

# Accounting Review LHCb Input

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Stefan Roiser for the LHCb Distributed Computing Team  
WLCG Operations Coordination  
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# Accounting Portal

- Information from the portal is used for the preparation of CRSG reports
- A tool to prepare plots for executed work will be useful

- Example for T1 sites below
- Similar plot for countries with the possibility to distinguish Tier levels would be also useful

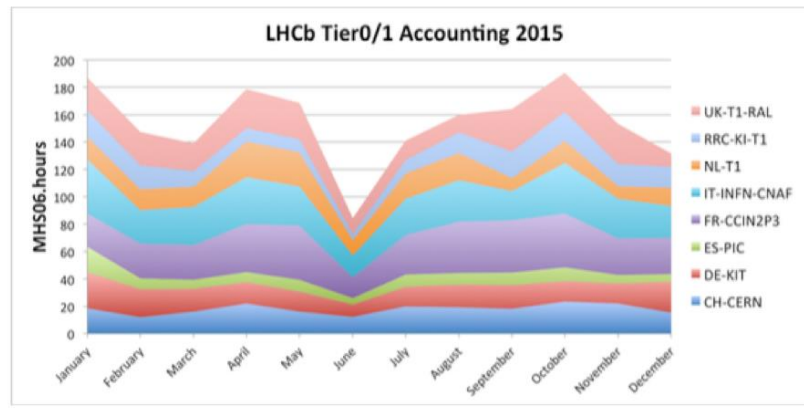


Figure 3-3: Monthly CPU work provided by the Tier1s (and Tier0) to LHCb from Jan 1<sup>st</sup> until December 31<sup>st</sup> 2015.

- Agree to move to “walltime corrected” HS06 work accounting (and pledges)
  - LHCb is measuring the CPU/walltime efficiency of executed payloads

# Accounting Reports

- Little use of Accounting Reports
  - used for cross checking availabilities

# Multicore Accounting

- Currently working on implementing multi-processing workflows therefore right now not applicable yet
- LHCb agrees to the proposal for “locked resources” from Pepe Flix in the Feb MB
  - multiply your walltime by the number of processors used for this payload execution

# Opportunistic Resources

- Currently usage of unpledged resources done in CRSG reports for HLT farm and other unpledged resources
  - Accounting data for both WLCG and other resources available from DIRAC

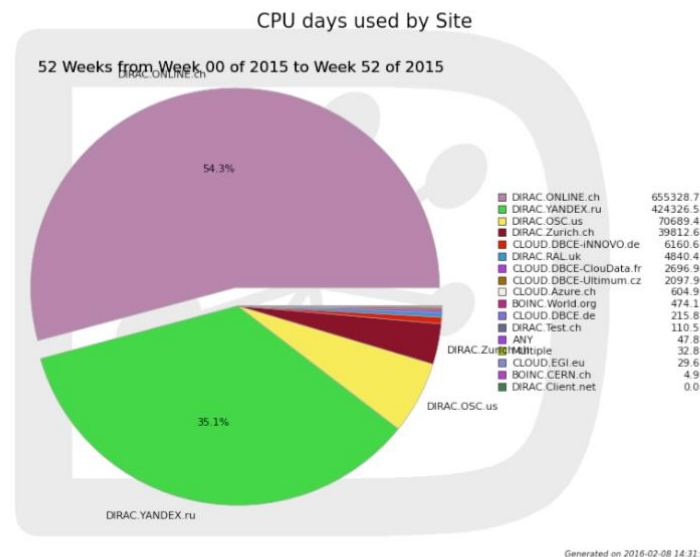


Figure 3-5: CPU time consumed by LHCb during Jan 1<sup>st</sup>—Dec 31<sup>st</sup> 2015 (in days), for WLCG sites, excluding the HLT farm (top, per country), and non-WLCG sites, including the HLT farm and commercial clouds (bottom, per site).

# Space Accounting

- Site disk space accounting currently done via srm/lcg-stmd
  - Accounting for free, used and total space
  - Used to be presented in SLS now in DIRAC
- LHCb uses its own replica catalog (DFC) to compare against the available resources from the accounting portal
  - More fine grained check – file level – possible (e.g. via HTTP Fed)
- Open to adopt replacements for SRM, any replacement needs to have
  - Unified interface across all storage technologies
  - Fast update cycle in order of hour(s)
- Useful to have tape accounting by sites in spans of months

# Rebus

- Storage
  - Using information of pledged resources
    - In addition to pledges information about single sites also aggregation by country
  - Less interested in installed and capacity available to the VO
    - Better be done “live” - see space accounting
- CPU
  - Rough comparison between pledged resources and executed work is done but not to the % level
  - In operations need to take into account different benchmarking and fare share mechanisms of sites.
- Request to provide aggregated pledges across federations in addition to individual sites