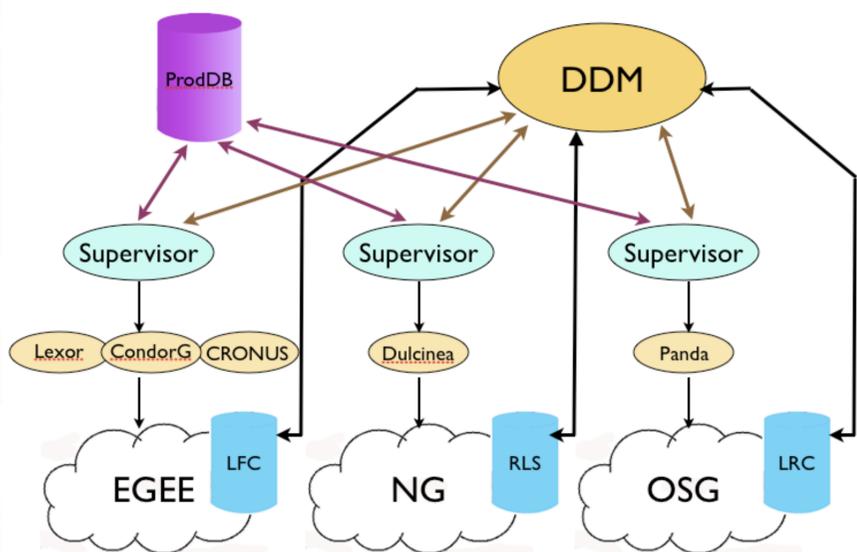


Abstract

In preparation for first data at the LHC, a series of Data Challenges, of increasing scale and complexity, have been performed. Large quantities of simulated data have been produced on three different Grids, integrated into the ATLAS production system. During 2006, the emphasis moved towards providing stable continuous production, as is required in the immediate run-up to first data, and thereafter. Here, we discuss the experience of the production done on EGEE resources, using submission based on the gLite WMS, CondorG and a system using Condor Glide-ins. The overall walltime efficiency of around 90% is largely independent of the submission method, and the dominant source of wasted cpu comes from data handling issues. The efficiency of grid job submission is significantly worse than this, and the glide-in method benefits greatly from factorising this out.

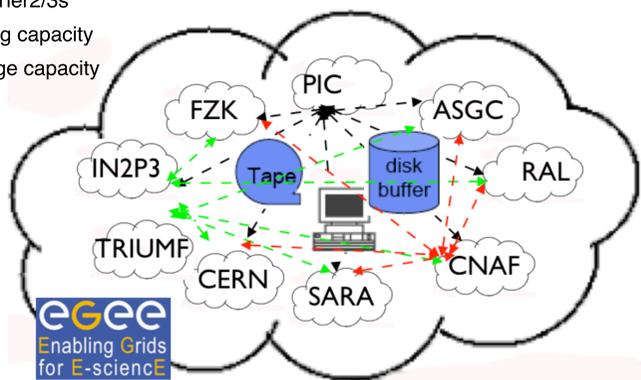
ATLAS production system schema:

Simulated production jobs are fairly different from the user specific jobs, they are defined and structured in a common basis and embedded in the ATLAS production system, which provides a common framework where any grid flavor may be integrated. It is formed from several individual elements which when plugged together provide the required functionality for the submission, tracking, recovery and validation of the jobs.

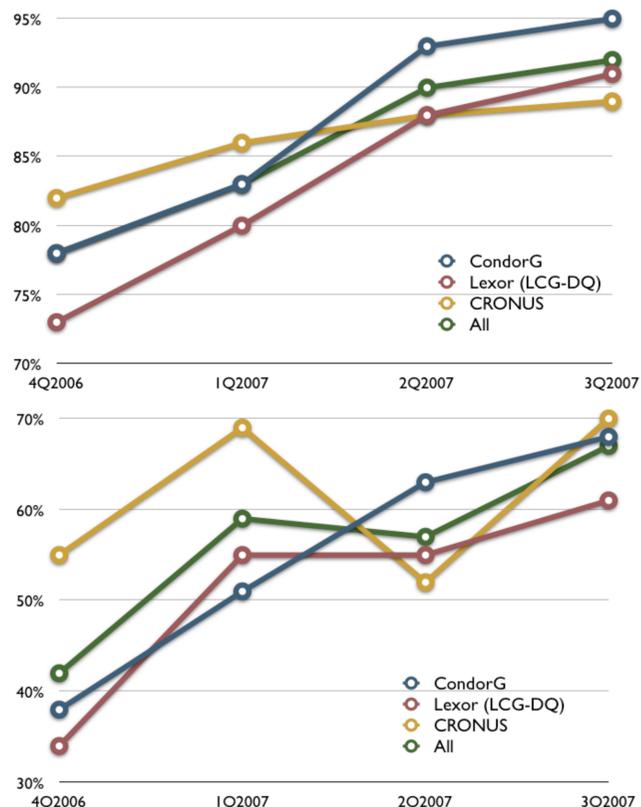


Resources on EGEE:

