



LHCb Computing planning Q3/Q4 2013

Joel Closier
Stefan Roiser

*On behalf of the LHCb Computing
Group*





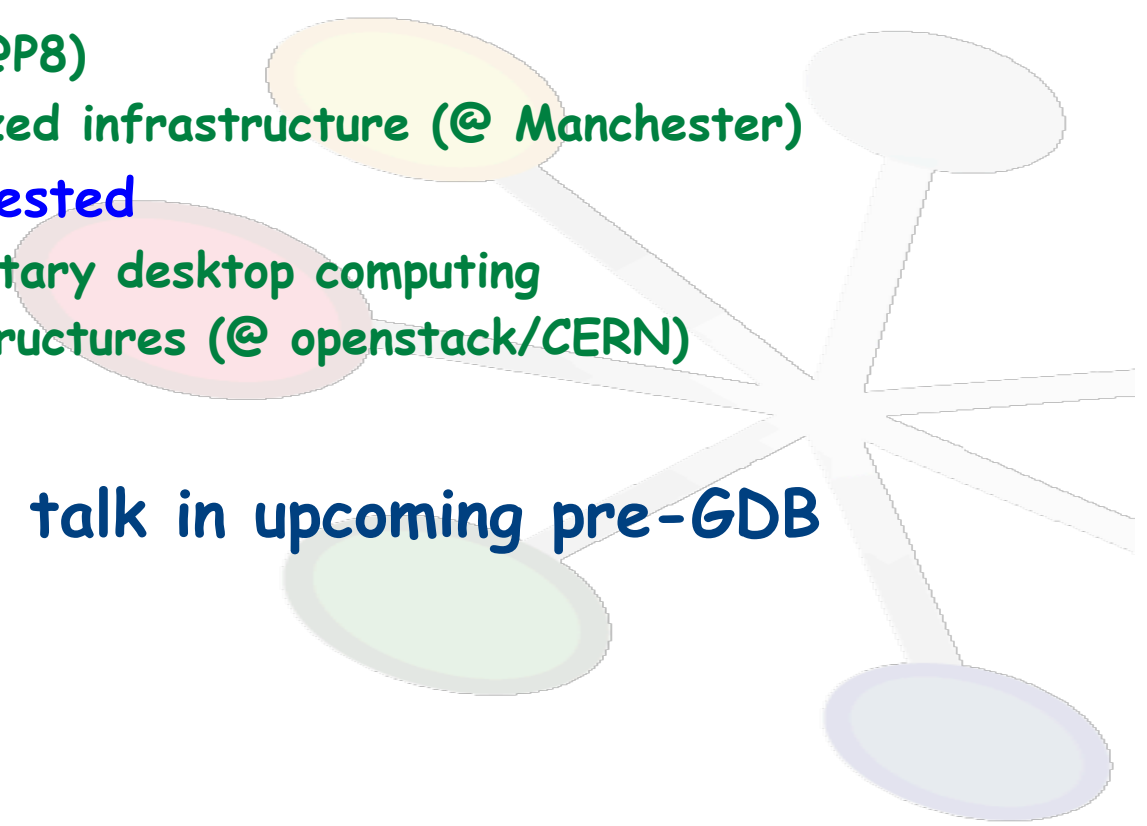
- Tier2Ds are a new concept in LHCb which also introduces disk only space at a limited set of Tier2 sites which subsequently will run user analysis jobs
- 3 sites provide already disk capacities and are currently in preparation (Manchester, RAL-HEP, CBPF)
 - Another 10 sites are possible candidates to become Tier2Ds





