



Enabling Grids for E-science

NA3 Activity – Training and Induction

**Robin McConnell, NA3 Activity Manager,
NeSC, University of Edinburgh**

EGEE-II EU Review (CERN)

8/9 July 2007

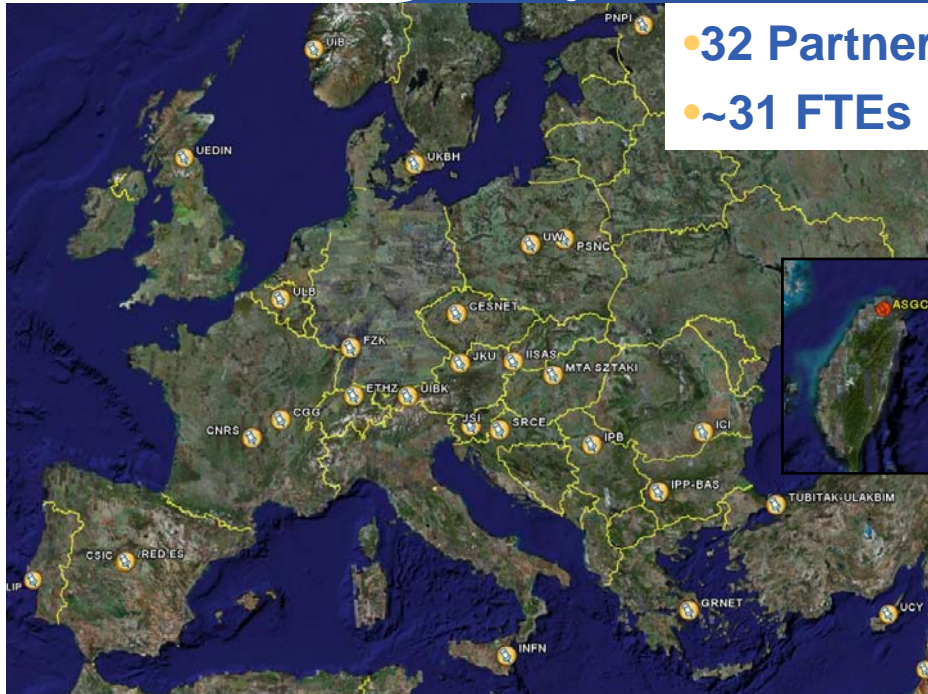
www.eu-egee.org



- **NA3 – Training and Induction**
 - Objectives
 - Organisation
- **Achieving Objectives**
 - Training Team
 - NA3 Training Resources
- **Issues & Plans**
- **Summary**

- **Expand portfolio of training materials & courses**
- **Train a wide variety of EGEE users (internal/external)**
- **Develop effective mechanisms for training end-users of the EGEE infrastructure**
- **Enhance e-Learning structure and provision of t-Infrastructure**
- **Validate cohorts of trainers & compile directory**
- **Collaborate in cross-activity initiatives**

- **Activity Manager – Robin McConnell (UEDIN)**
- **Deputy Activity Manager – Gergely Sipos (MTA-SZTAKI)**
- **t-Infrastructure – Roberto Barbera/Emidio Giorgio (INFN)**
- **Digital Library – Boon Low (UEDIN)**
- **Editorial Task Force (UEDIN / INFN / MTA-SZTAKI / CERN)**
- **Federation/Partner level NA3 leaders**

