



Enabling Grids for E-science

# Presentation of DNA4.3.2

*Vincent Breton*

*On behalf of NA4*

[www.eu-egee.org](http://www.eu-egee.org)



Information Society



- **Introduction**
- **Executive summary**
- **Overview of migration to the production infrastructure**
- **List of deployed applications**
- **Migration report on preproduction service and testing of gLite**
- **Update on integration of user communities**
- **Conclusion**

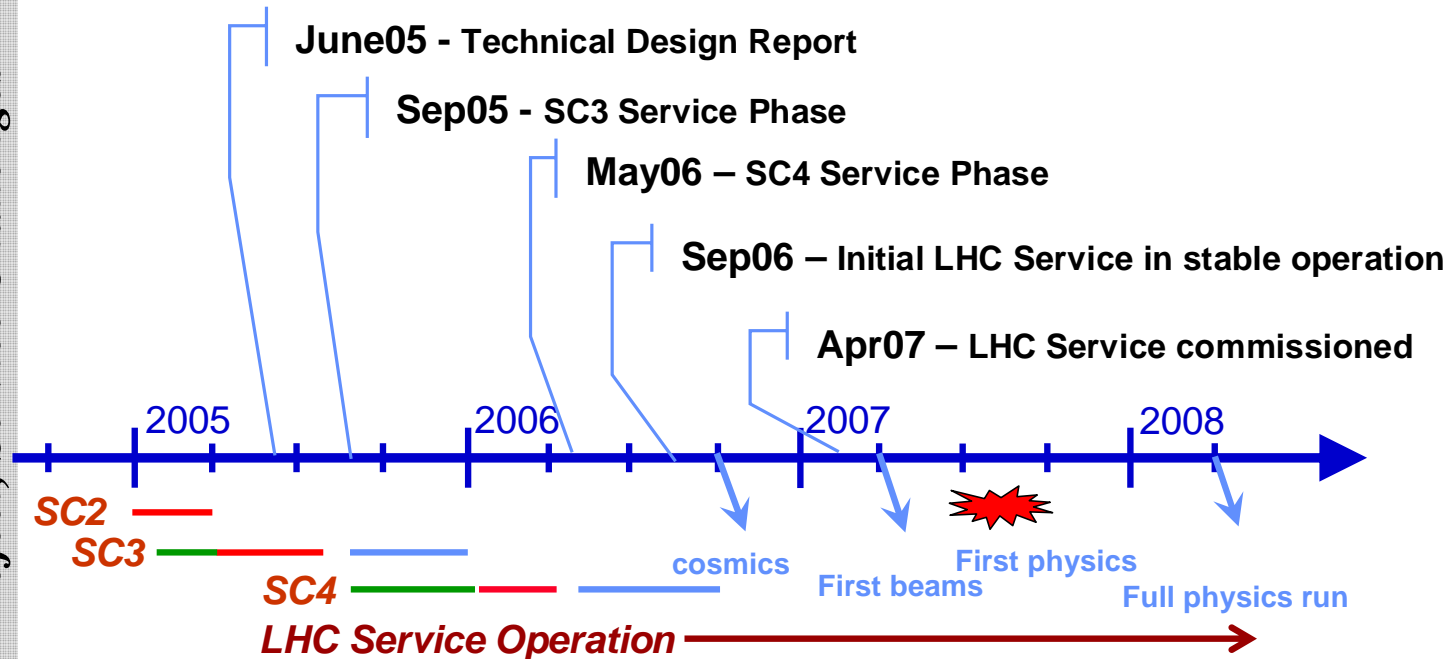
- **Overall edition of the document**
  - HEP: Massimo Lamanna, Frank Harris, Birger Koblitz
  - Biomed: Johan Montagnat
  - Generic: Roberto Barbera
  - V. B. & Florence Jacq
  
- **Contributions from the application supervisors for chapter 4**
  - Good overall feedback
  - Some delayed contributions still missing (ESR, E-GRID)