Use of additional resources

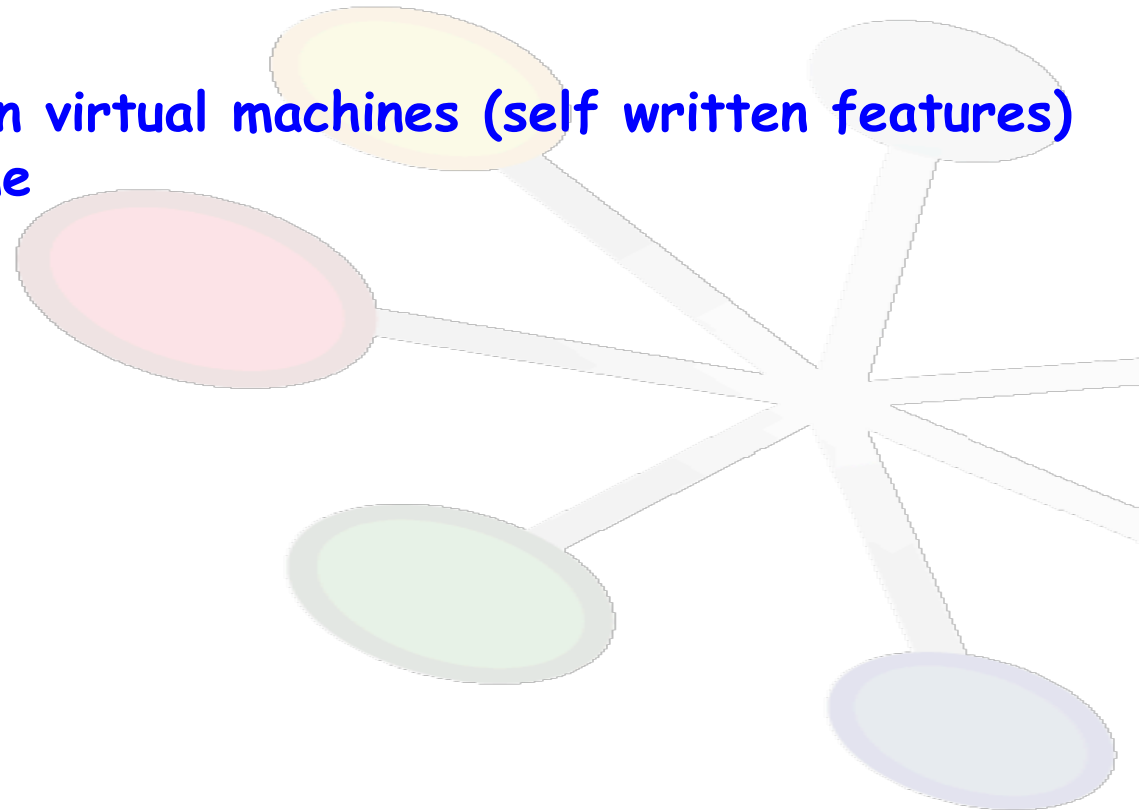
- In addition to batch systems LHCb is currently investigating interfacing to additional resources
 - In production
 - ☆ HLT farm (@P8)
 - ☆ VAC virtualized infrastructure (@ Manchester)
 - Successfully tested
 - ☆ BOINC voluntary desktop computing
 - ☆ IaaS infrastructures (@ openstack/CERN)
- Note: detailed talk in upcoming pre-GDB





