



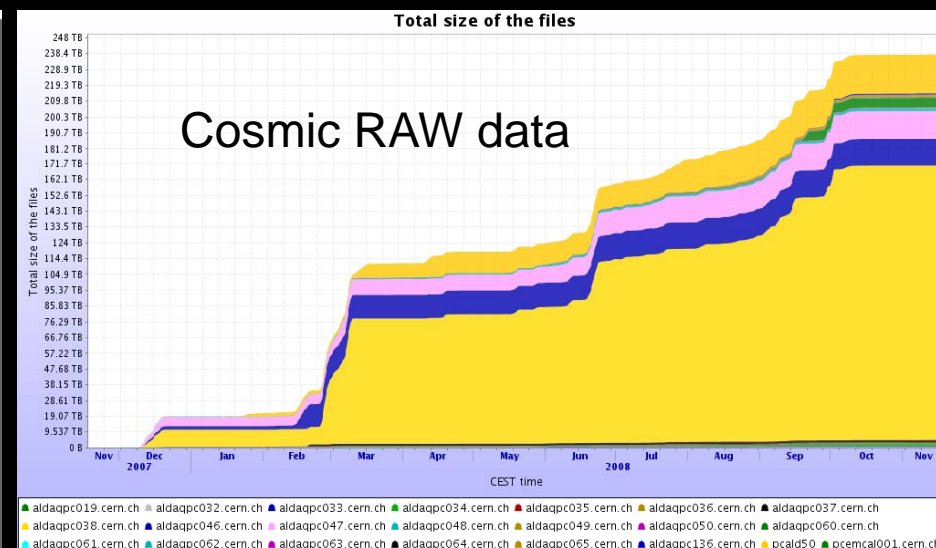
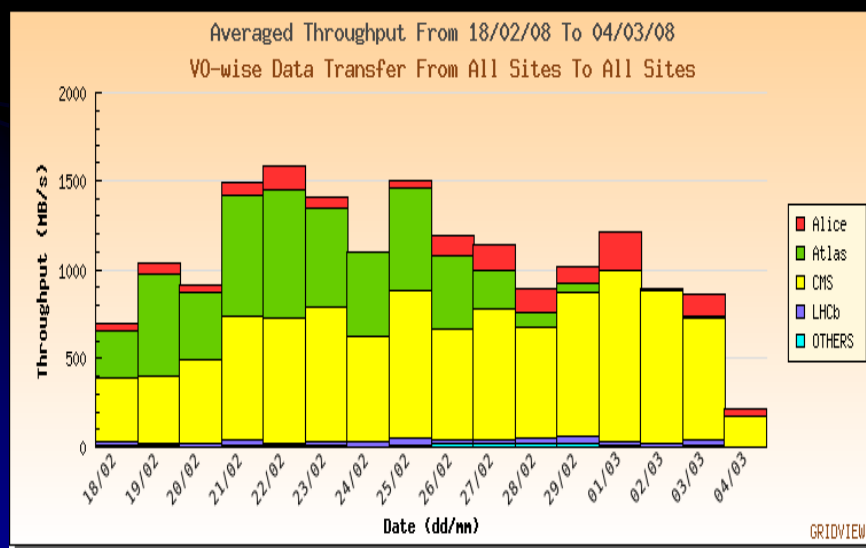
LCG-LHCC Referees Meeting

Status of ALICE

Latchezar Betev
18 November 2008

Readiness for data processing

- Successful completion of all WLCG CCRC08 tasks
 - Raw data registration/replication, workload management, storage
 - Reconstruction chain for RAW (T0, T1) and ESD (T2s) availability fully tested and ready



Planned actions for 2009 – T0/T1s

- RAW data volumes in 2008
 - Total 310 TB at CERN + 200 TB replicated at T1s
 - Includes cosmic, detector calibration data
- Following the recommendations of resources scrutiny group
 - Data cleanup of old MC and parts of RAW
 - ~600TB identified for removal
- Planned updates (in progress)
 - Move to FTS on SCL4
 - Validation of new SRM endpoint at CERN
- Functionality check of replication tools

