



NGS Training & Outreach

David Fergusson



Connecting Infrastructure

Connecting Research



NGS

Introduction

NGS -1

System of providing appropriate training events to help stimulate users into adopting the NGS development of the infrastructure help bring new applications.

Mechanisms for advertising the training and monitoring the quality

targeting of the training by surveying participants not only at events but also subsequently.

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NGS-2 developments

Working to provide training targeted towards the needs of particular user communities.

Putting in place mechanisms to stimulate and support the development of local and community based training and education to encourage potential new users of the infrastructure.

Move towards developing online training

Continue program of training events

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Developing materials

Experience has shown that the most effective strategy is to develop materials using tradition face to face events

testing with real users is possible and then to re-develop the materials for online use.



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Training Events for Research Communities

- > 67 events
- > 10 locations
- > 862 participants
- > 1754 participant days committed.

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Distribution of UK training events

http://www.communitywalk.com/edinburgh_uk/ngs_training/map/257688



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Internationally

1st year of EGEE III



- <http://maps.google.co.uk/maps/ms?ie=UTF8&hl=en&msa=0&msid=105309604395982569374.00046692b0ff3a97a69e8&ll=46.679594,11.601563&spn=40.957588,79.101563&z=4>

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Induction courses

These introduce concepts of Grids and of UK e-infrastructure; give an orientation to the National Grid Service and give practical experience of use of the NGS compute and data services. These courses are suitable for someone with some UNIX experience (familiar with command-line interfaces and an editor). Participants will mostly be

- researchers seeking to explore the relevance of the NGS to their own goals
- system managers and administrators seeking to understand the opportunities and challenges that arise with the NGS.



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Application Developer Courses

These build on the concepts to explore a range of ways in which developers can use the basic data and computing services to create application-domain software.

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Grid Data Services

This course will explore how data resources can be exposed as services to users of the NGS. The data might be held as relational databases, XML databases or flat-files. Deployment of an OGSA-DAI service permits these resources to be exposed to grid users, with computation "activities" being used in workflow that is executed close to the data.



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"Training the trainers" courses

The NGS team is keen to support others in delivering their course material. The "training the trainers" course is being run on demand, to help to stimulate growth in the number of courses that can be run. The course explores the organisational as well as the technical aspects of running courses.



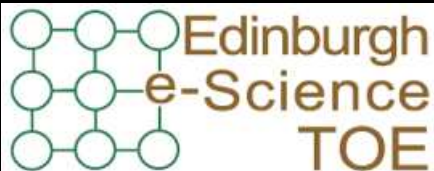
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Technology Update Courses

This is a one-day course to introduce established users of the NGS to the new services that have recently been deployed, including the NGS Applications Repository, GridSAM services, the (pre-production) Resource Broker and VOMS.



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Training Outreach and Education

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RSS

UK Training Events

Organisers of training events to be held in the UK are invited to add to this list via the link: [Add a new Event](#).

UK e-Science and NGS training material is available in the UK e-Science collection in the [ICEAGE Digital Library](#).



Search Events by Title

[Advanced Search](#)

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No	Title	Location	Dates	Summary/Registration
1.	Advanced Distributed Services Summer School	Oxford	24 August - 6 September, 2009	
2.	Advanced tools and technologies for collaborative research	Manchester	6 November, 2008	
3.	Managing Data: Advanced Research Techniques for the Arts and Social Sciences	Bristol	18 September, 2008	Summary
4.	SIMDAT: Grid-based workflow technology	London	12 May, 2008	
			23 - 25 April, 2008	
			25 March - 20 April, 2008	
7.	Using OGSA-DAI to Grid enable data for the Arts Humanities and Social Sciences - part 1	Edinburgh	18 - 20 March, 2008	Summary
8.	2nd UK Computational Steering School	Manchester	18 - 19 March, 2008	
9.	Standards for Interoperable Grids: Experience from NextGRID and OMII-Europe	Edinburgh	17 March, 2008	
10.	International Winter School on Grid Computing 2008	Edinburgh	6 - 12 March, 2008	
11.	Grid tutorial for physicists	London	28 January, 2008	Summary
12.	e-Science and The Grid for Bio/Health Informaticians	Manchester	14 - 18 January, 2008	Summary
13.	1st UK Computational Steering School	Rutherford Appleton Lab.	11 - 12 December, 2007	
14.	Workshop for UK e-Science Educators	Edinburgh	10 December, 2007	

<http://www.nesc.ac.uk/training/events/index.cfm>

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NGS Different Interfaces

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CDDL Configuration Description Language

Info: J. Tatemura (author) 2007-01-12

Successful realization of the Grid vision of a broadly applicable and adopted framework for distributed system integration, virtualization, and management requires the support for configuring Grid services, their deployment, and managing their lifecycle. A major part of this framework is a language in which to describe the components and systems that are required. This document, produced by the CDDL working group within the Open Grid Forum (OGF), provides a definition of the XML-based configuration description language and its requirements.