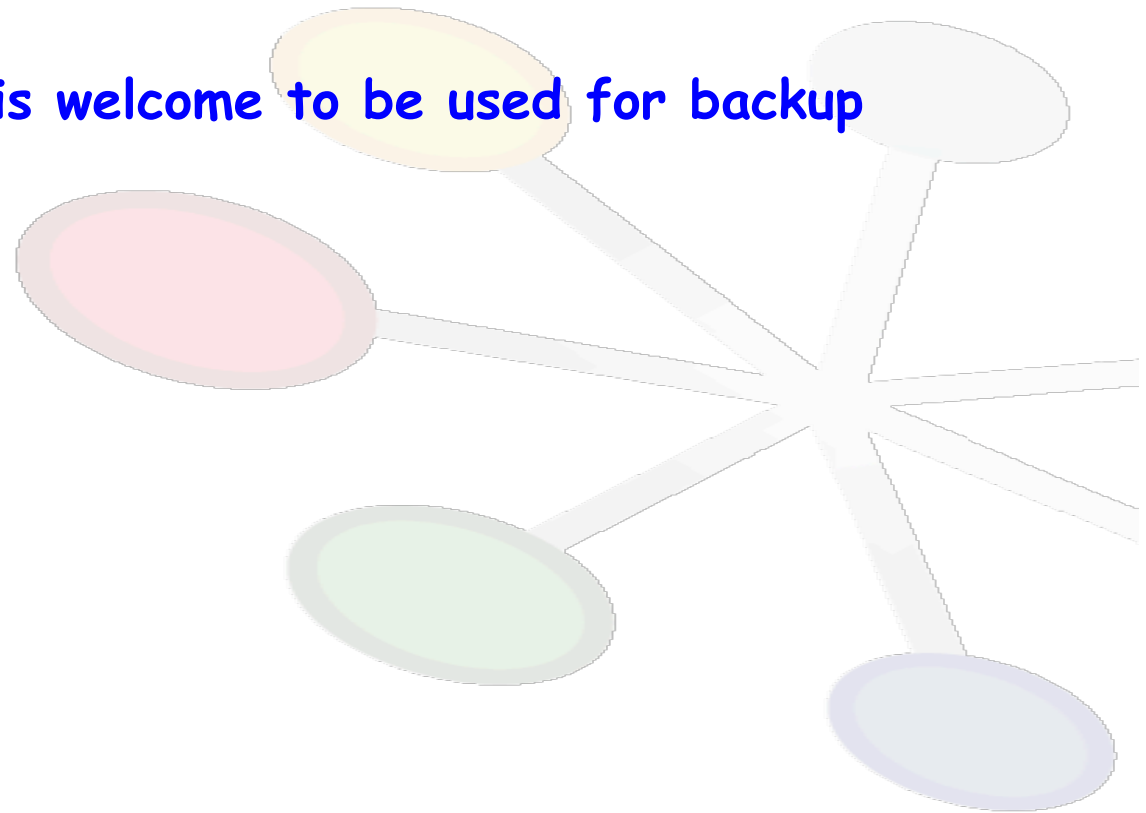
Machine features

- LHCb is interested in using machine/job features both in batch and virtualized environments
 - Some clarifications need to be done on the initial specification
 - Simple tests in virtual machines (self written features) have been done