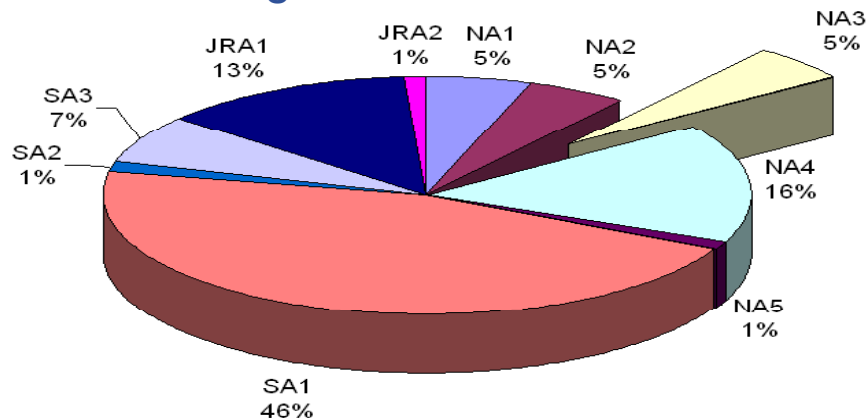


- 32 Partners in 26 countries
- ~31 FTEs

Funded Partners

Short Name	Country	Total PMs
JKU	Austria	24
UIBK	Austria	12
CESNET	Czech Rep.	12
MTA SZTAKI	Hungary	24
ICM-UW	Poland	12
PSNC	Poland	12
IISAS	Slovakia	12
JSI	Slovenia	6
UEDIN	UK	144
CSCS	Switzerland	12
CNRS	France	24
FZK	Germany	24
INFN	Italy	96
ULB	Belgium	12
UKBH	Denmark	24
UiB	Norway	12
IHEP	Russia	36
PNPI	Russia	24
IPP-BAS	Bulgaria	24
UCY	Cyprus	12
GRNET	Greece	24
TAU	Israel	24
ICI	Romania	24
LIP	Portugal	12
CSIC	Spain	12
RED.ES	Spain	12
IPB	Serbia	24
TUBITAK-ULAKBIM	Turkey	24
SRCE	Croatia	24
Total		738

EGEE-II Budget



- Overall target (*for both years of the project*) of 1500 participant-days has been exceeded (6628)
- 273 training events, with 3344 participants have been held in 108 different locations (41 Countries)
- All NA3 partners organised training events in EGEE-II
- Most active partners (participant-days/ joint events):
 - FZK, MTA-SZTAKI, INFN, GRNET, PNPI/IHEP, UEDIN
- Events Database has feedback from >60% of training events held since start of EGEE-II (Yr1-57%, Yr2-64%)
- Other EGEE Activities contributed to Training



Advertising events

Enabling Grids for E-science

[EGEE-II Public Homepage](#) | [EGEE-II Technical Homepage](#) | [EDMS Documents](#)
[Calendar](#) | [Agenda maker](#) | [Glossary](#) | [Site Map](#)



Training Events and Registration

[NA3 Home](#)

Events & Registration

[Suggestions & Requirements](#)

[Training Material](#)

[Add an Event](#)

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Search Events by Title

[Advanced Search](#)

Search

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No	Title	Location	Dates	Summary/Registration
1.	Introduction to gLite RESPECT tools at EGEE08 conference	Istanbul, Turkey	20 - 21 September, 2008	
2.	6th International GridKa School	Forschungszentrum Karlsruhe, Germany	8 - 12 September, 2008	
3.	Tutorial: Distributed Data Analysis using R SIMDAT	TU Dortmund, Germany	11 August, 2008	
4.	Grid and e-Science	Valencia, Spain	15 - 18 July, 2008	
5.	Train the Trainers	Geneva CERN, Switzerland	16 - 18 June, 2008	
6.	Tutorial : Initiation l'utilisation de la Grille EGEE/LCG	Palaiseau 91, France	5 - 6 June, 2008	
7.	Initiation l'utilisation de la grille EGEE / LCG	Palaiseau, France	5 - 6 June, 2008	
8.	EU-IndiaGrid Workshop - Interoperability and Interoperation between Europe India and Asia	Barcelona, Spain	2 June, 2008	
9.	SIMDAT: Process Integration Training	Leuven, Belgium	30 May, 2008	
10.	Grid computing technologies	Bratislava, Slovakia	28 May, 2008	
11.	Introduction to Cluster Computing and Grid Environment 2	Zagreb, Croatia	27 - 29 May, 2008	
12.	gLite Introduction at FHTW Berlin	Berlin, Germany	20 May, 2008	
13.	Introduction to Cluster Computing and Grid Environment	Zagreb, Croatia	13 - 15 May, 2008	
14.	SIMDAT: Grid-based workflow technology	London, United Kingdom	12 May, 2008	

