# UKI-SouthGrid Overview
# Face-2-Face Meeting

Pete Gronbech
SouthGrid Technical Coordinator
Oxford
June 2013

| | EFDA JET | | | Birmingham | | | Bristol | | | Cambridge | | | Oxford | | | RALPP | | | Sussex | | | Overall | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current | Q-2 | Q-1 | Current |
| % of promised (by that time) disk available to GridPP | 55% | 55% | 7% | 96% | 96% | 112% | 114% | 122% | 121% | 233% | 233% | 200% | 176% | 176% | 154% | 152% | 152% | 146% | #DIV/0! | #DIV/0! | #DIV/0! | 152% | 155% | 147% |
| % of promised (by that time) CPU available | 1067% | 1067% | 1049% | 186% | 186% | 190% | 136% | 136% | 139% | 335% | 335% | 210% | 350% | 350% | 349% | 262% | 262% | 261% | #DIV/0! | #DIV/0! | #DIV/0! | 276% | 276% | 272% |
| Average SAM (SLL page) availability performance over the last quarter | 100% | 100% | 100% | 93% | 98% | 100% | 91% | 98% | 100% | 90% | 97% | 99% | 97% | 99% | 100% | 94% | 99% | 100% | | 100% | 100% | 93% | 99% | 100% |
| Average SAM (SLL page) reliability performance over the last quarter | 100% | 100% | 100% | 93% | 98% | 100% | 91% | 98% | 100% | 92% | 97% | 99% | 97% | 99% | 100% | 94% | 99% | 100% | | 100% | 100% | 93% | 99% | 100% |
| Average SLL untargeted ATLAS test performance (UK test) | na | na | na | 48% | 69% | 64% | na | na | na | 90% | 100% | 100% | 93% | 96% | 99% | 84% | 96% | 90% | | | 100% | 79% | 90% | 88% |
| Approx. CPU utilisation (wall clock time) | 21% | 21% | 18% | 85% | 71% | 102% | 47% | 47% | 56% | 78% | 66% | 96% | 91% | 85% | 90% | 64% | 76% | 62% | 0% | 2% | 21% | 68% | 70% | 70% |
| Approx. CPU utilisation (CPU time) | 20% | 20% | 17% | 79% | 66% | 94% | 42% | 35% | 43% | 71% | 60% | 82% | 83% | 78% | 82% | 56% | 61% | 53% | 0% | 2% | 21% | 61% | 60% | 62% |