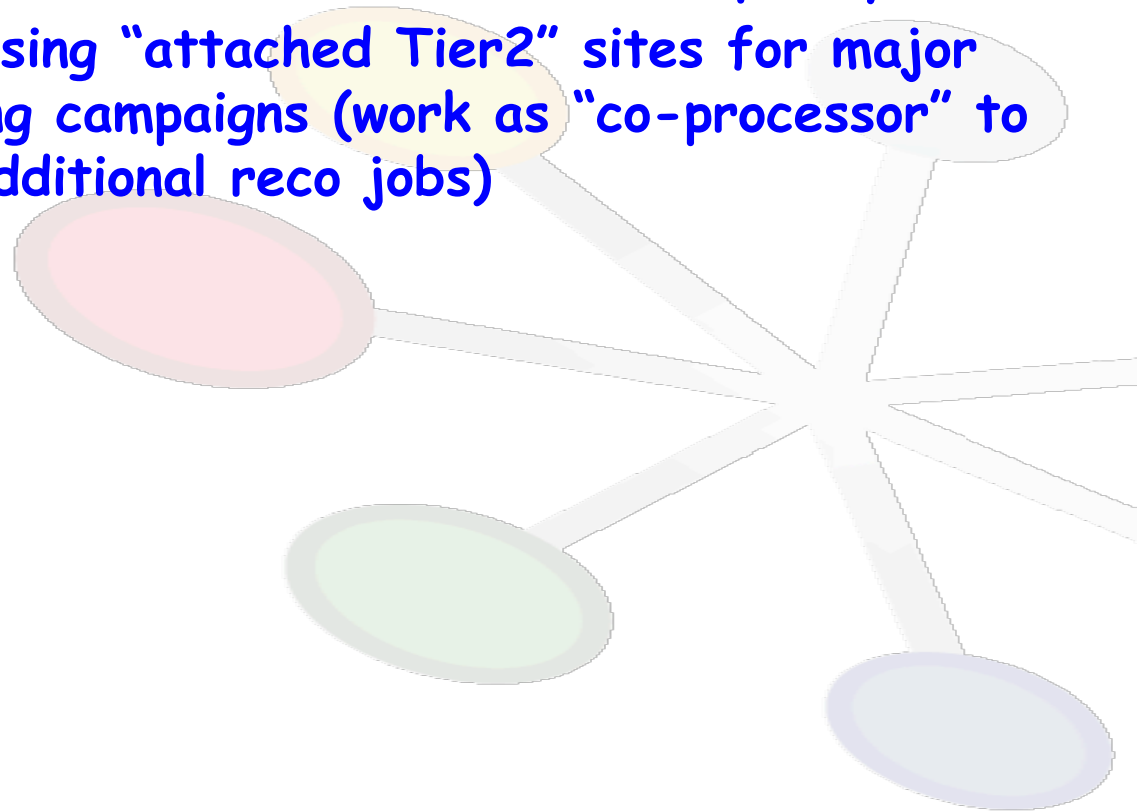


- First “channel” in use (in FTS2 mode)
 - Plan to move all transfers to FTS3 CERN instance progressively as soon as it is available as production instance
 - RAL instance is welcome to be used for backup





- Information on sites to monitor provided to the perfSonar task force
 - Will be used as a metric for Tier2D site quality
 - Used for choosing “attached Tier2” sites for major data processing campaigns (work as “co-processor” to execute eg. additional reco jobs)





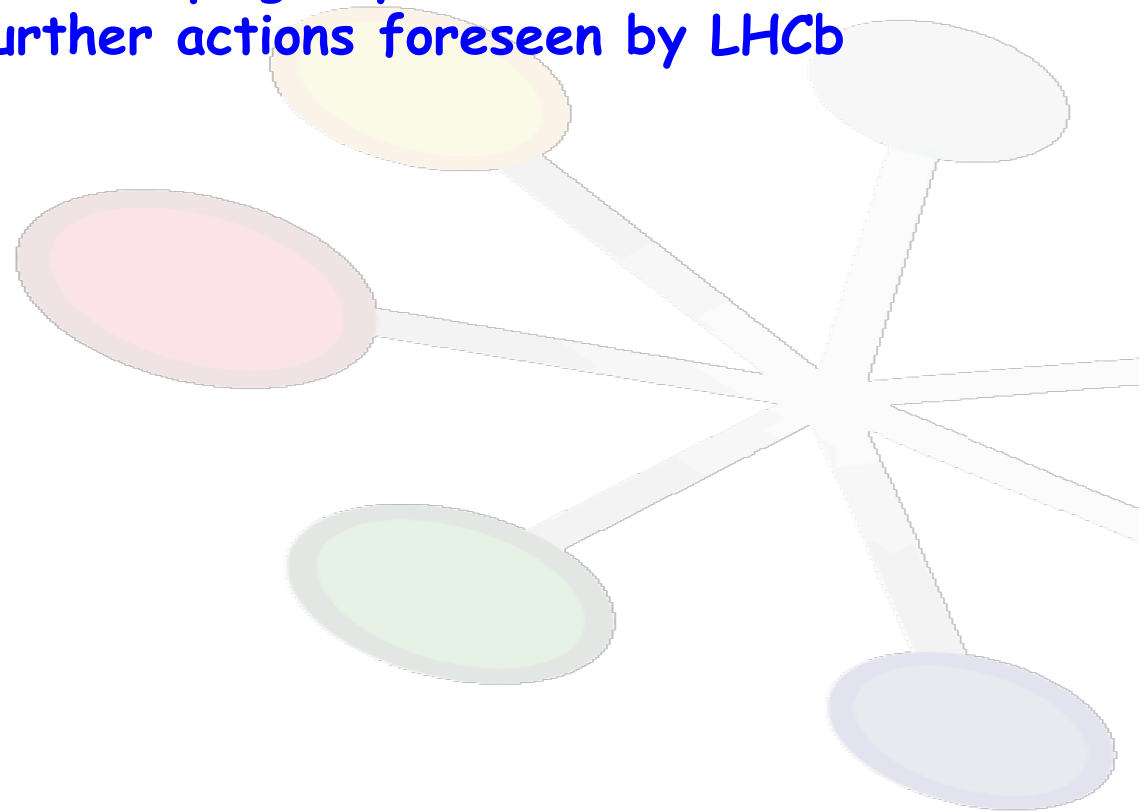
SHA2 certification

- Testing of SHA2 certificates is completed
 - All Dirac services (web, CLI) work with SHA2 certificates
 - Next step will be the needed deployment on the grid and submission of jobs