<http://www.egee.nesc.ac.uk>

Training Event Locations

Argentina	1	Hungary	9	Russia	32
Austria	13	Israel	4	Serbia	4
Belgium	12	Italy	6	Singapore	1
Brazil	4	Latvia	1	Slovakia	4
Bulgaria	7	Lithuania	2	Spain	12
China	4	Malaysia	1	Sweden	1
Croatia	8	Montenegro	1	Switzerland	8
Cyprus	6	Morocco	2	Taiwan	6
Czech Republic	2	Netherlands	1	Tunisia	2
Estonia	1	Norway	2	Turkey	9
Finland	1	Philippines	1	Ukraine	1
France	10	Poland	3	United Kingdom	40
Germany	12	Portugal	5	Venezuela	2
Greece	18	Romania	14	Grand Total	273



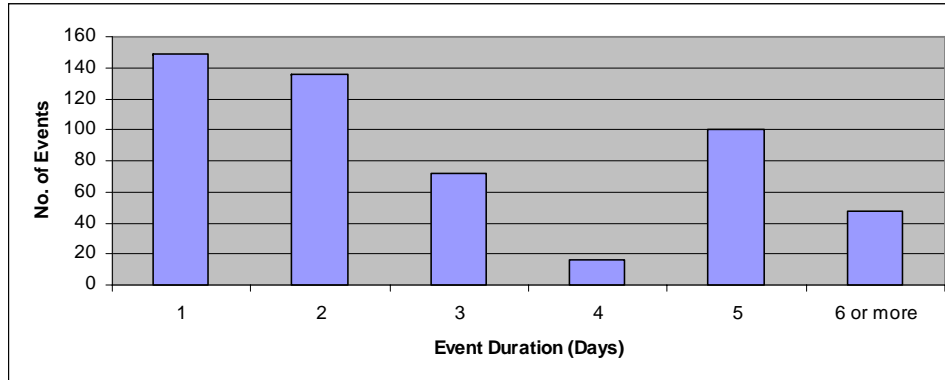


Resources

- **gLite**
- EGEE Training Material
- Tutors
- Gilda

International Winter School
on **Grid Computing 2008**
6th February - 12th March 2008

- 38 Participants
- 1200 messages on Discussion Forum
- ~20 hours per week (student average)

