



Enabling Grids for E-science

Plans for the next period

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This presentation highlights the planned advances and foreseen issues for the next reporting period

- Project Management
- Middleware
- Infrastructure
- Networking
- Security
- Applications
- Training & Dissemination
- Policy
- **Summary**





Deliverables/Milestones Timeline

Enabling Grids for E-science

Month	Ref	Description
10	MJRA1.5	Integrated Release Candidate 1 enters testing and validation period (Release 1)
12	DJRA1.3	Software and associated documentation (Release 1)
12	DJRA2.2	Annual Report on EGEE Quality Status, including software and Grid operations and plan for second year
12	MJRA3.6	Security operational procedures (first revision)
12	MJRA3.7	Framework for policy evaluation accepted in GridPMA policies and CA service authorities for EGEE
12	MJRA4.3	Prototype tool to access network performance metrics from a limited set of measurement points
12	DNA1.1.4	Quarterly periodic report
12	DNA2.6.2	Dissemination Progress Reports revision
12	MNA3.3	First external review of User Training and Induction with feedback
12	MNA4.3	First external review of Applications Identification and Support with feedback

Due to the scale of project and FP6 reporting guidelines, it takes a lot of effort to produce and review deliverables/ milestones

Large proportion of Project Execution Board time is dedicated to overseeing this process to the detriment of the technical coordination of the activities

16	DJRA3.3	Global security architecture (first revision)
18	MJRA1.6	Test plan for core Grid components and overall Integration (Release 2)
18	MJRA3.8	Security operational procedures (second revision)
18	MJRA3.9	Set-up of accounting techniques and distributed budgets
18	MJRA4.6	Specification of high-level monitoring and diagnostic tools. Revision of metrics.
18	MJRA4.7	Dynamic re-configuration of key ingress points in response to reservations.
18	DJRA4.3	Report on implications of Ipv6 usage for the EGEE Grid
18	DNA1.1.6	Quarterly periodic report
18	DNA1.3.2	Periodic report
18	DNA2.6.3	Dissemination Progress Reports revision
18	DNA5.4	European Grid project synergy report (in collaboration with DEISA, SEE-GRID)
18	MNA1.2	Successful completion of second review

**35 deliverables/milestones
(29 more in final 6 months)**

- The project has already met many of the targets set for the first 2 year phase
- Current metrics are defined by the simplest means of measurement – these will evolve as we understand better the true effect of EGEE

- **Likely to grow at a slower rate**
 - **Users**
 - **Applications**
 - **Scale of production service**

Wider definition to include scientists who benefit from results of EGEE infrastructure

<u>Metric</u>	<u>Current status</u>	<u>Target end Year 2</u>
Number of Users	~ 500	≥ 3000
Number of sites	>110	50
App. breadth (disciplines)	6	≥ 5
Multinational (countries)	30	≥ 15
Reviewed applications	23%	≥ 15%

- **Migration to gLite middleware will increase the interaction between all the project's activities**
 - Relies on the work performed and relationships established during the first period
- **Oversee the potential incorporation of resources/applications/software from other projects**
 - Support for other projects now dependent on EGEE
 - This requires extra resources in the project itself

Balance the short-term needs of user communities and long-term goals of establishing a common grid infrastructure

- **February**
 - Installation and basic functionality testing with JRA1, SA1 and NA4
- **March**
 - Further testing for robustness and scalability
 - Official release of gLite (release 1) on pre-production service
- **April**
 - Start of incremental releases
 - leading to gLite v2.0 at PM21
 - Evaluation of OMII and GT4 toolkits
- **May**
 - Update gLite architecture taking into account initial deployment and usage
 - Continue work on GGF/OGSA and provide feedback from deployment
 - Deployment of gLite components on production service
- **June**
 - Update gLite design according to architecture changes

Manpower needed for testing and time for mware to mature
Priorities for releases must be driven by feedback from users and operations groups not just the contractual Description of Work
Still many uncertainties about how grid standards will evolve

- **Continuous refinement of procedures to improve QoS**
 - Better efficiency of job completion
 - Classification of grid sites
 - Escalation procedures
- **Addition of 5th CIC (Russia)**
- **Growing importance (and support load) of pre-production service**
 - For early gLite deployment
- **Investigate co-existence and inter-operation of gLite with LCG-2 and toolkits from related grid projects (Grid3/OSG, Nordugrid etc.)**
- **Participate to the LCG service challenges**
 - As a means of measuring and improving the quality of service
 - SLAs and Operations (monitoring and troubleshooting)

