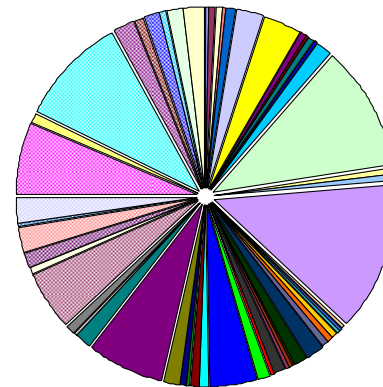


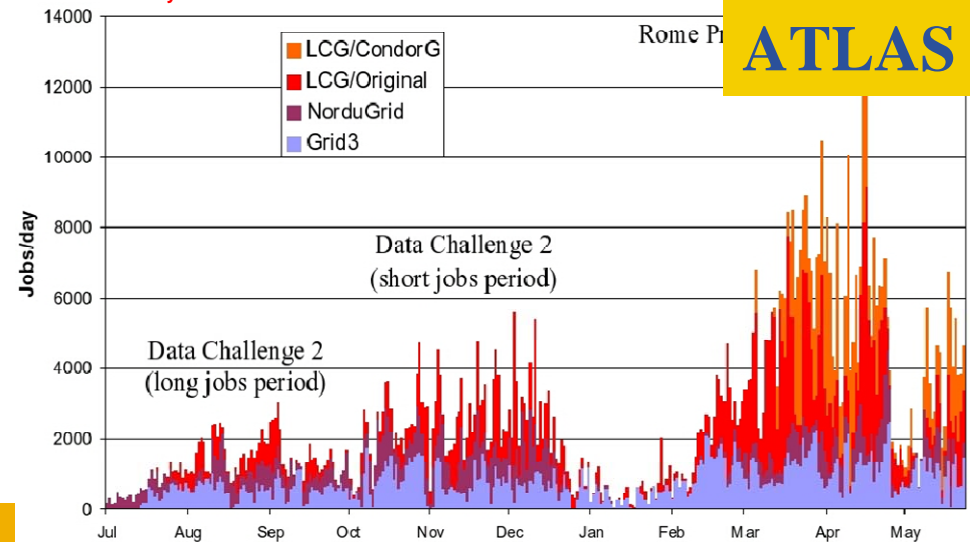
- **Fundamental activity in preparation of LHC start up**
  - Physics and detector studies
  - Computing systems commissioning
- **Examples:**
  - LHCb: >700 CPU/years in 2005 on the EGEE infrastructure
  - ATLAS: >10,000 jobs per day
    - Comprehensive analysis: see S.Campana et al., e-Science 2005, Melbourne, Australia
  - A lot of activity in all involved applications (including as usual a lot of activity within non-LHC experiments like BaBar, CDF and D0)
  - More details in DNA4.3.2