All sites except JET providing more than the GridPP MoU. As older kit is decommissioned at our larger sites we should be able to find the 20TB required at JET.
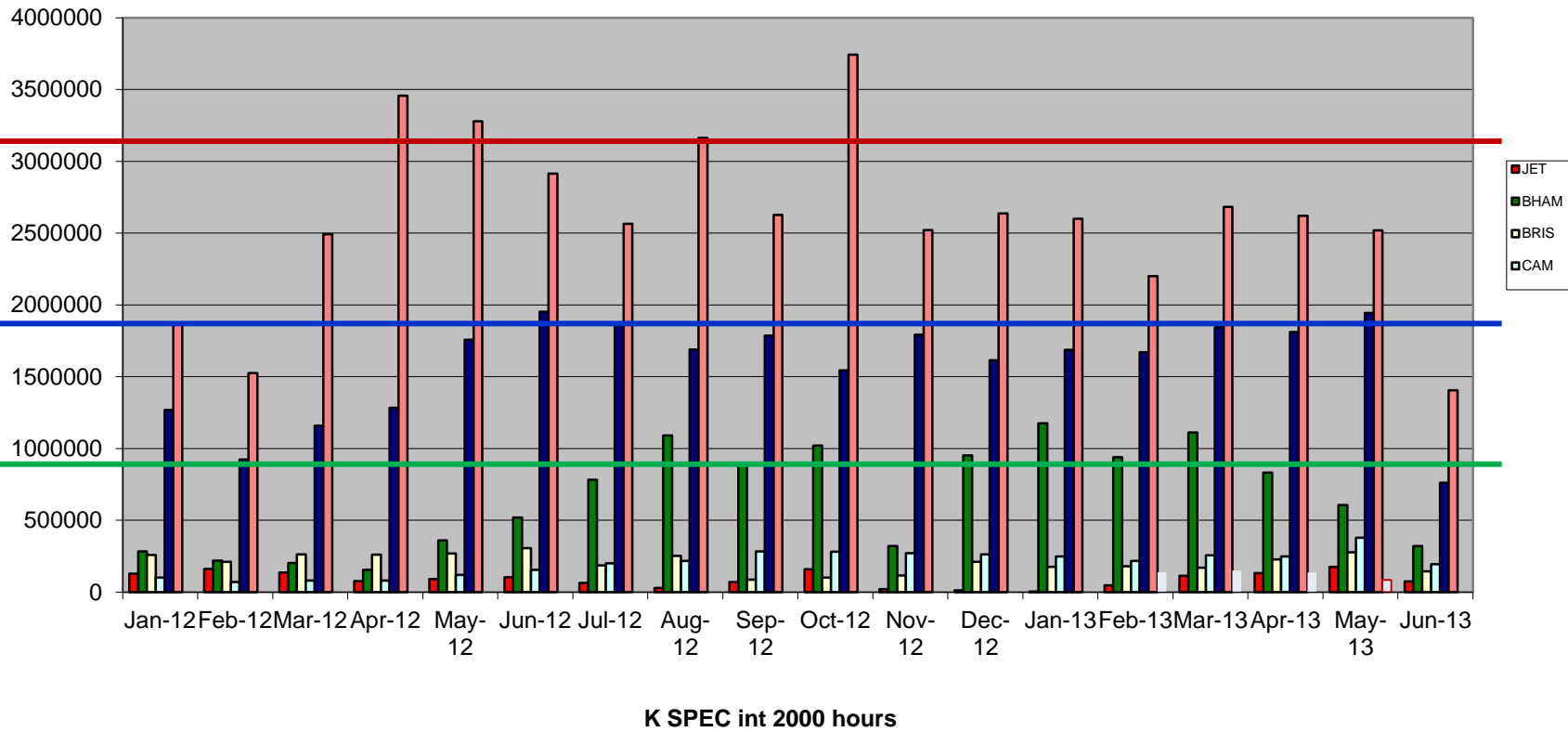
Availability/reliability now up to 100% - Great News.