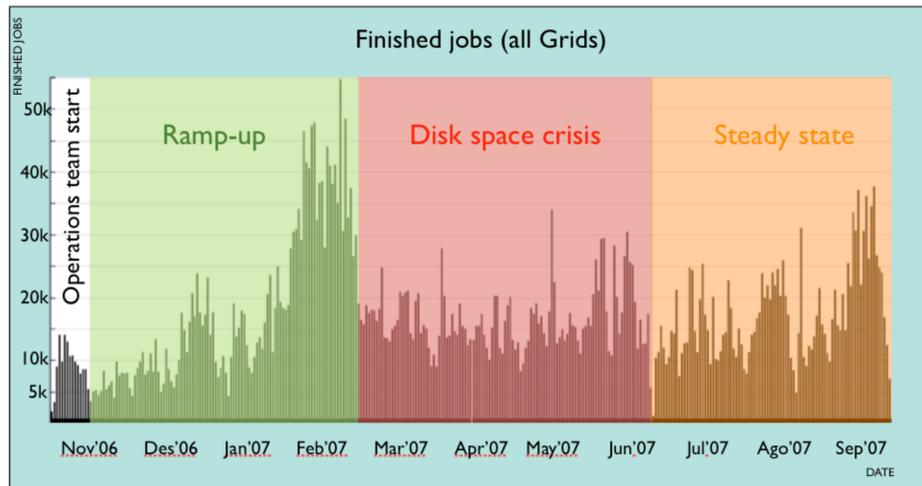
- 8 Tier-1s and ~40 Tier2/3s
- 26 Msi2k computing capacity
- >130TB disk storage capacity



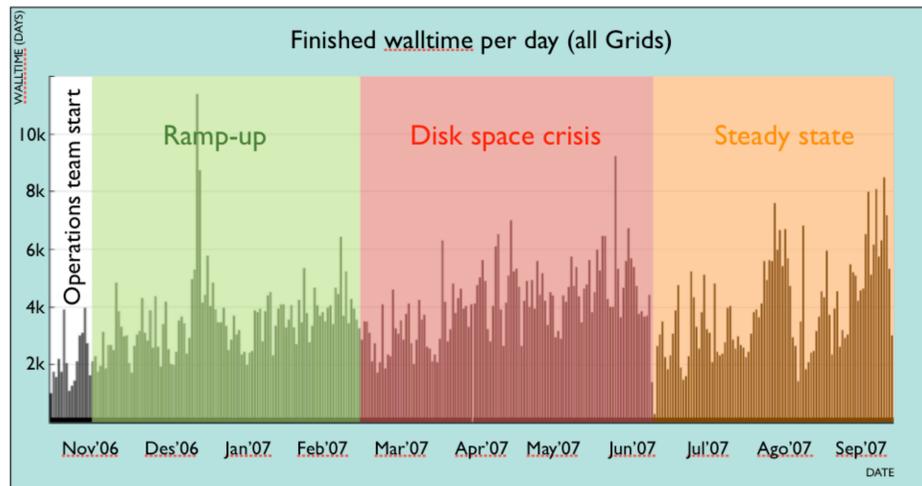
Evolution of the efficiencies:



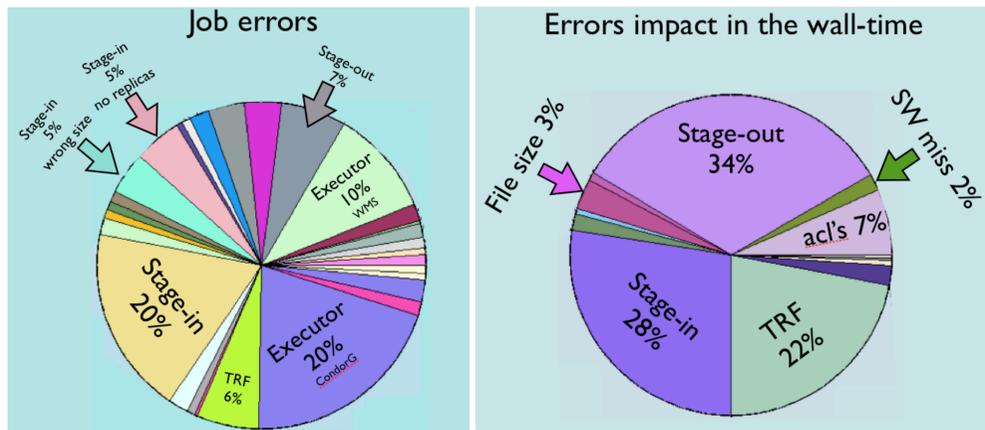
Statistics (Nov'06-Sep'07) finished jobs:



Statistics (Nov'06-Sep'07) finished walltime:



Error breakdown - Job and Wall-time (Nov'06-Sep'07) :



Statistics (Nov'06-Sep'07) for the executors running on EGEE:

Executor	#events	Job eff.	WCT eff.
Lexor	55M	55%	87%
CondorG	58M	53%	88%
CRONUS	37M	63%	87%
Combined	150M	57%	87%

References:

- [1] ATLAS Computing Technical Design Report, ATLAS TDR--017 CERN-LHCC-2005-022
- [2] D. Adams, D. Barberis, C. Bee, R. Hawkins, S. Jarp, R. Jones, D. Malon, L. Poggioli, G. Poulard, D. Quarrie, T. Wenaus, The ATLAS Computing Model ATL-SOFT-2004-007 CERN-LHCC-2004-037/G-085
- [4] All statistics has been taken from the ATLAS monitoring web:\\ <http://atlas.web.cern.ch/Atlas/GROUPS/SOFTWARE/OO/php/DbAdmin/Ora/php-4.3.4/proddb/monitor/Home.php>
- [5] G. Poulard et al. Experience on large scale production on the grid, CHEP 2006
- [6] X. Espinal et al. Large-scale ATLAS production in EGEE, CHEP 2007