Offline reconstruction

- Significant improvements of the processing configurations for all detectors
- Automatic configuration of detector reconstruction parameters implemented and tested
- Automatic quasi-online reconstruction status
 - Reconstruction trigger system tested
 - Conditions data present, run registered at T0, Online QA completed
- All reconstructible runs from 2008 cosmics data taking are processed
 - Emphasis on 'First physics' detectors
 - Preparation of Pass 2 reconstruction (improved calibration, alignment and detector code)

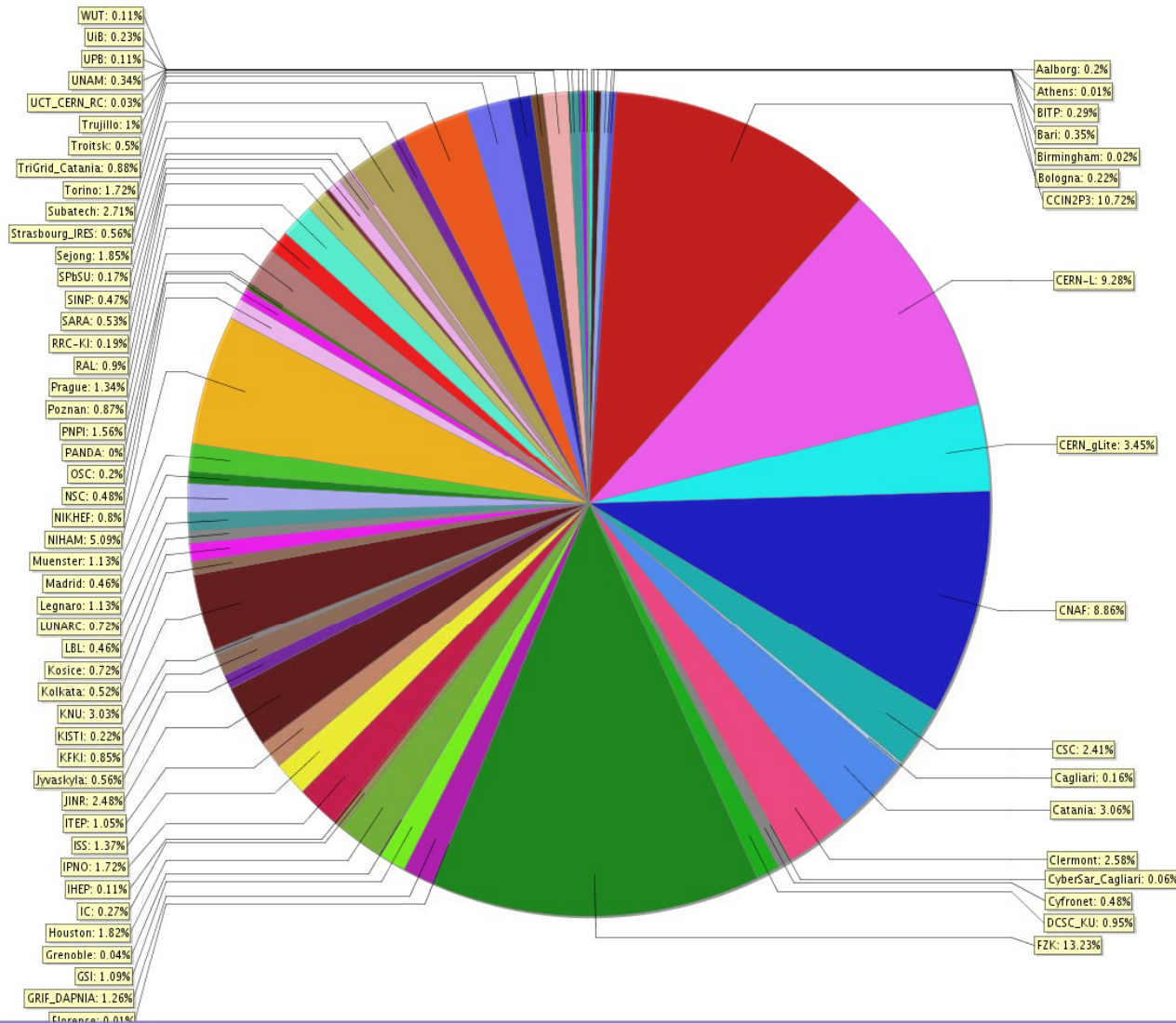
Conditions data

- Shuttle (subsystem DBs to Grid conditions data publisher) system in production
- High stability of primary sources of conditions data: DCS, DAQ DBs and configuration servers
- Current efforts concentrated on filling in the missing conditions data
 - Critical LHC parameters
 - Newly installed detectors and control hardware

Grid batch user analysis

- Steady increase of Grid users
 - 426 registered, ~120 active
- MC data analysis
 - 'First physics' production cycles
 - Large p+p MC production with 2009 detector configuration in preparation
- RAW (cosmics/calibration)
 - Pass 1 reconstruction analyzed
- Analysis train – ordered analysis tasks with common input
 - Development of tasks (wagons) by PWGs ongoing, regular Grid/CAF tests

T2 status



67 T2s providing resources for ALICE

~50% contribution to CPU

Critical role for MC production and **analysis** – high percentage of disk storage is at T2

Emphasis on installation of new xrootd-enabled storage

Prompt analysis

- PROOF enabled facilities @CERN (CAF) and @GSI Darmstadt (GSIAF)
- Fast processing of
 - MC ESDs – critical for first physics
 - Calibration and alignment iterative tasks
 - Limited RAW data samples
- CERN CAF recently upgraded (CPU/disk)
- Good integration with the Grid on the level of data exchange