CPU utilisation has improved, although low at JET and Sussex. Getting JET setup with CVMFS has helped with LHCb jobs. Atlas less willing to invest time at such a small site.
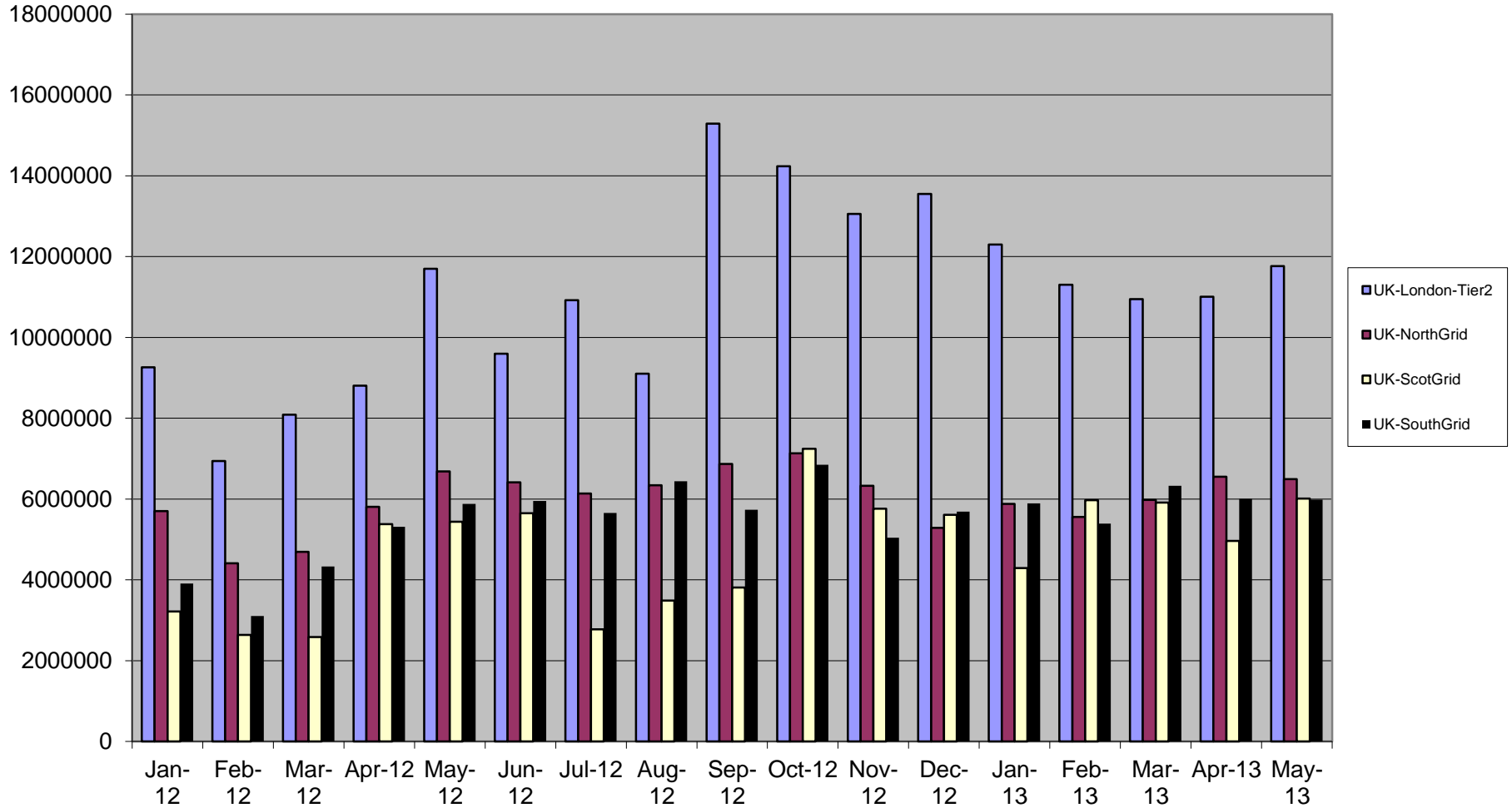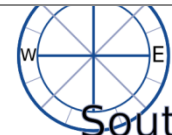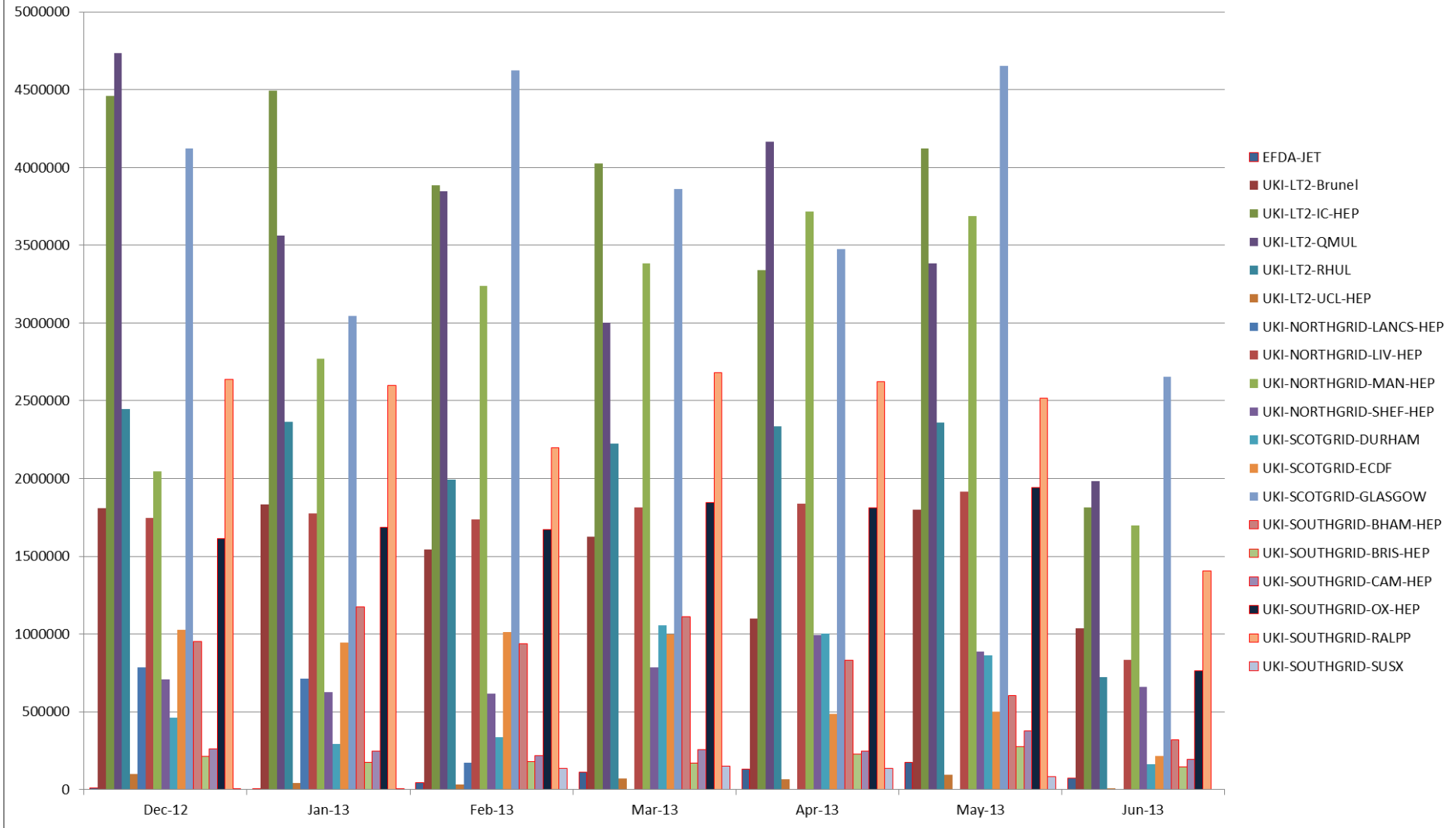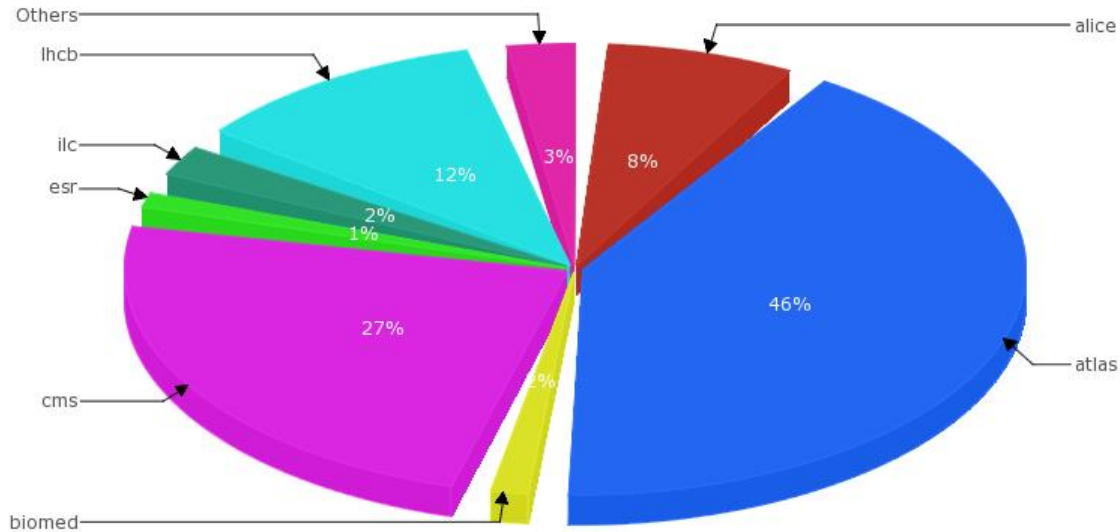
**GridPP** — UK Computing for Particle Physics



