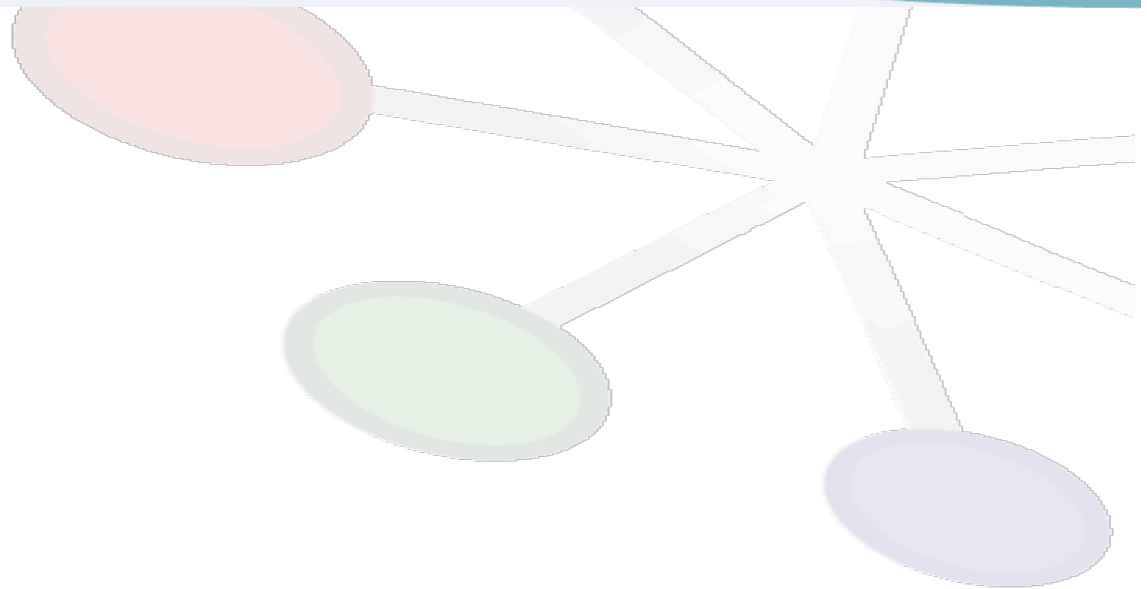




LHCb and Tier3s





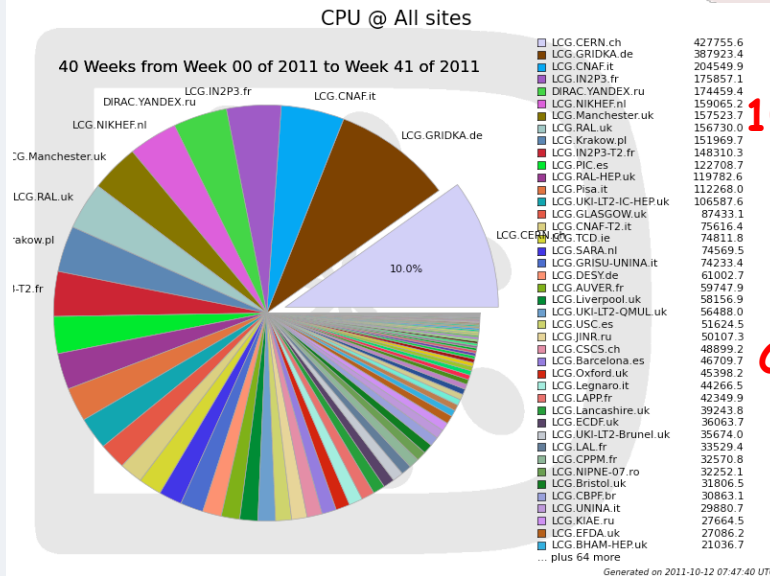
What is a Tier3?

1. Everything that is not a Tier0/1/2?
 2. Non-Grid site, i.e. local cluster with only local access?
- MONARC definition different from WLCG definition (none!)
 - Also depends on who one talks to
 - Various semantics strangeness:
 - Tier3 collocated with a Tier2/1/0
 - Tier2 collocated with a Tier1
 - Some "different Tiers" share the same storage
 - Some "different Tiers" even share the same WNs (!!)
 - In fact just different queues on the same "site"
 - Let's see how we use and handle the various cases in LHCb



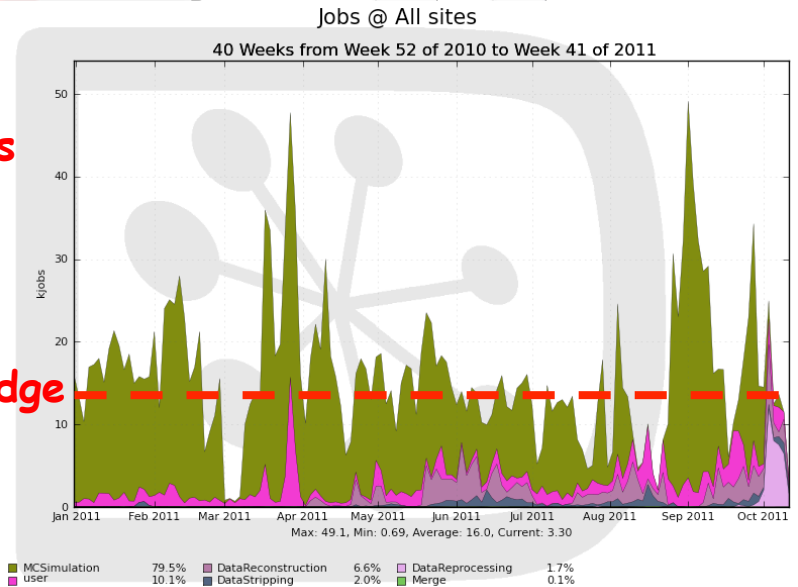
Sites that are not "official Tier2"

- i.e. those that did not sign the MoU and do not pledge formally resources
- We use them as any other site, very effective (see plot)
- Run MC Simulation jobs
- No disk requirement
- Output data upload to a Tier1
 - Tier1 association by country
 - E.g. German sites to KIT, Croatia assigned to Germany, therefore to KIT
- A few "non-Grid" sites (so-called DIRAC sites), i.e. no CE, pilot submission to the batch system



102 sites

CPU pledge





- Independent clusters, i.e. not located on the same site as a Grid site
 - Could possibly have an SRM-enabled storage (DPM)
 - LHCb provides tools for:
 - ☆ Distributing software
 - ☆ Replicating datasets (DIRAC DMS)
 - * Registered in LFC if SRM (easier, better bookkeeping)
 - * Local disk array otherwise
 - * Handled by the local team of physicists
- Special queues on the same cluster as a Grid site, reserved for local direct batch submission
 - Usually have access to the local Grid storage
 - ☆ Use directly replicated datasets
 - Also use the locally deployed (or CVMFS) software
 - Job submission using ganga to the local batch system
- Usually unknown to the central operations team
 - Only local SE registration in LHCb DIRAC configuration (if SRM)