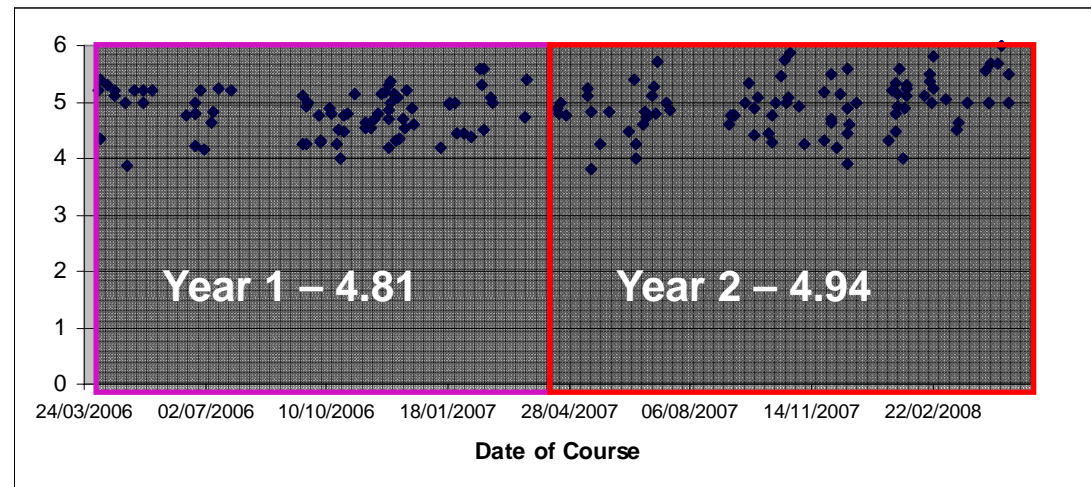


< Event Duration

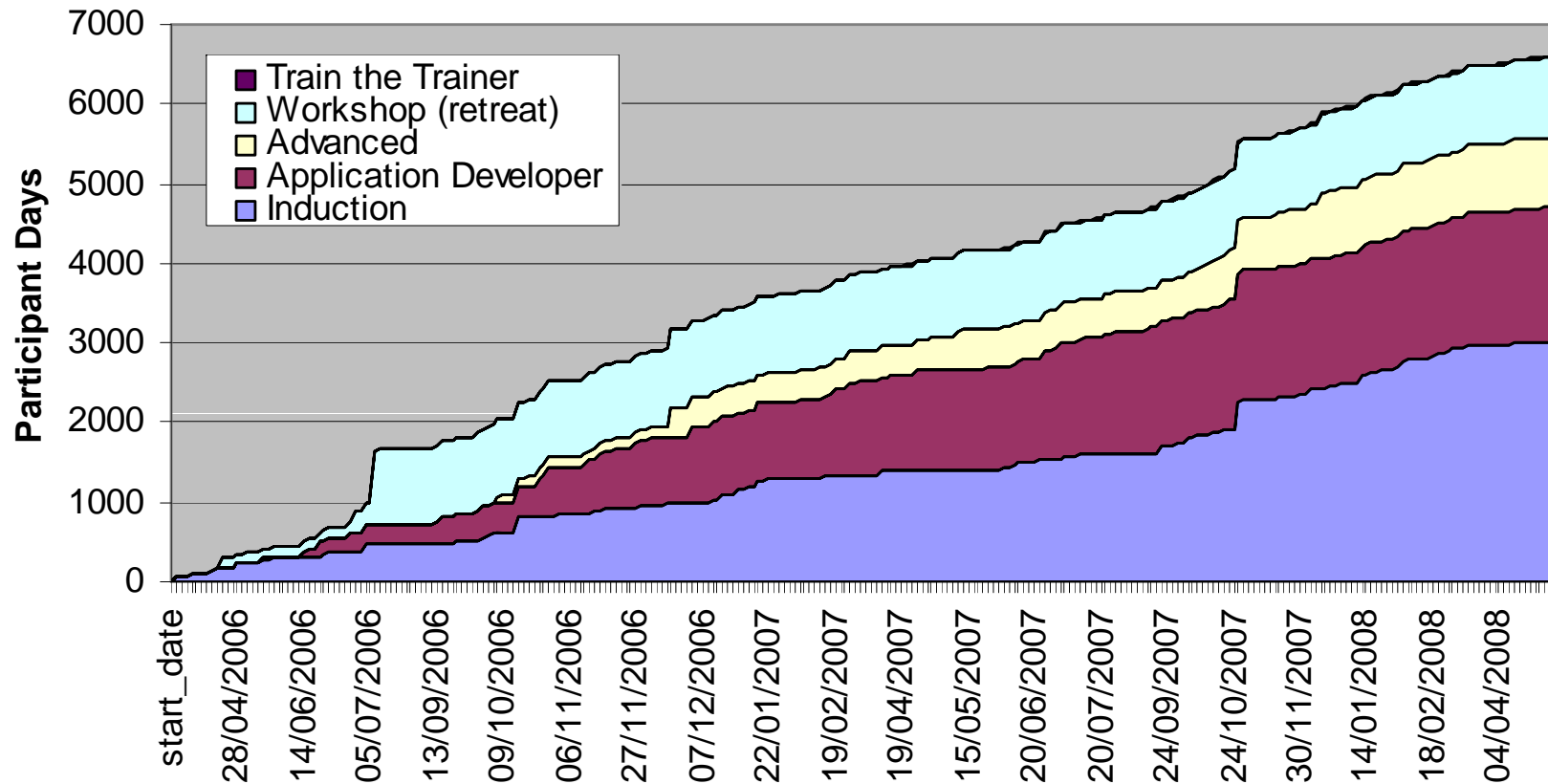
Average course length 2.0 days

Feedback Ratings over time >

Average evaluation score 4.89 (out of 6)