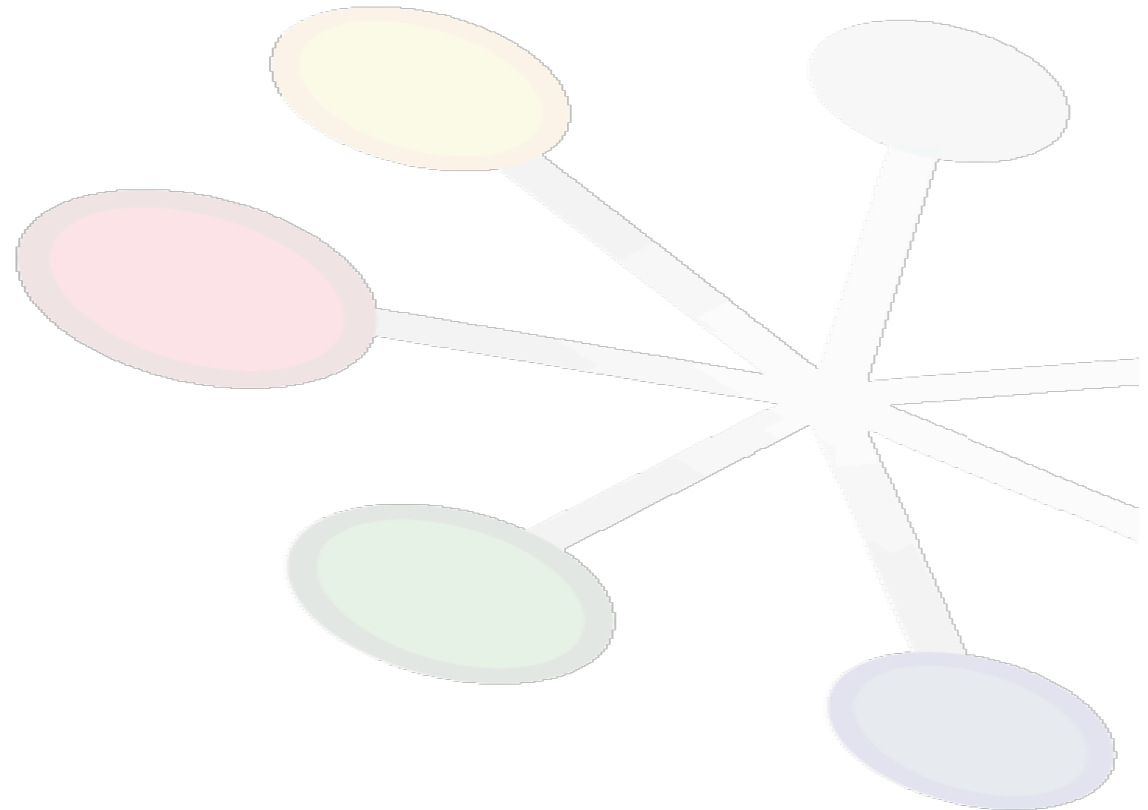


- Initial tests have been executed by LHCb and reported to the glExec deployment task force
 - Until deployment campaign by the task force is finished, no further actions foreseen by LHCb





- Kick-start activity soon
 - Work on metrics measuring data popularity in a first instance and subsequently on algorithms to propose actions





- LHCb in a first instance interested that all supporting Tier1 sites provide some SL6 based capacity
 - Not all Tier1 sites do provide capacities right now
- Need vast majority of resources available on SL6 by end of 2013
 - Intend to use C++11 features, only available on compilers > gcc 4.6 which are not provided on SL5
 - The new stack of LHCb Applications are compiled only for SL6.





- Working on interfacing Dirac -> SAM/Nagios
 - Will provide several types of information to Nagios framework (and SUM)
 - ☆ Dirac "SAM" tests, i.e. simplified workflows (reco, simu, stripping, etc)
 - ☆ Resource status information
- Overall strategy will be further aligned with the currently ongoing "Monitoring consolidation project"
- reliability doesn't address performance and scalability issues (for example LHCb currently suffering from staging performance at GRIDKA), and that this should be taken into account in the future