**K SPEC int 2000 hours**

**K SPEC int 2000 hours**

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GridPP
UK Computing for Particle Physics

Developed by CESGA 'EGI VIew': / normcpu / 2012:1-2013:6 / SITE-VO / all (x) / GRBAR-LIN / I

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UK-SouthGrid Normalised CPU time (kSI2K) per VO



Usage dominated by LHC VOs.

7% Non LHC

- Supported at Birmingham and Oxford
- Jobs done since the last accounting period ended.

# GridPP
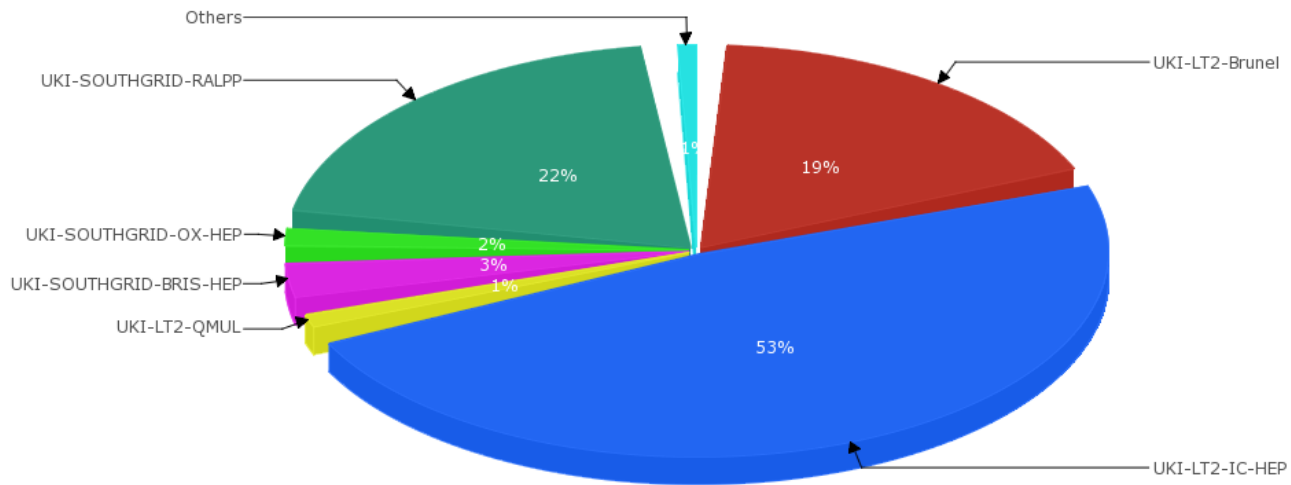UK Computing for Particle Physics

- Bristol is currently a CMS Tier-2
- Oxford is a CMS Tier-3



Developed by CESGA 'EGI View': / normcpu / 2011:11-2013:5 / SITE-DATE / custom (x) / GRBAR-LIN / I     2013-06-17 15:51

