Experience Commissioning the ATLAS Distributed Data Management system on top of the WLCG Service

Simone Campana (CERN/IT), on behalf of ATLAS Distributed Computing
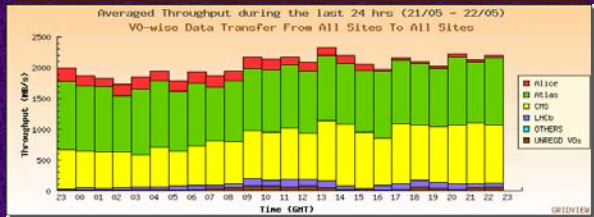
Common Computing Readiness Challenge 08

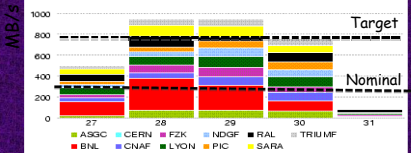One month of full scale commissioning of the Data Management system

➢ Testing readiness of the system before data taking
➢ Quite demanding metrics (approx 150% of computing model nominal rates)
➢ Includes all traffic flows (T0-T1, T1-T1, T1-T2)

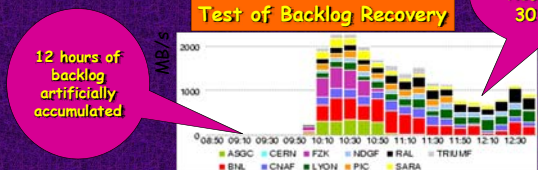The test was run in conjunction with all LHC experiments

All 4 LHC experiments in the game

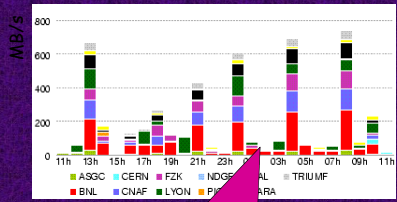Averaged Throughput during the last 24 hrs (21/05 - 22/05)
VO-wise Data Transfer From All Sites To All Sites

T0->T1s throughput

Target Rate for CCRC08= 150% of Nominal Rate

T1-T2 transfers

Centralized Data Deletion
1 PB of data deleted in 1 day (over 70+ sites)

TAIWAN-LCG2_ATLASDATADISK
Free space - last month

Test of Backlog Recovery

12 hours of backlog artificially accumulated

Backlog Fully Recovered in 30 minutes

Subscriptions injected every 4 hours and immediately honored
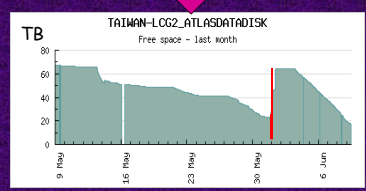
Detector and Simulated Data Placement and Replication

dataset status statistics for all period, TIER1S only, updated: 2009-02-24 11:20:03 UTC

subscribed: 0.0% (0)   transfer: 0.1% (63)   done: 99.9% (50882)   suspect: 0.0% (13)

Cosmic Data Replication (number of datasets)

Last subscription: 13 December 19:51:25 | Last FC checked: 24 February 11:08:15 | Last transfer: 02 Janua...
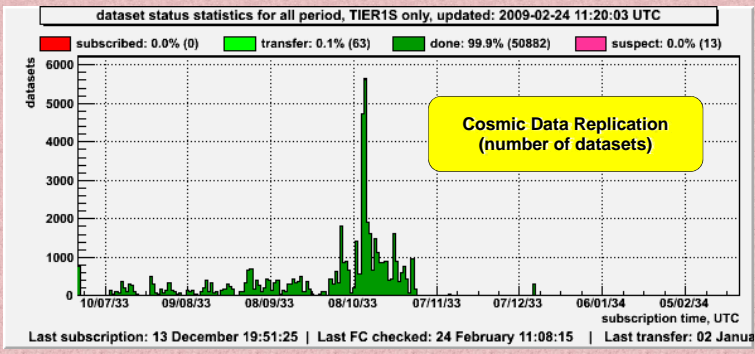
Cosmic Dataset replication time T0-T1s (completed transfers)
96.4% data replication is done (~92% within 3h)

last_transfer_time - first_transfer_time (hours) for all TIER1S_done, updated: 2008-07-08 11:40:54

h_all_tiers	
Entries	16976
Mean	3.251
RMS	4.917
Overflow	0
Integral	1.698e+04

96.5% of done finished for 10 hours

2.5 days

created by Alexey Anisyonkov
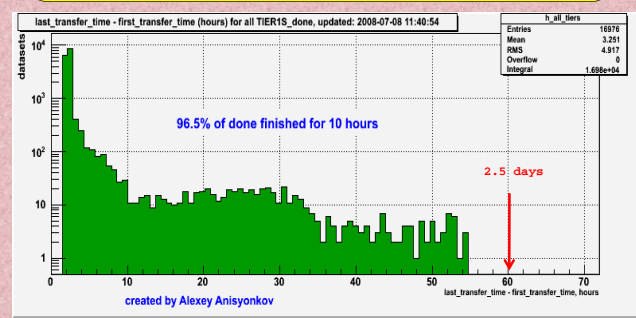
Number of replicated files over a one month period
850K files/day average, peak at 1.5M files/day
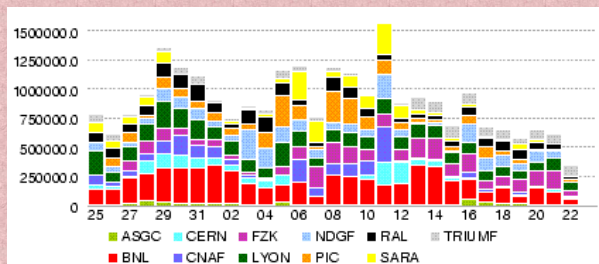
ATLAS Beam and Cosmics data replication to ~70 Tier2s

dataset status statistics for all period, TIER2S only, updated: 2008-12-04 08:24:49 UTC

subscribed   transfer   done   suspect

Last subscription: 03 December 23:19:13 | Last FC checked: 04 December 08:24:29 | Last transfer: 04 December 04:33:09