- **2-page overviews by application sector (HEP, biomed, generic)**
- **Highlights**
  - HEP: Data and Service challenges
  - Biomed: data challenge
  - Generic: overall growth of the activity
- **Main issues**
  - Migration to gLite
  - Middleware efficiency of the order of 80%
  - Large scale usage is still labour intensive (e.g data challenge)
  - Relationship to external projects

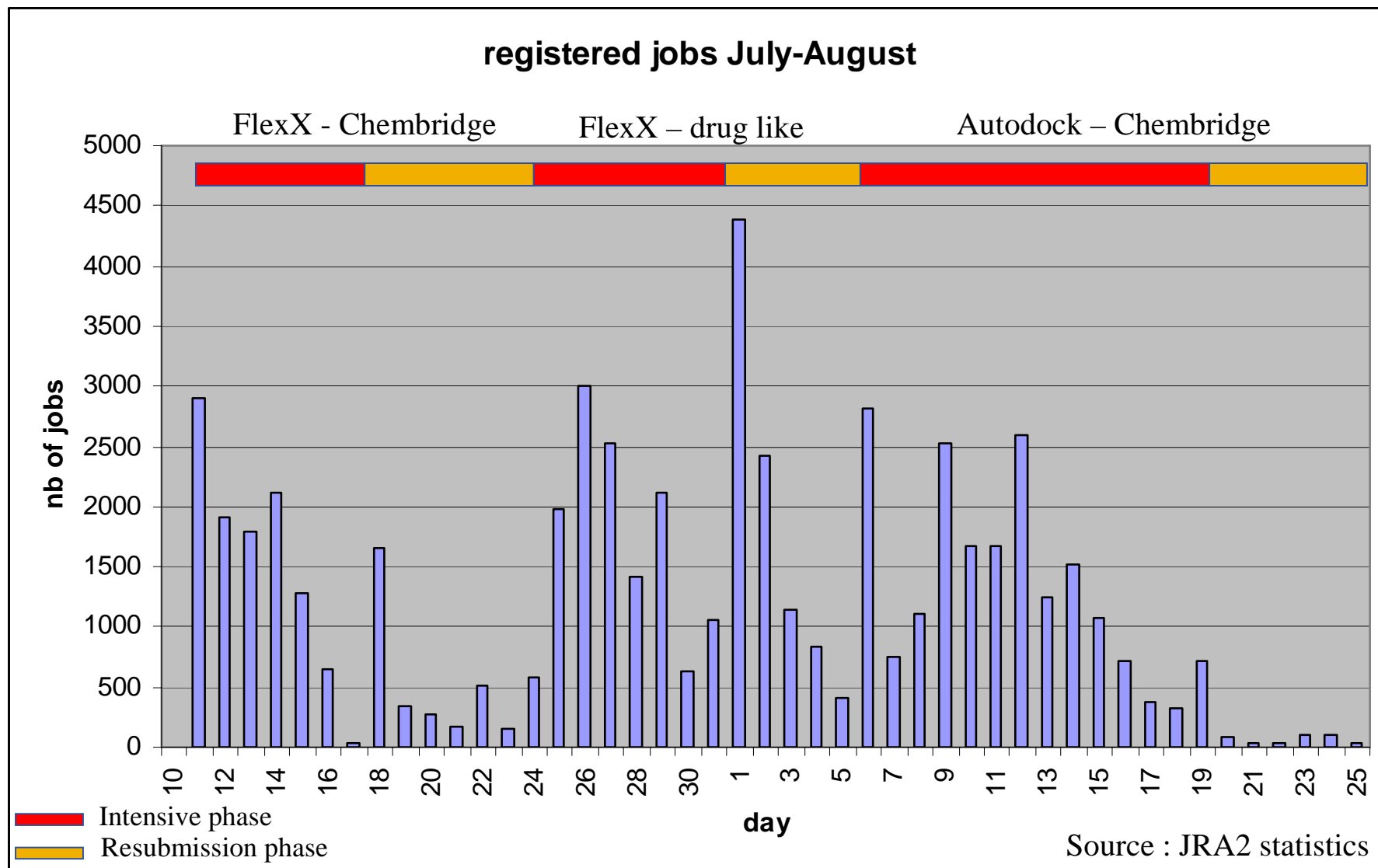


## LCG Service Challenges - ramp up to LHC start-up service

LCG Project, Service Challenges



- SC2** – Reliable data transfer (disk-network-disk) – 5 Tier-1s, aggregate 500 MB/sec sustained at CERN
- SC3** – Reliable base service – most Tier-1s, some Tier-2s – basic experiment software chain – grid data throughput 500 MB/sec, including mass storage (~25% of the nominal final throughput for the proton period)
- SC4** – All Tier-1s, major Tier-2s – capable of supporting full experiment software chain inc. analysis – sustain nominal final grid data throughput
- LHC Service in Operation** – September 2006 – ramp up to full operational capacity by April 2007 – capable of handling twice the nominal data throughput



# Evolution of the number of users

Name	Discipline	Number of users at PM9	Number of users at PM18
ALICE	HEP (LHC experiment)	27	50
ATLAS	HEP (LHC experiment)	203	400
CMS	HEP (LHC experiment)	161	350
LHCb	HEP (LHC experiment)	41	58
ESR	Earth Sciences	18	33
Biomed	Biomed	33	67
CompChem	Chemistry	9	5
Magic	Astronomy	5	10
EGEODE	GeoPhysics	0	3
Planck	Astrophysics	0	5
<b>TOTAL</b>		<b>497</b>	<b>981</b>

- **All applications were invited to fill a 2 page template providing**
  - Brief description of application
  - Resources
  - Issues
  - Results
- **List of applications described in the deliverable**
  - High Energy Physics: Alice, ATLAS, CMS, LHCb, BaBar, CDF, D0