CPU used: 6,389,638 h  
Data Output: 77 TB



Site	CPU %	Site	CPU %
DIRAC.Barcelona.es	0.214%	DIRAC.Zurich.ch	0.003%
DIRAC.CERN.ch	0.571%	LCG.ACAD.bg	0.106%
DIRAC.CracowAgu.pl	0.001%	LCG.Barcelona.es	0.281%
DIRAC.LHCbONLINE.ch	0.779%	LCG.Bologna.it	0.032%
DIRAC.PNPI.ru	0.000%	LCG.CESGA.es	0.528%
DIRAC.ScotGrid.uk	3.068%	LCG.CNAF-GRIDIT.it	0.012%
DIRAC.Zurich.ch	0.756%	LCG.CNB.es	0.385%
LCG.BHAM-HEP.uk	0.705%	LCG.CSCS.ch	0.282%
LCG.Bari.it	1.357%	LCG.CY01.cy	0.103%
LCG.CERN.ch	10.960%	LCG.Cambridge.uk	0.010%
LCG.CGG.fr	0.676%	LCG.Durham.uk	0.476%
LCG.CNAF.it	13.196%	LCG.FZK.de	1.708%
LCG.CPPM.fr	0.242%	LCG.Firenze.it	1.047%
LCG.CY01.cy	0.103%	LCG.GR-02.gr	0.226%
LCG.Cambridge.uk	0.010%	LCG.GR-04.gr	0.056%
LCG.Durham.uk	0.476%	LCG.HPC2N.se	0.001%
LCG.FZK.de	1.708%	LCG.IFCA.es	0.022%
LCG.Firenze.it	1.047%	LCG.IN2P3.fr	4.143%
LCG.GR-02.gr	0.226%	LCG.IPP.bg	0.033%
LCG.GR-04.gr	0.056%	LCG.Imperial.uk	0.891%
LCG.HPC2N.se	0.001%	LCG.JINR.ru	0.472%
LCG.IFCA.es	0.022%	LCG.Lancashire.uk	6.796%
LCG.IN2P3.fr	4.143%	LCG.Manchester.uk	0.285%
LCG.IPP.bg	0.033%	LCG.Montreal.ca	0.069%
LCG.Imperial.uk	0.891%	LCG.NSC.se	0.465%
LCG.JINR.ru	0.472%	LCG.Oxford.uk	1.214%
LCG.Lancashire.uk	6.796%	LCG.PNPI.ru	0.278%
LCG.Manchester.uk	0.285%	LCG.Pisa.it	0.121%
LCG.Montreal.ca	0.069%	LCG.RAL-HEP.uk	0.938%
LCG.NSC.se	0.465%	LCG.RHUL.uk	2.168%
LCG.Oxford.uk	1.214%	LCG.Sheffield.uk	0.094%
LCG.PNPI.ru	0.278%	LCG.Toronto.ca	0.343%
LCG.Pisa.it	0.121%	LCG.UCL-CCC.uk	1.455%
LCG.RAL-HEP.uk	0.938%	DIRAC.Zurich-spz.ch	0.003%
LCG.RHUL.uk	2.168%	LCG.ACAD.bg	0.106%
LCG.Sheffield.uk	0.094%	LCG.Barcelona.es	0.281%
LCG.Toronto.ca	0.343%	LCG.Bologna.it	0.032%
LCG.UCL-CCC.uk	1.455%	LCG.CESGA.es	0.528%
		LCG.CNAF-GRIDIT.it	0.012%
		LCG.CNB.es	0.385%
		LCG.CSCS.ch	0.282%
		LCG.CY01.cy	0.103%
		LCG.Cambridge.uk	0.010%
		LCG.Durham.uk	0.476%
		LCG.FZK.de	1.708%
		LCG.Firenze.it	1.047%
		LCG.GR-01.gr	0.349%
		LCG.GR-03.gr	0.171%
		LCG.GRNET.gr	1.170%
		LCG.ICL.ro	0.088%
		LCG.IHEP.su	1.245%
		LCG.INTA.es	0.076%
		LCG.ISTEP.ru	0.792%
		LCG.Iowa.us	0.287%
		LCG.KFKI.hu	1.436%
		LCG.Legnano.it	1.569%
		LCG.Milano.it	0.770%
		LCG.NIKHEF.nl	5.140%
		LCG.Napoli.it	0.175%
		LCG.PIC.es	2.366%
		LCG.Padova.it	2.041%
		LCG.QMUL.uk	6.407%
		LCG.RAL.uk	9.518%
		LCG.SARA.nl	0.675%
		LCG.Torino.it	1.455%
		LCG.Triumf.ca	0.105%
		LCG.USC.es	1.853%

**LHCb**



**ATLAS**

- **Task Forces**
  - EGEE + experiment people. Very close and positive collaboration. Emphasis on integration onto EGEE infrastructure

- **One example (direct contribution of NA4-HEP/ARDA within the ATLAS TF)**

- Detailed studies of advanced gLite feature: WMS bulk submission (ATLAS Task Force)
- Other middleware tested in the framework of other ARDA prototypes and TFs
- More under [arda.cern.ch](http://arda.cern.ch)



