



LHCb & SC3

Plans for SC3 sample jobs; SC3 resource needs; Planning updates; Current problems and issues (SC3 and LCG)

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- **Aims**
 - **Phases & Schedule**
 - **Requirements**
 - **Current Issues**



LHCb-SC3 Aims



- **Test Data Management system**
 - Bulk scheduled operations
 - Real Time data transfers
- **Interaction between Data Management and Workload Management systems**



Phase 0



- **Preparation for SC3 Service phase**
- **Tuning and testing phase**
- **Functional test of later procedures**
- **No significant computing or network resources will be needed**
- **Already started**

- **Bulk Scheduled data movement:**
 - a) **Stripped data replication from CERN to all Tier1's:**
 - ~1 TB of data (50k files, including event tag collections, large and small files).
 - b) **Data replication from CERN to all Tier1's:**
 - ~8 TB of data (500 MB/file), ~30% of 2008 req.
 - c) **Removal of DSTs via LFN's.**
 - d) **Data replication from each Tier1 to CERN and all other Tier1's**
 - ~40% of 2008 req.

- **Phase 1.a):**
 - may be included as part of the Phase 0 at the end of September.
 - ~1 TB permanent space on fast access storage at each Tier1 (disk with SRM interface preferred).
- **Phase 1.b):**
 - 2 weeks: 40 MB/s out of CERN (6.5 MB/s into Tier1).
 - ~8 TB temporary space on MSS at each Tier1.
 - Starts in October.
- **Phase 1.c):**
 - After each cycle of phase 1.b) is completed.
- **Phase 1.d):**
 - 2 weeks: 3.3 MB/s point to point.
 - ~8 TB temporary space on MSS at each Tier1 + CERN.
 - Second half of October.

- **Real Time data movements + WMS:**
 - MC production on Tier2's.
 - Online stripping on Tier1's (+ CERN).
 - Replication of selected events to all Tier1's + CERN.
 - Limited User Analysis at Tier1's (+ CERN).
- **File Catalog stress testing:**
 - LFC and Fireman.
 - 10 M "LFN's" and 100 M "PFN's".

- Starting mid of November and running until the end of the year.
- Req:
 - 800 x 2.4GHz WN's for the MC production.
 - 4 x 2.4 GHz WN's at each Tier1 (+ CERN) for the stripping.
 - 10 TB distributed storage for full MC sample.
 - 350 GB at each Tier1(+ CERN) on fast access storage (pref. Disk with SRM).
- User analysis will start using data from phase 1.a). High level LHCC milestone to be met.

- All 6 LHCb Tier1's participate (+ CERN):
 - CNAF, FZK, IN2P3, NIKHEF, PIC & RAL.
- File Catalogs:
 - Dedicate LFC (CERN + ≥ 1 R.O.).
 - Dedicated Fireman.
- FTS:
 - Central Server + Client tools.
- Storage:
 - MSS with SRM interface + gridFTP server.
- Dedicated hosting CE for VO specific agents.

- **Working on LCF integration:**
 - Catalog population.
 - Interaction with DIRAC and LCG WMS.
- **FTS first tests.**
- **User Analysis:**
 - Adding GRID certificates and proxies to DIRAC.
 - Including roles to manage access to different DIRAC services.

- **Minor modifications in schedule with respect to SC3 workshop (to accomodate all experiements).**
- **Testing up to end of September**
- **Bulk data movement in October**
- **Online data tranfers and processing since mid November**
- **Others:**
 - **File catalog testing**
 - **User Analysis**