



Enabling Grids for E-sciencE

NA3 Activity – Training and Induction

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www.eu-egee.org







NA3 Objectives in EGEE-II

Enabling Grids for E-sciencE

- 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

Gee6

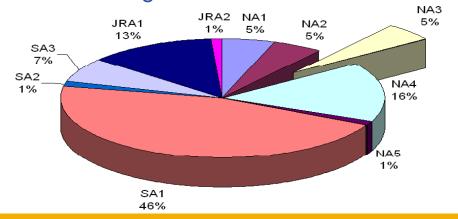
NA3 in Numbers

Funded Partners

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EGEE-II Budget



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



Training Events

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Training Event Locations

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Europe (EGEE)

Austria	13	Montenegro	1
Belgium	12	Netherlands	1
Bulgaria	7	Norway	2
Croatia	8	Poland	3
Cyprus	6	Portugal	5
Czech Republic	2	Romania	14
Estonia	1	Russia	32
Finland	1	Serbia	4
France	10	Slovakia	4
Germany	12	Spain	12
Greece	18	Sweden	1
Hungary	9	Switzerland	8
Israel	4	Turkey	9
Italy	6	Ukraine	1
Latvia	1	United Kingdom	40

South America

Argentina	1
Brazil	4
Venezuela	2

North Africa

Tunisia	2
Morocco	2

Asia/Pacific

China	4
Malaysia	1
Philippines	1
Taiwan	6
Singapore	1



EGEE Collaboration events

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e-Learning event

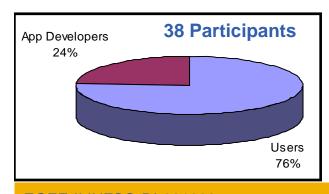
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Resources

- •gLite
- EGEE Training Material
- Tutors
- •GILDA provided testbed for ALL technologies

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

- length 5 weeks
- ~20 hours per week (student average)



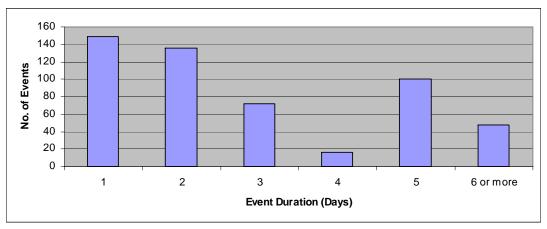
- •93% completed questionnaire
- •75% structure "good"
- 90% course "correct length
- •80% interested in individual technology week





Training Event Data in EGEE-II

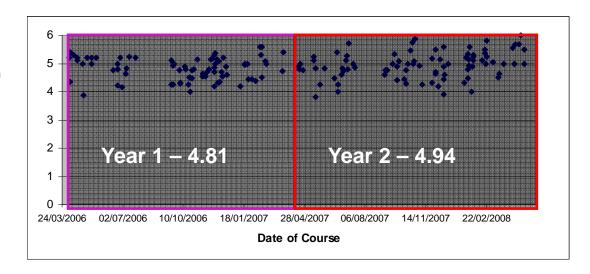
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< Event Duration

Average course length 2.0 days

Feedback Ratings over time > Average evaluation score 4.89 (out of 6) (n=165)

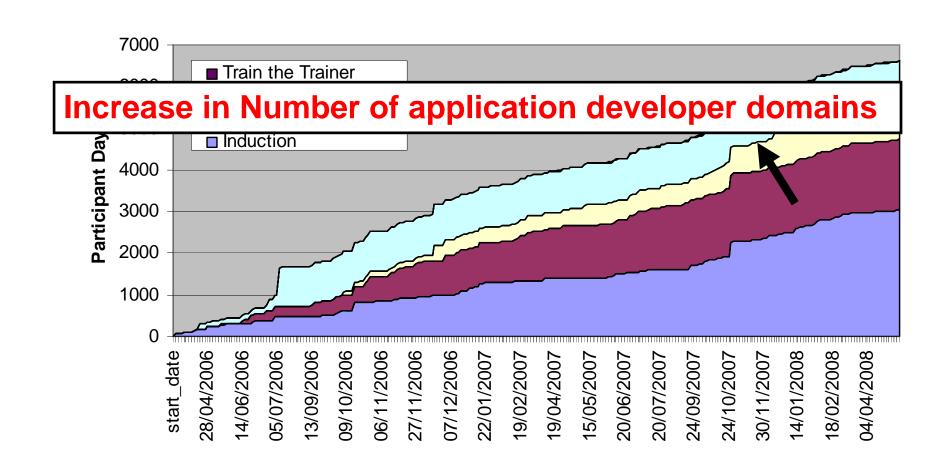




Breakdown by Event Type

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Cumulative Participant Days - EGEE-II Training Events