<http://www.ogf.org/documents/GFD.85.pdf>

Report for the GGF 15 Community Activity: Leveraging Site Infrastructure for Multi-Site Grids

Info: Von Welch (author) 2007-01-18

This document summarizes the Community Activity "Leveraging Site Infrastructure for Multi-Site Grids" held at GGF 15 on October 3rd in Boston.

<http://www.ogf.org/documents/GFD.89.pdf>

OGSA Basic Security Profile 1.0 – Core

Info: T. Mori (author) F. Siebenlist (author) 2007-01-12

The growing number of Web services specifications makes it important to understand and define the interaction and use of these specifications to ensure interoperability. In the wider technical domain of distributed system management and grid computing, the OGSA WSRF Basic Profile 1.0 [OGSA WSRF Basic Profile] provides the first normative profile, addressing issues regarding the addressing, modeling and management of WS-Resources, but it does not address the details of the security aspects of interoperability issues.

Therefore, in order to ensure the secure and interoperable interaction of Web services in the context of distributed resource management and grid computing, we define here the OGSA Basic Security Profile 1.0 – Core, a profile which is intended to be used along with one of the OGSA Basic Profiles, such as the OGSA WSRF Basic Profile 1.0 [OGSA WSRF Basic Profile].

The OGSA Basic Security Profile 1.0 – Core described in this document is an OGSA Recommended Profile as Proposed Recommendation, as defined in the OGSA Profile Definition [OGSA Profile Definition]. The OGSA Basic Security Profile 1.0 – Core describes uses of widely accepted specifications that have been found to enable interoperability. The specification considered in this profile is the basic Web services

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[OGSA-DAI 3.0 Activity Writing Tutorial](#)

[Tutorial] 2008-03-19

Using [OGSA-DAI](#) to Grid enable data for the Arts, Humanities and Social Sciences


[Event] 2008-03-18

[An Introduction to Grid Data Services using OGSA-DAI](#) 

NeSC TOE team, OGSA-DAI team [Event] 2007-10-11

[What is OGSA-DAI?](#) 

OGSA-DAI team [Presentation] 2007-07-31

[Overview of recent deployment of software services on the NGS](#) 

[Presentation] 2007-06-20

[NGS Applications Repository \(The NGS Portal\)](#)

[Presentation] 2007-06-20

[Technology Update for NGS Users](#)

[Event] 2007-06-20

<http://library.iceage-eu.org/>



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For e-Science & Grid Computing Education



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This Month

[eRoadshow 2008-11-06](#)

[4 ta red y visualizacin grafica tecnologia 2008-11-12](#)

[Hands-on workshop in BGU 2008-11-12](#)

[Grid and Graphic Visualization Tehnology 2008-11-12](#)

[Grid for primers 2008-11-16](#)



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International Summer School on Grid Computing 2008

Hungary, 6th - 18th July

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- Registration
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- Accommodation
- Cost
- FAQ
- Archive
- Sponsors
- Prerequisite Exercises
- Programme Committee
- Local Organising Committee
- Staff
- Travel
- Language
- Payment
- Announcements

:: Announcements


ISSGC'08 has begun.
Number of participants: **45**

[Announcements RSS Feed](#) 

- Grid computing school shares teaching resources through digital l... [+] [23/06/2008]
- Registrations have closed [20/05/2008]
- Deadline for applications extended [07/05/2008]
- Applications now available [04/03/2008]

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:: Silver Sponsor



"It has become a yearly reference point for Grid computing where the very best Grid developers and scientists come and review the state of the art and teach an impressive audience of very smart students. I am happy that Microsoft has agreed to be main sponsor of this conference again this year and I am sure that the company with my colleagues will be very well represented."

- Fabrizio Gagliardi, Microsoft Research

:: About the School

The School will be held in Hungary from 6th to 18th July 2008.

This is a rare opportunity to hear about the latest achievements from Europe, North America and Asia, as well as to gain experience of a variety of Grid systems.

The School will boost students' capabilities for research and innovation thanks to lectures, discussions, laboratory sessions, tutorials and group work. These activities will be delivered by leading authorities in the fields of advanced grid technology, applications of e-Science and distributed systems research.