Synchronization of gLite release process with middleware groups

Migration to gLite needs careful planning for sites, data, applications, tools & people to ensure continuous QoS

- **Definition of standard interface for network performance monitoring based on GGF NM-WG schema**
- **Specification of high-level network monitoring and diagnostic tools**
- **Definition of end-to-end Service Level Agreements (SLAs) between EGEE sites and GEANT**
- **Development and testing of a prototype bandwidth reservation service**
- **Further training/dissemination on IPv6 issues**

Issues with deployment of Network Performance Monitoring tools on EGEE fabric to be addressed in collaboration with SA1

- **Support for security related software modules in gLite**
- **Continue work of JSPG and MWSG towards an agreed security infrastructure with other grid projects**
- **Revision of the security operational procedures**
- **Continuous evaluation of new CAs by EUGridPMA**
 - During this period it is expected that all EU member states involved in grid projects will have a national accredited Authority
- **Assessment of accounting infrastructure and analysis of what is missing to provide secure quota-based resource access**

A policy decision needs to be agreed to provide secure outbound connectivity as required by applications

It is unlikely that a secure quota-based resource access mechanism will be in production before the end of the project

- **Major focus will be the migration of applications from LCG-2 to gLite**
 - This involves people, data, software and resource centres
- **Move applications from GILDA to the production service**
 - Some applications cannot be migrated from GILDA/LCG-2 until there is agreed support for the management of commercially licensed software and outbound network connectivity
- **Project Technical Forum**
 - Do requirements tracking against gLite release 1
 - Oversee agreement of any gLite service interface changes
- **Industry Forum**
 - Work with technical activities to investigate management of commercially licensed software

LCG-2 to gLite migration process will require a lot of effort

Need more manpower resources to support new user communities

Need dedicated manpower to oversee the virtuous cycle

- **Migration from LCG-2 to gLite implies updating almost all training material**
 - Significant changes to application developer and site administrator courses
- **Introduction of t-infrastructure resources at UEDIN**
 - Will give NA3 first hand experience of gLite installation and environment to port tutorial exercises
- **Perform external review of training activity**
- **Expand on use of grid based tools (Accessgrid) and eLearning technology**

Depends on availability of experts from other activities as trainers
Great and urgent demand for gLite training
Missing partners in some geographical regions (voluntary contacts being established)

- **Keep EGEE in the media spotlight**
 - Maintain high-level of dissemination established in the 1st period
 - Timely/regular production of new material and press releases
- **Organise 2 project conferences with the PO and local partners**
 - April (Athens), October (Pisa)
- **Improve documentation available to new project contacts**
 - Easy introduction from 3 points of view: user, site administrator, application developer
 - Newly created User Information Group (NA2/NA3/NA4/SA1)

Need better way of collecting newsworthy information from technical activities

Missing partners in some geographical regions (voluntary contacts being established)

- **Further releases of the eIRG white paper on grid policy**
 - Closer relations with the European Strategy Forum on Research Infrastructures (ESFRI)
- **Participation in EU concertation meetings**
 - Contribute to organisation
 - Leadership of key working groups (e.g. security via JRA3)
- **EU synergy roadmap revision**
 - With SEE-GRID and DEISA

The timing and content of the NA5 deliverables depends on the input of related grid projects and the scheduling of EU concertation events

- **EGEE is on-track and even ahead of schedule in a number of key areas**
 - This has been made possible by the dedication and enthusiasm of everyone involved
 - Rationalising the project reporting task would allow members to concentrate on the programme of work
- **The focus for the next period will be the introduction of the gLite middleware**
 - The migration from LCG-2 to gLite will require substantial, synchronized effort by all activities to ensure a continuous production quality service
- **The EGEE infrastructure has attracted more interest than expected**
 - Inclusion of more user communities will require more manpower to provide support and avoid stalling the virtuous cycle
- **EGEE has forged excellent relationships with related grid projects**
 - Intimate links with LCG has meant EGEE could “*hit the ground running*”
 - Further links will be pursued and the scope of EGEE extended to new geographical regions