  - Biomedical applications: Drug Discovery, GATE, CDSS, GPS@, gPTM3D, SiMRI3D, Bronze Standards, GridGRAMM-GROCK, Pharmacokinetics
  - Generic applications: computational chemistry, astroparticle physics, astrophysics, earth sciences (EGEODE), ...
  - applications incubated on GILDA: Nemo and Antares, Patsearch, GA4tS, SPM, Splatche, “sonification” of sismograms, gMOD



- **Presentation of the work done within NA4 by**
  - ARDA
  - Biomedical task force
  - Gilda team
  - NA4 test team
- **Edited by B. Koblitz**
- **Main conclusions**
  - Lot of work done on PPS and GILDA
  - gLite middleware offers the necessary functionalities
  - PPS instability and scale has slowed down application deployment

- **First gLite tutorial on GILDA, Catania, 13-15 June 2005**
- **ESR retreat to move to gLite, Bratislava, 27-30 June 2005**
- **GGF Grid School, Vico Equense, 10-22 July 2005**
- **EGEE Summer School, Budapest, 11-16 July 2005**
- **Healthgrid Workshop, Clermont-Ferrand, 25-27 July 2005**
- **UK grid event, Swansea, 6 August 2005**
- **EGEE Tutorial, Taipei, 22-23 August 2005**
- **EGEE tutorial for summer students, CERN, 24 August 2005**
- **EGEE Tutorial, Tokyo, 25-26 August 2005**
- **EGEE Tutorial, Seoul, 29-30 August 2005**
- **EGEE Tutorial for the Crossgrid Project, Lausanne, 5-9 September 2005**
- **Cern School of Computing, Saint-Malo, 12-15 September 2005**
- **GridKa School for Grid Application Developers, Karlsruhe, 26-30 September 2005**

- **Presentation of the user survey (achievement of MNA4.3)**
- **Life cycle of an application on EGEE (work done in preparation of EGEE-II)**
  - Application incubation
  - Initial deployment as local applications
  - Transition to supported applications
  - Application deployment
- **Main issues**
  - Slow uptake of gLite by generic applications
  - Efficiency/stability of production and fact it is labour-intensive