Contacts


enquiries
isgc08@lists.nesc.ac.uk
practicals Support
ISSGC08_practicals_support@lists.nesc.ac.uk

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Biomed Grid School 2008

from
Monday 12 May 2008
 (09:00)
 to **Friday 16 May 2008**
 (17:00)
 at **Varenna (Sala Fermi)**
 chaired by:
Luciano Milanesi (CNR-ITB)
 support: [bioinfogrid AT itb.cnr.it](mailto:bioinfogrid@itb.cnr.it)

Description: Grid Summer school for Biomed sector

[Monday 12 May 2008](#) | [Tuesday 13 May 2008](#) | [Wednesday 14 May 2008](#) | [Thursday 15 May 2008](#) | [Friday 16 May 2008](#)

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10:30->10:45 Welcome Biomed Grid Summer School 2008

10:30 Welcome Biomed Grid Summer School 2008 (15)	Luciano Milanesi (CNR-ITB)
---------------------------------------------------	----------------------------

10:45->12:15 Grid middleware

10:45 gLite technical aspects and installation (30)	Cristina Aifitimiiei (INFN)
11:15 the gLite Data Management system (30)	
11:45 the gLite Workload Management System (30)	

12:15 Lunch break

14:00->17:15 The latest developments in Grid technology

14:00 Secure Storage service for the gLite middleware (30)	Diego Sardaci (INFN)
14:30 Overview on monitoring tools for Grid Systems - GridICE (30)	Antonio Pierro (INFN)
15:00 Introduction to GENIUS portal (30)	

15:30 break

15:45 AGMA (30)	
16:15 Practical on gLite and GENIUS (1h15)	

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09:00->12:15 Grid Portals

Description:

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Advanced Distributed Services Summer School 2009



August 24th - September 4th 2009

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e-Learning

International Winter School in Grid Computing - 2009 March

Camera and Voice

080226 IWSGC Foster.ppt

How Do We Answer

Empirical

Attendee List (34)

- Luke Humphry
- Ian Foster
- Petar Jandric
- Aengus McCullough
- amrey@epcc.ed.ac.uk
- amrey@epcc.ed.ac.uk 2
- Anca Hangan
- Angel deVicente

Ask for Help! (Q & A)

Luke Humphry: You can ask for support here

Luke Humphry: questions and answers will be

35 students

1 month long

1 week per
technology

3 interactive talks by
research leaders

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Fostering national and
international cooperation and
standards

It is important for training in the NGS to help foster the environment for training and education in grids

become a part of the general landscape of education in all subjects in the UK.

This process has to be supported

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Open Grid Forum

Education and Training Community Group

The group is now publishing documents based on this work in the fields of:

