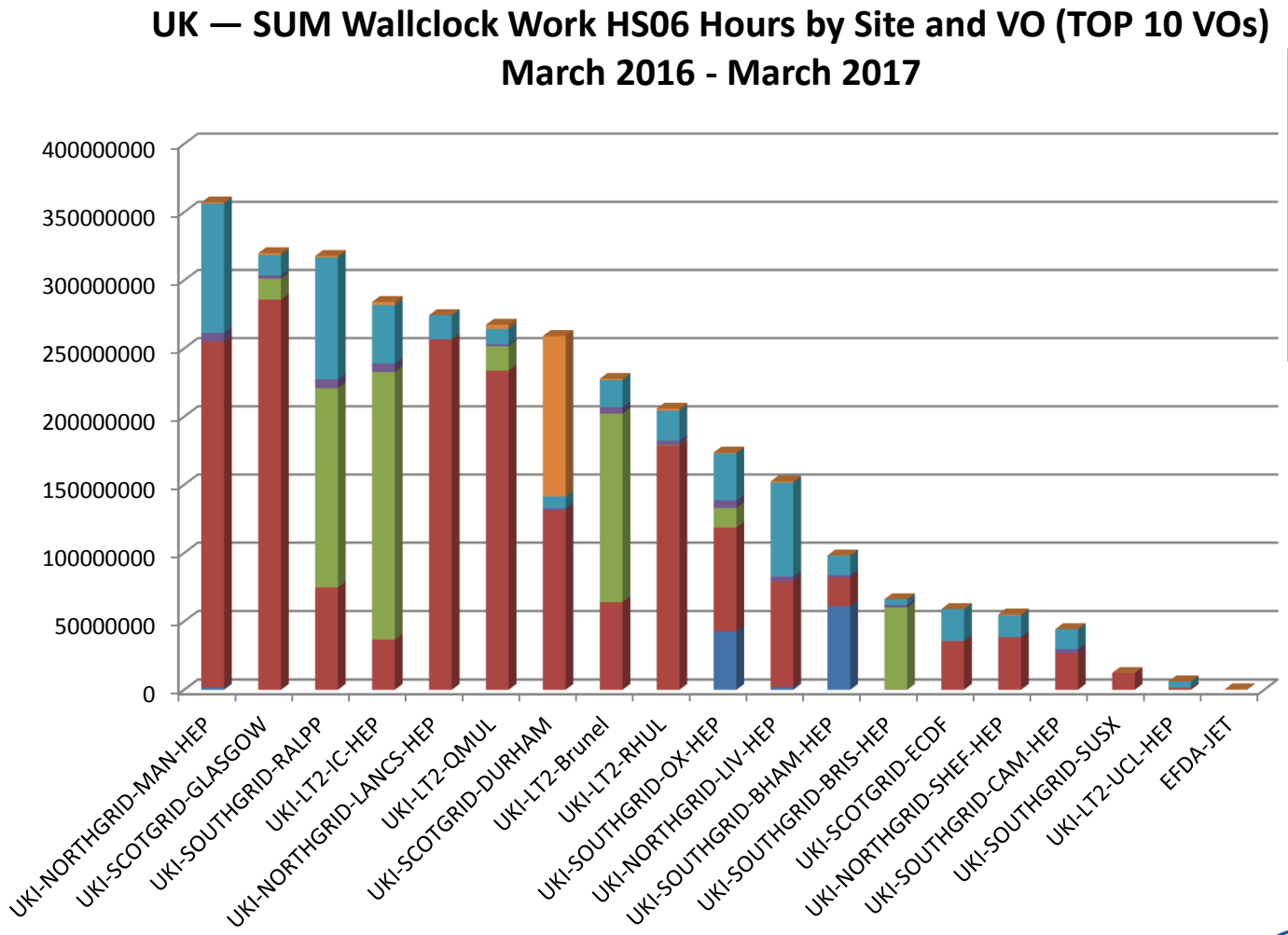
Shared File system

- NO – 9 sites
- YES – 8 sites (2 Lustre, 5 NFS, 1 NFS + dcache)

Top non-LHC or GridPP DIRAC VOs supported (CPU)

- ILC – 14 sites
- Biomed – 9 sites
- Pheno – 8 sites
- Dune – 3 sites
- T2k – 3 sites
- SNO+ - 3 sites
- IceCube – 2 sites
- Na62 – 2 sites
- LZ – 2 sites
- Mice, CEPC, enmr, uboone – mentioned by 1 site each

Usage by top 10 VOs over the last year by site



SNO+	0.55%
Dune	0.51%
Bio	0.36%
GridPP	0.34%
LZ	0.55%

April 2016

Storage System

- DPM – 12 sites
- dcache – 2 sites
- StoRM – 2 sites (the Lustre sites)
- Dmlite+ HDFS – 1 site

Non-LHC Storage supported

- VO's listed as having storage
- T2k – 5 sites
- SNO+ - 5 sites
- Bio – 4 sites
- Pheno – 2 sites
- ILC – 2 sites
- Comet, DUNE, Hyper-k, LSST, LZ, NA62 - 1 site each

- From Q416 Quarterly reports
- Total Non-LHC storage was 5% of total ~20PB ie ~1PB

Access to the SE for local storage

- YES – 11 sites
- NO – 6 sites

Conclusions

- A very diverse set of responses across the 17 sites.
- No set pattern across large sites vs small sites

- There are favourites for batch system and SE, ie HTCondor/ARC and DPM
- However site preferences and compatibility with other university services may well prevent greater commonality.

- https://www.gridpp.ac.uk/wiki/GridPP5_Tier2_plans