Cumulative Participant Days - EGEE-II Training Events



- **“Training the Trainers”**
 - Designed to enhance the expertise of project partners
 - Provide Partner autonomy
 - Experts ensure quality of message
 - Balance - Technical vs Pedagogy
- **A directory of accredited trainers created:**
 - Currently lists 89 trainers
 - Record of experience in Induction, Application Developer, Sys Admin courses

NA3 Resources

HOME | ABOUT | SEARCH | CREATE | HOW-TOS

• Addition of "How-To"s

Rebranding

EGEE LIBRARY

EDITORIAL EXEMPLAR ARTICLE COURSE EVENT IMAGE MODULE PRESENTATION TUTORIAL

Improved Search & Filter

Search EGEE Go full text

Introduction of "Feeds"

Library facilitates the use of various training and dissemination resources related to the Enabling Grids for E-science (EGEE) project

Translated Material

Editorial Exemplars

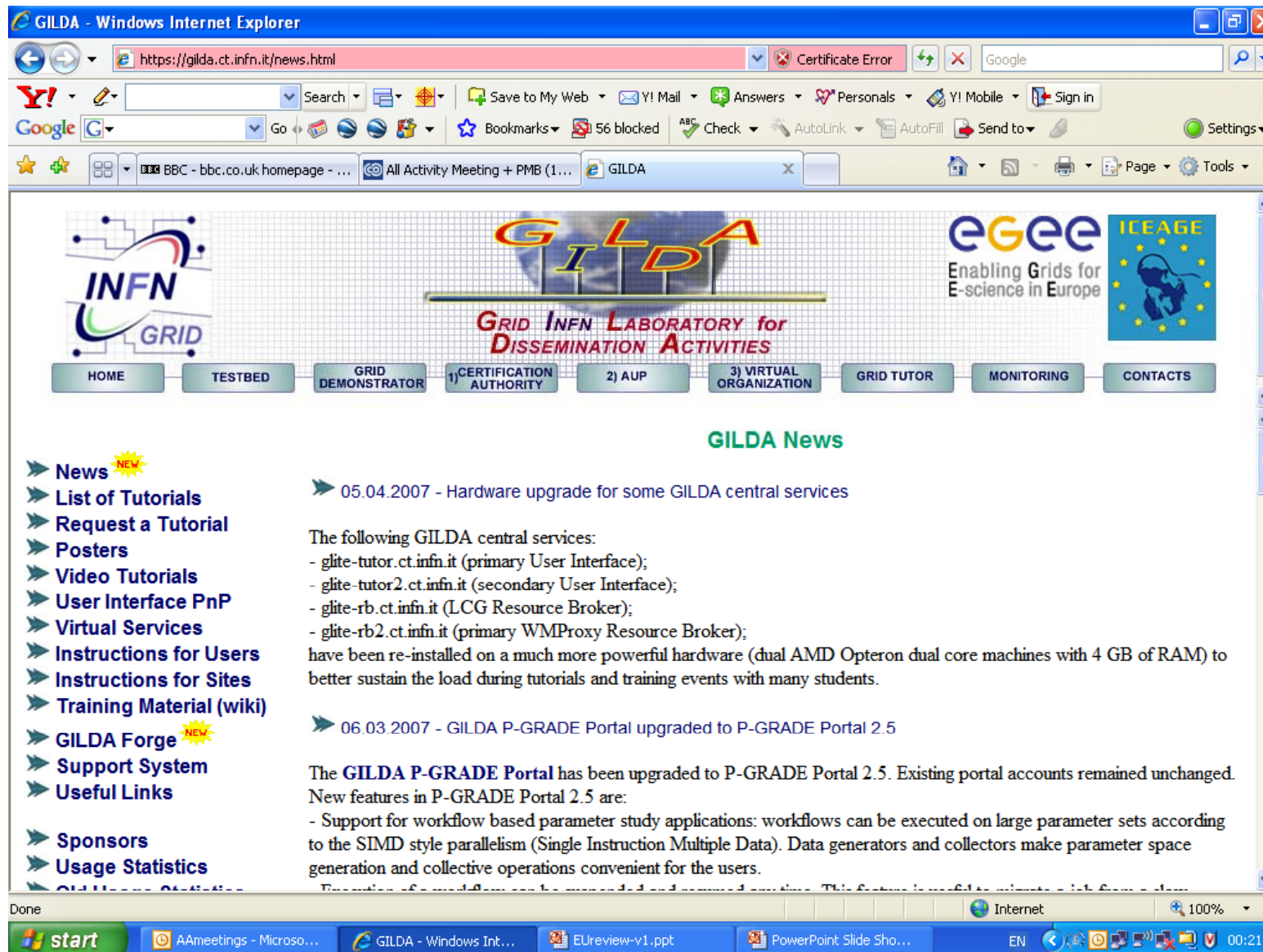
- Data management in gLite
- R-GMA for monitoring grid applications (talk and practical)
- EGEE Middleware: The Resource Broker
- Next Steps with EGEE
- Data Management in gLite

