

The US Federation

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www.eu-egee.org

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Overview



- US institutions
 - University of Chicago (I. Foster)
 - University of Southern California (C. Kesselman)
 - University of Wisconsin-Madison (M. Livny)
- Funding (year 1)
 - \$200K from the NSF Middleware Imitative (NMI) via the GRIDS center
 - \$250K from the Particle and Nuclear Astrophysics program at the NSF
 - \$97K from the DOE-LHC Research Program





- Integral part of the gLite technical process
 - Contributed to the formulation of the gLite technical effort
 - Participation in the monthly meeting of the gLite design team
 - Participation in "focused" meetings of the design team (Data Management, Account management and Authentication)
 - Review architecture documents
- Operate one out of the two gLite prototype sites
- Facilitate exchange of concepts, principals and implementation details between EGEE and OSG
 - Joint membership in the design teams of the two grids
 - Formal and informal exchanges of design principals and development plans and schedules



University of Chicago

- Dynamic accounts service
 - GT4-based service for creation, lifetime management, access control of dynamically created Unix accounts
 - EGEE using with GT2 GRAM; adaptation to GT4 GRAM easy
 - Integration with LCMAPS and VOMS security services from EGEE
 - Tested on gLite testbed; scheduled for 1st release
- GRAM4 design & implementation
 - Control of resource usage on head node, and other benefits
 - Also evaluated as gLite SetUID service
- New GridFTP implementation
 - Visit to CERN to discuss status & inclusion in EGEE software
- GT4 development and evaluation
 - Frequent contact with EGEE integration team; visits to CERN
- Grid Security Infrastructure enhancements
 - Many, some have made their way into EGEE software

CGCC University of Southern California Enabling Grids for E-sciencE

- Developed a Globus-based POOL FileCatalog using Globus Replica Location Service (RLS) + minor enhancements
 - Unit, system and performance tested at Fermi Lab
 - Used in test environment with ORCA application
 - Early performance tests show up to 800/sec file registrations and up to 400/sec file lookups
 - Currently adapting to new interfaces exposed by upcoming release of POOL – eliminate unused metadata interfaces
- Near-term plans: enhance the Globus File Catalog to support a distributed backend
- Long-term plans: add complimentary Publishing Service (based on LIGO LDR) to replicate data files among sites
- Deployment of Globus RLS on Wisconsin EGEE testbed
 - Currently: Uses Globus RLS for the GLite replica catalog
 - Future: Working to replace the GLite file catalog

CGCC University of Wisconsin-Madison Enabling Grids for E-sciencE

- Compute Element
 - Collaborated with the gLite team on adding PBS and LSF interfaces to Condor-G
 - Developed Condor-C according to meet gLite requirements
 - Collaborated with the gLite team on interfacing the WMS with Condor-C
- Data Management
 - Supported the evaluation and usage of Stork
- Prototype
 - Operated one of the two nodes of the testbed
 - Deployed a second VO on the UW node
 - Participated in the weekly eXtented Integration Meeting
- Virtual Data Toolkit (VDT)
 - Worked closely with EGEE deployment to meet their requirements and incorporate their enhancements



- Effective exchange of ideas, requirements, solutions and technologies
- Coordinated development of new capabilities
- Open communication channels
- Joint deployment and testing of middleware
- Early detection of differences and disagreements

gLite is not "just" a software stack, it is a "new" framework for international collaborative middleware development. Much has been accomplished in the first year. However, this is "just" the first step.