Development of EGEE Trainers

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"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





GILDA t-Infrastructure





GILDA t-Infrastructure

- Available for Grid novices training 24/7
- Bookable for Training events (also commercial events)
- GILDA is also available for porting applications
 - Commercial applications
 - Testbed availability for new applications
- Efforts made to improve documentation and facilities offered to grid beginners
 - Online tutorials available (wiki)

Check your voms proxy

Once that your proxy has been created, you can gather info on it through the voms-proxy-info command. It is much more useful if ran with it will show also the VO related infos added by the VOMS server, such as belonging groups (tutor in this case) or roles. You may note also to first is related to the proxy itself, the second one is referred to the AC infos added by the VOMS server. They have to be valid both in order to perform operations.

```
[giorgio@glite-tutor giorgio] $ voms-proxy-info --all subject : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN/CN=Emidio Giorgio/Email=emidio.giorgio@ct.infn.it/CN=p issuer : /C=IT/O=GILDA/OU=Personal Certificate/L=INFN/CN=Emidio Giorgio/Email=emidio.giorgio@ct.infn.it
```



GILDA improvements

Stability of GILDA vastly improved

- Closer "match" to production infrastructure
- Major efforts to install monitoring tools
 - SAM (Service Availability Monitoring) has been installed
 - GILDA is also monitored by GStat/GridICE

Improved Interfaces

- 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



User Information Group (UIG)

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Page No Title			
0-01	•Cross-activity group,	<u>Introduction</u>	
0-02	performed editorial	Acronym Reference Page	
1-01	function	Getting a Certificate	
1-02		Registering with a Virtual Organisation	
1-03	•"one stop shop"	Proxy Certificates	
1-04	for	Getting an Account on a User Interface	
1-05	documentation	Setting up the UI Environment	
1-06	on commonly-	Simple Job Cycle	
1-07	used processes	Retrievir Simple Job Cycle	
1-08	in EGEE.	Job-compatible Resources	
1-09	•21 Articles -	Basic Data Management	
2-01	wide range		
2-02		Querying the Information System	
2-03		<u>Service Discovery</u>	
2-04		Low Latency (SDJ) Scheduling	
2-05		<u>Installing a gLite User Interface</u>	
2-06		VO Software Installation	
2-07		MPI Jobs	
2-08	noon on uk/uig	<u>Job Monitoring (via R-GMA)</u>	

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



UIG pages (example)

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-w 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

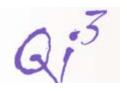
glite-wms-job-logging-info [-v <verbosity>] -i <file_path>

where <jobld> 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 option of glite-wms-job-submit and it is advisable to use -v 3 to get the most complete information.



Industrial Training

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- Market survey of commercial Grid training
 - 65% believe availability of commercial training → >Grid technology adoption
 - 32% would adopt Grid technology if commercial training available



Potential solution for commercial training (Business Associate)

- Geneva-based IT Training company
- Open-source software training (Linux LPI)
- EGEE providing Linalis with:
 - Training
 - Access to training material
 - Use of t-Infrastructure (GILDA)



 BEinGRID project accessing Digital Library for Training Material



- Middleware releases
 - Ensuring up-to-date material vs Stable Platform
- 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
- International Summer (& Winter) Schools in Grid Computing no longer funded (ISSGC, IWSGC)



Exploitation Plans

Sustainability

- Train the trainer events
 - Develop autonomous training groups
- Further develop Trainer accreditation

Scalability

- Increased e-learning facilities
- Further development of library
- scheduled distance learning courses
 - Online tutorials/exercises
 - Assessments
 - Courses range from one-off presentations -> larger scale schools

Participants → Committed Users

Induction/Porting Application workshops



Summary

- 273 training events delivered, and with wider geographical coverage than anticipated
- Resources continuously enhanced during EGEE-II
- Participated in inter-partner and cross-activity collaborations (ETF, UIG, Training Events)
- Expanding numbers of trainers by running "Training trainers" events