Recent Training Resources

- A HunGrid infrastruktúra és alkalmazásfejlesztő környezete
- Grid felhasználás fázisátmenetek tanulmányozására
- Tricks & Trades series: AMGA Metadata Services: examples and usage scenarios
- The Web Services Resource Framework and

- **Repository hosting**
 - **NA2 images uploaded (“corporate logos”)**
 - **Site security material (ISSEG Project)**

- **Addition of usage statistics (Google Analytics)**
 - **Allows monitoring**
 - **Usage level**
 - **Location of Users**
 - **Types of pages accessed**



INFN GRID

GILDA

EGEE Enabling Grids for E-science in Europe

ICEAGE

HOME TESTBED GRID DEMONSTRATOR 1) CERTIFICATION AUTHORITY 2) AUP 3) VIRTUAL ORGANIZATION GRID TUTOR MONITORING CONTACTS

GILDA News

- **News** ^{NEW}
- List of Tutorials
- Request a Tutorial
- Posters
- Video Tutorials
- User Interface PnP
- Virtual Services
- Instructions for Users
- Instructions for Sites
- Training Material (wiki)
- GILDA Forge ^{NEW}
- Support System
- Useful Links
- Sponsors
- Usage Statistics
- Old Home Statistics

➤ 05.04.2007 - Hardware upgrade for some GILDA central services

The following GILDA central services:

- glite-tutor.ct.infn.it (primary User Interface);
- glite-tutor2.ct.infn.it (secondary User Interface);
- glite-rb.ct.infn.it (LCG Resource Broker);
- glite-rb2.ct.infn.it (primary WMProxy Resource Broker);

have been re-installed on a much more powerful hardware (dual AMD Opteron dual core machines with 4 GB of RAM) to better sustain the load during tutorials and training events with many students.

➤ 06.03.2007 - GILDA P-GRADE Portal upgraded to P-GRADE Portal 2.5

The **GILDA P-GRADE Portal** has been upgraded to P-GRADE Portal 2.5. Existing portal accounts remained unchanged. New features in P-GRADE Portal 2.5 are:

- Support for workflow based parameter study applications: workflows can be executed on large parameter sets according to the SIMD style parallelism (Single Instruction Multiple Data). Data generators and collectors make parameter space generation and collective operations convenient for the users.

- **GILDA is a t-Infrastructure for EGEE and other European projects, providing resources for training events**
- **Available for Grid novices training**
- **The GILDA t-Infrastructure supported by 12 sites, mostly managed on a best-effort basis**
- **GILDA is also available for porting applications**
- **Efforts have been made to improve documentation and facilities offered to grid beginners**

- **Virtual/Plug'n'Play User Interfaces: preconfigured UIs installable on the majority of machines, freeing users from the requirement of an account on a “real” UI**
- **Improved integration between GILDA and the P-GRADE grid portal**
- **Major efforts to install monitoring tools**
 - SAM (Service Availability Monitoring) has been installed
 - GILDA is also monitored by GStat

- **Editorial Task Force (ETF)**
 - Intra-NA3 group
 - Peer-reviewing and repurposing existing training materials
 - mainly presentations and tutorials
 - Exemplar Material
 - Template
 - Online material

- **Phase 1 (completed September 2006)**
 - Set up of ETF wiki and web-pages, commenting initially on induction-level courses
- **Phase 2 (completed January 2007)**
 - Established exemplars for Induction, Sys Admin, Installation, Training Trainers (29 exemplars now complete)
- **Phase 3 (Ongoing)**
 - All trainers encouraged to submit updated modules
 - increase App. Dev. material

- **User Information Group (UIG)**
- **Cross-activity group, performed editorial function**
 - provision of essential user information, certified as up to date.
 - “one stop shop” for documentation on commonly-used processes in EGEE.