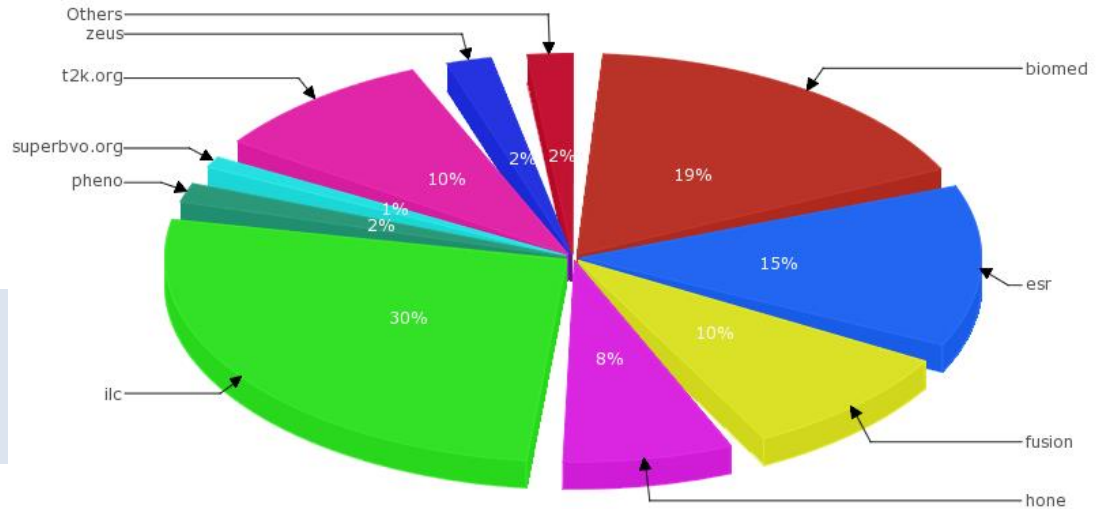UK Normalised CPU time (kSI2K) per SITE

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Developed by CESGA 'EGI View': / normcpu / 2012:1-2013:6 / SITE-VO / custom (x) / GRBAR-LIN / l

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UK-SouthGrid Normalised CPU time (kSI2K) per VO

A wide range of 'Other VOs'

Ilc and t2k increasing, Pheno down

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- The support of other VOs and in particular local interesting groups can be used as a good 'impact' story.

- Are there local groups at your site that would like to make use of some GridPP resources, possible for a short time, with a little support from us?

- The landslides VO at Bristol was a very good story but Michael Wallace has now left.

- In the past we had CAMONT too.

- VoxTox/Accel-RT?

- Neurogrid?

# Gridpp4 h/w generated MoU for 2012-14

## Q113 Resources

| Site | Total available to GridPP | |
|---|---|---|
| | HEPSPEC06 | Storage (TB) |
| EFDA JET | 1772 | 1.5 |
| Birmingham | 6276 | 315 |
| Bristol | 2247 | 117 |
| Cambridge | 1614 | 278 |
| Oxford | 11770 | 700 |
| RALPP | 25975 | 1260 |
| Sussex | 2500 | 60 |
| Totals | 52154 | 2731.5 |

| | 2012 TB | 2013 TB | 2014 TB |
|---|---|---|---|
| bham | 265 | 282 | 346 |
| bris | 96 | 96 | 116 |
| cam | 123 | 139 | 167 |
| ox | 409 | 456 | 549 |
| Jet | 19 | 21 | 26 |
| RALPPD | 830 | 862 | 1034 |
| | | | |
| Total | 1744 | 1857 | 2237 |
| | 2012 HS06 | 2013 HS06 | 2014 HS06 |
| bham | 3375 | 3305 | 4184 |
| bris | 1651 | 1619 | 1982 |
| cam | 730 | 770 | 949 |
| ox | 3287 | 3372 | 4173 |
| Jet | 166 | 169 | 208 |
| RALPPD | 10082 | 9959 | 12243 |

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**Year:** 2013

Note: Sorting by multiple columns at the same time can be activated by 'shift' clicking on the column headers which they want to add to the sort.   Hovering mouse over the column headers to get descriptions of table columns.