- Intellectual Property Rights in training and education for grids

- Teaching-Infrastructure experiences and recommendations

- Curricula for grid training and education

- Certification of grid training

- Policy frameworks to support grid education and training

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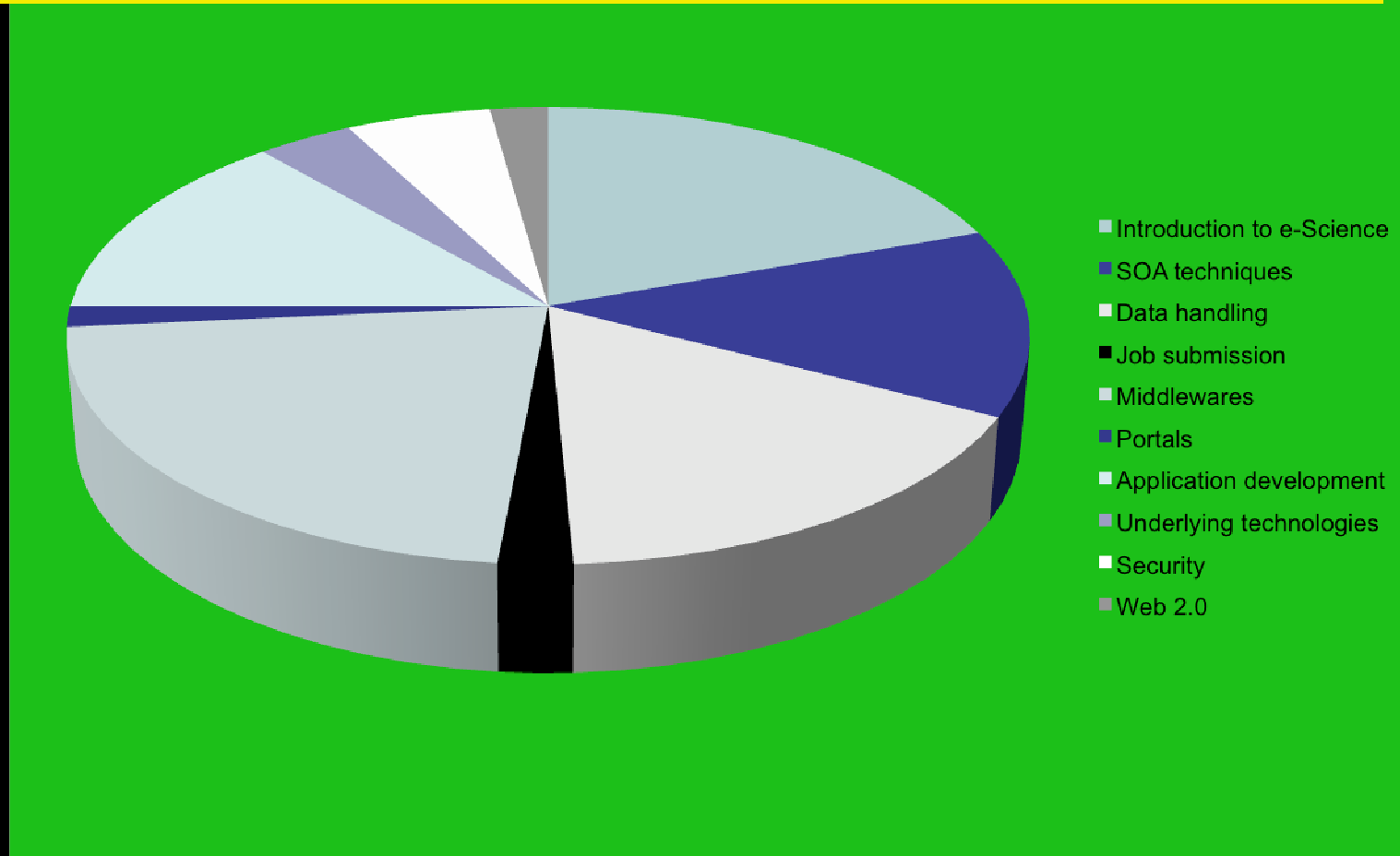
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eUptake

<http://www.zoomerang.com/Survey/ p=WEB228A8EFYDA9>



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Follow on surveys

2006

Question	Total	UK
training matched expectations (ave score, of 6)	72%	77%
original level of experience (ave score, of 6)	44%	35%
Course was of use in real work (ave of 6)	68%	73%
gained a certificate	52%	37.5%
renewed certificate	47%	25%
Gained experience	81%	87.5%
Improved ability to do work	57%	62.5%
Training others	33%	25%
Willing to train others in future	57%	62.5%

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Employment	Percent
University	48%
Research institute/centre	47%
Finance	1%
Other	2.4%



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Subject Area	Percent
High Energy Physics	16%
Astrophysics	12%
Biomedical	17%
Earth sciences	10%
Finance	1.2%
Social sciences	0
other	53%

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51% of respondents owned a e-Science digital certificate.

70% of respondents had used the grid.

44% of those attending induction events felt that they now required more advanced training.

8% had gone on to look for a more advanced course



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2008 Training Survey Results

- 110 attendees, in total, completed surveys at the All Hands Meeting, Oxford e-Research Conference and EGEE 2008 in September
- The top five training requirements from existing categories are:
 - 1) Introduction to e-Science (25)
 - 2) Application development (15)
 - 3) Monitoring (11)
 - 4) Security (9)
 - 5) Semantic grid (7)



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2008 Training Survey Results New Categories

Seven new categories for training have been identified from 2008 Results:

- 1) Data management (10)
- 2) Access Grid (6)
- 3) Interoperation (3)
- 4) Project management in a distributed environment (3)
- 5) Campus grid (1)
- 6) IPR and grid/e-Science (1)
- 7) Cloud computing (1)

Of these new categories, DATA MANAGEMENT ranks in the top five across old and new categories (4).



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t-Infrastructure

Training certificates being issued for training events from RAL.

Reservations of a few processors for each event.

A “user interface” machine being provided at TOE-NeSC, so participants connect to this by Java GSISsh

The NeSC Training Cluster has continued to be used in support of training events on particular technologies, for example Condor training.

A tool has been developed by the NeSC TOE Team that automates this distribution of certificates to the trainees via a (secure) web server.



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Future

Develop UK Training and Education community to leverage existing resources

Leverage collaborative work with related projects

Continue introducing online training to aid scalability

Develop UK t-Infrastructure provision

Reaching new research communities

Measuring requirements and impact

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