<http://www.egee.nesc.ac.uk/uig>

UIG Index Page



Name	Revision	Last changed date	Last review date	Reviewer	Contact
UIGindex.html	114	2008-03-20	2008-02-26	Alistair Mills	project-eu-egee-uig-support@cern.ch

UIG Index Page

Site Index

The table below lists the titles of the current set of User Information Group Pages. Click on any title in the table to view the corresponding page.

- 21 Articles (Instruction sets)
- Tasks range from Simple user to more advanced user tasks

Page No	Title
0-01	Introduction
0-02	Acronym Reference Page
1-01	Getting a Certificate
1-02	Registering with a Virtual Organisation
1-03	Proxy Certificates
1-04	Getting an Account on a User Interface
1-05	Setting up the UI Environment
1-06	Simple Job Cycle
1-07	Retrieving Simple Job Cycle
1-08	Job-compatible Resources
1-09	Basic Data Management
2-01	Proxy Renewal with MyProxy
2-02	Querying the Information System
2-03	Service Discovery
2-04	Low Latency (SDJ) Scheduling
2-05	Installing a qLite User Interface
2-06	VO Software Installation
2-07	MPI Jobs
2-08	Job Monitoring (via R-GMA)

Retrieving job history

This page describes how to retrieve the history of a submitted job.

Retrieving job history

This page describes how to retrieve the history of a job.

The commands used to retrieve the history of a job are:

See job history `glite-wms-job-logging-info`

All job management commands require the user to have a valid proxy to work, as all interactions with the WMS are secure and authenticated.

Retrieve the history of a job

Sometimes, it is useful to know the history of a job through the WMS from submission to end, for example to better understand the reason of a failure, when `glite-wms-job-status` is not enough. The history, also called *logging information* of a job can be retrieved by doing:

```
$ glite-wms-job-logging-info [-v <verbosity>] <jobId>
```

or

```
$ glite-wms-job-logging-info [-v <verbosity>] -i <file_path>
```

where `<jobId>` and `<file_path>` are respectively a jobId and a file containing a list of jobIds (like the file produced by the `-o` option of `glite-wms-job-submit`). The optional parameter `-v <verbosity>` is used to set the amount of detail in the output, and it is advisable to use `-v 3` to get the most complete information.

- **Market survey of commercial Grid training (Qi3)**
 - 65% believe availability of commercial training → >Grid technology adoption
 - 32% would adopt Grid technology if commercial training available
- **Linalis – potential solution for commercial training (Business Associate)**
 - EGEE provide Linalis with training
 - Access to training material
- **BEinGRID project accessing Digital Library for Training Material**

- **Middleware releases**
 - *Ensuring up-to-date material*
 - *Stable Training platform*
- **Site administrator training**
 - *New NA3/SA1 Training members to assist*
- **Event feedback summary - Low return rate**
 - *Management Follow-up →improvement in the last few months (Jan-Apr 85% return rate)*
- **Digital Library “hit” rate lower than expected**
 - *Average 168 visits per month*
 - *Survey - 33% awareness, 92% found useful*
 - *More Publicity required*

- **Sustainability**
 - Train the trainer events
 - Develop autonomous training groups
 - Further develop Trainer accreditation
- **Scalability**
 - Increased remote learning facilities
- **Participants → Committed Users**
 - Induction/Porting Application workshops

- All Deliverables and milestones completed
- NA3 partners have delivered 273 training events in EGEE-II, surpassing targets, and with wider geographical coverage than anticipated
- e-Learning and t-infrastructure provision have been continuously enhanced during EGEE-II
- Participated in inter-partner and cross-activity collaborations (ETF, UIG)
- Expanding numbers of trainers by running “Training trainers” events, especially in new or distant NA3 partners