All Tiers | Tier 0 | Tier 1 | Tier 2

Search:

| Pledge Type ▲ | ALICE ⇕ | ATLAS ⇕ | CMS ⇕ | LHCb ⇕ | SUM ⇕ |
|---|---|---|---|---|---|
| CPU (HEP-SPEC06) | 188,000 | 350,000 | 350,000 | 46,000 | 934,000 |
| Disk (Tbytes) | 12,800 | 49,000 | 26,000 | 0 | 87,800 |

**Year:** 2014

Note: Sorting by multiple columns at the same time can be activated by 'shift' clicking on the column headers which they want to add to the sort.   Hovering mouse over the column headers to get descriptions of table columns.

All Tiers | Tier 0 | Tier 1 | Tier 2

Search:

| Pledge Type ▲ | ALICE ⇕ | ATLAS ⇕ | CMS ⇕ | LHCb ⇕ | SUM ⇕ |
|---|---|---|---|---|---|
| CPU (HEP-SPEC06) | 190,000 | 390,000 | 390,000 | 47,000 | 1,017,000 |
| Disk (Tbytes) | 12,800 | 49,000 | 27,000 | 0 | 88,800 |

**Year:** 2015

Note: Sorting by multiple columns at the same time can be activated by 'shift' clicking on the column headers which they want to add to the sort.   Hovering mouse over the column headers to get descriptions of table columns.

All Tiers | Tier 0 | Tier 1 | Tier 2

Search:

| Pledge Type ▲ | ALICE ⇕ | ATLAS ⇕ | CMS ⇕ | LHCb ⇕ | SUM ⇕ |
|---|---|---|---|---|---|
| CPU (HEP-SPEC06) | 200,000 | 522,000 | 500,000 | 47,000 | 1,269,000 |
| Disk (Tbytes) | 16,000 | 65,000 | 31,000 | 0 | 112,000 |

Showing 1 to 2 of 2 entries

- By 2015 need to replace obsolete and add new h/w to reach:
- Equivalent to up to 150% on CPU
- Equivalent to up to 133% on Disk

- Expected around April 2014; dependent on STFC guidance.

- This will be just in time to purchase storage required at Birmingham and our other sites, as older kit is phased out.

- Check the metrics page to see how you are doing.

- http://pprc.qmul.ac.uk/~lloyd/gridpp/metrics.html

- Remarkable few tickets which shows we are running our sites well….I hope.

- Jet – None

- Birmingham – None

- Bristol – None

- Cambridge – None

- Oxford - None

- RALPP - https://ggus.eu/ws/ticket_info.php?ticket=94886 A limited problem

- All sites upgraded from EMI 1 to EMI2
- All sites have CVMFS installed now.
- Overall SouthGrid performing at a comparable level to other Tier 2s
- All sites need to ensure that they are making optimum use of the resources they have. If the cluster is not 100% full it is a problem, there are always plenty of jobs out there.
  - Ganglia
  - Pbswebmon
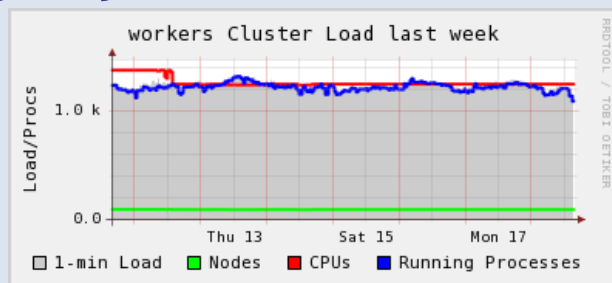


- New effort to migrate to SL6 during the summer.
- Renewed request to ensure glexec and argus installed.

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