- Very popular service with users

Middleware/OS upgrades

- ALICE sites migration to WMS submission
 - Completed last week
 - ALICE is **RB free**
- Tests of CREAM CE
 - Validated in production at GridKA
 - Deployment at sites in parallel with gLite CE ongoing
- Tests of SLC5
 - Validation (32- and 64-bit versions) ongoing at CERN PPS

Storage

- New storage (at T2s)
 - Gradually increasing the number of sites with xrootd-enabled SEs
- Every SE is validated and tuned independently
- Emphasis on disk-based SEs for analysis
 - Including a capacity at T0/T1s
 - Storage types remain unchanged
 - T1D0 for RAW, production, custodial ESD/AOD storage
 - T0D1 for analysis: ESD/AOD replicas

Resources in 2009 - assumptions

- ALICE will take data at a rate allowing to collect 60% p+p and 100% Pb+Pb of the data in a standard year, i.e. 0.6×10^9 p+p events and 10^8 Pb+Pb events
- MC production will correspond to a standard year of data taking
- MC data production for first physics produced in 2008 will be further used

Resources in 2009 - requirements

- ALICE needs the resources originally required and reported in the CTDR
- CPU@T0 - partially needed for 2008 cosmic data processing
- All the CPU planned in external sites is needed (missing 10% in T1, 26% in T2)
- DISK - all the storage required will be needed, 60% deficit compared to up to date pledges
- TAPE - full capacity required for 2009 will be needed. The storage planned for 2008 was not fully used, overall missing storage 47%.

Conclusions

- ALICE was ready for the first physics@LHC
 - Services, software and procedures
- Shutdown emphasis
 - Improving the detector code (2009 detector configuration)
 - Re-processing of 2008 cosmics and calibration data
 - Migration to new Grid services (FTS, WMS, CREAM CE)
 - Installation and validation of storage
 - Improvements of user analysis framework
- Resources
 - Requirements for 2009 remain largely unchanged