**First gLite pre1.4 WMS performance measurements in Milano**

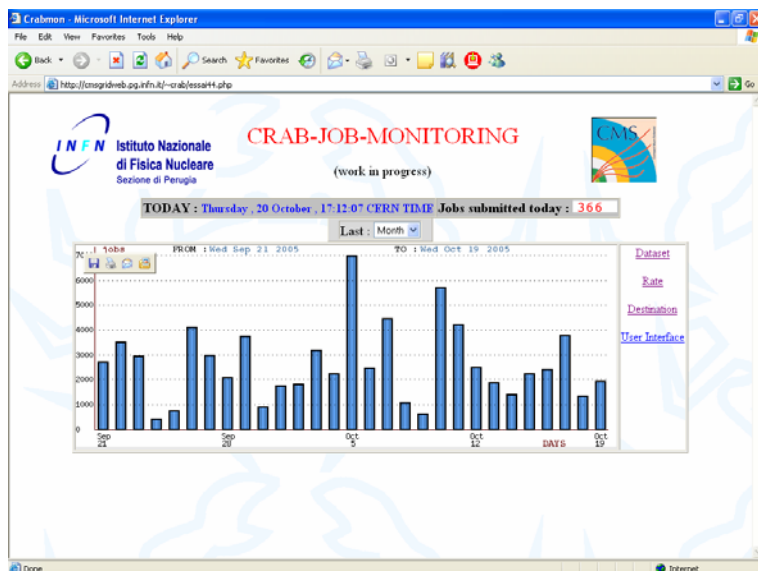
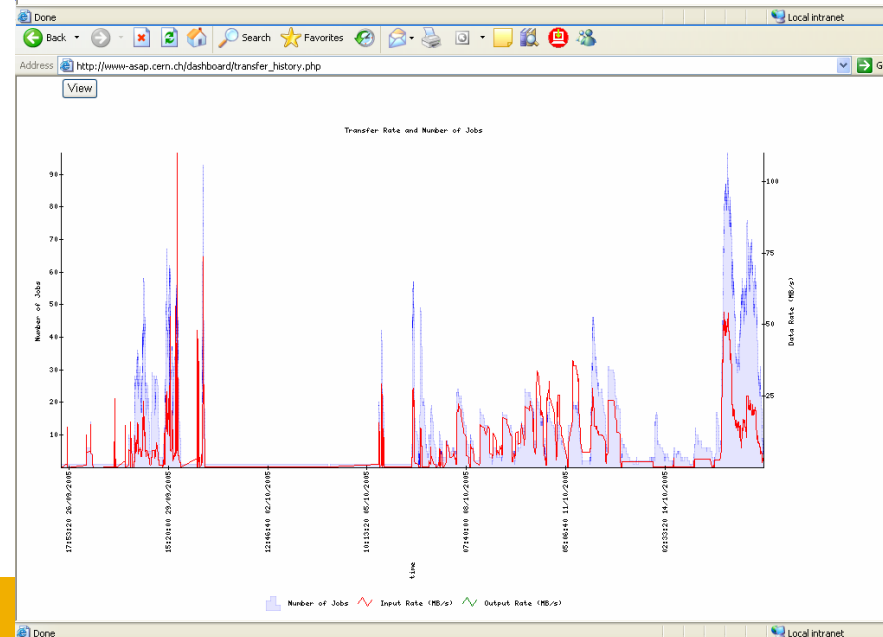
- gLite 1.4 WMS (4CPU, 3GB memory)
- 300 simple hello world jobs submitted by 3 parallel threads
- submission rate ~ 4.1 jobs/sec
- dispatching rate ~ 0.08 jobs/sec
- All jobs in bulk are submitted to the same CE: [atlasce.lnf.infn.it](http://atlasce.lnf.infn.it)

• Thanks to Elisabetta Molinari for setting up the gLite WMS in Milan

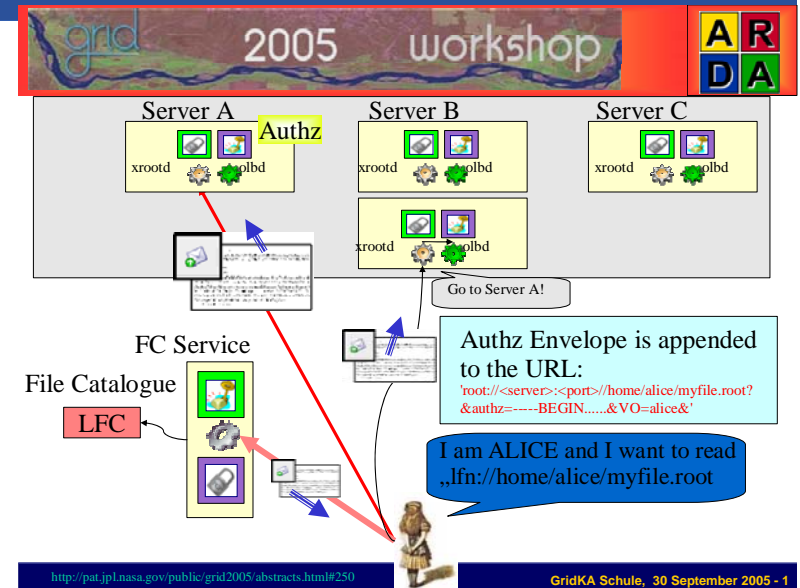
30 Sept. 2005

LCG/EGEE Taskforce Meeting

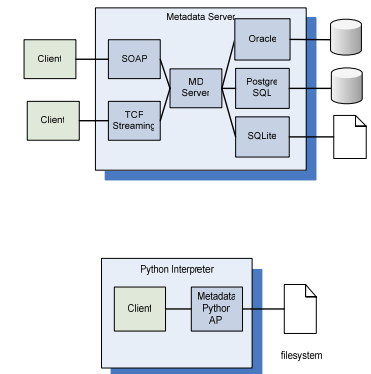
- From prototypes to coherent integration (CMS)
  - NA4 HEP (ARDA/ASAP) prototype → converging on the CMS CRAB system
  - SC3 activity, analysis jobs, productions jobs → CMS dashboard
  - Clear signs of wide user activity!!!
    - ASAP and CRAB
    - ~150k jobs/month



- Other examples:
  - Efficient data access integration: File catalogue ACL and fast data access via xrootd (ALICE prototype and Task Force). Presentation at SuperComputing 2005
  - Improved user access: GANGA (ATLAS and LHCb activities). Good feedback and demo in Pisa
  - Contribution to services used also outside HEP and contributed to gLite (AMGA). Used in the demo of Biomed and “Generic” in Pisa EGEE Conference



- **Prototype**
  - Validate our ideas and expose a concrete example to interested parties
- **Multiple back ends**
  - Currently: Oracle, PostgreSQL, SQLite, MySQL
- **Dual front ends**
  - TCP Streaming
    - Chosen for performance
  - SOAP
    - Formal requirement of EGEE
    - Compare SOAP with TCP Streaming
- **Also implemented as standalone Python library**
  - Data stored on the file system



- **PPS components tested**
  - Weekly testing of WMS
  - FiReMan
  - ACLs for file access
  - R-GMA
- **Other gLite testing**
  - Site installation (v1.0, 1.1, 1.2 and 1.3)
  - Advanced data management on prototype testbed
    - FiReMan, File Transfer Service
    - Metadata (AMGA)
    - File encryption
    - dCache SRM (SRM-DICOM interface)
    - Security features really needed for biomedical applications: expected on PPS soon!

- **Demonstrated added value in terms of deployment scale**
  - Heavy production of simulated data for LHC Computing Grid
  - Essential for the commissioning of the experiments
- **Demonstrated added value in terms of response time**
  - Computation of seism epicenter
  - Search for new drugs: large scale in silico docking (WISDOM)
- **Demonstrated added value in terms of data distribution**
  - Distribution of LHC data on the grid and sizeable users activity (~150k jobs/month in the CMS case)
- **Coming:**
  - medical data management

- **Dates: March 1-3 2006**
- **Location: CERN, Switzerland**
- **Target attendance: 150 participants**
- **Goals**
  - Get a consistent understanding across the EGEE related projects of expectation, present status and possible evolution
  - Promote cross-application fertilisation
  - Prepare EGEE-II
- **Participation open to external projects and EGEE members**
- **Format: 3-day workshop**
  - Presentations by thematic areas selected by invitation and through a call for contributions
  - EGEE presentations (integration of new applications, access to resources, status of middleware,...)
  - With a lot of time for discussion
- **URL:**
  - <http://egee-intranet.web.cern.ch/egee-intranet/User-Forum/index.html>