



# Enabling Grids for E-sciencE

# e-Learning Development Phase One: Digital Library

NA3, User Training and Induction UK National e-Science Centre

www.eu-egee.org







# Training requirements

- Best to take training to the audience ubiquitous
- Persistency of courses anytime
- Account for different background & skills
- Rapid response to rising training demands

"I prefer to learn whenever I need to and online!".

"Experts and trainers under heavy demand. Core training team already supporting events all over Europe and need to train more people within the current constraints".



# e-Learning

- Enhances accessibility to courses 24/7 availability
- Provides alternative training approaches
- Facilitates prerequisites training/focus on advanced
- Provides collaborative environments for all involved

Knowledge exchange

Self-paced, peer-topeer learning

Need to diversify training methods

Sharing and localising training resources



# Service oriented e-learning

Enabling Grids for E-sciencE

Activity Authoring	Course Validation	Learning Flow	Marking	Sequencing
Assessment	Curriculum	Personal Developm't	Reporting	Tracking
Course Management	Learner Management	Quality Assurance	Resource List	••••
AV Conferencing	Alert / Notification	Annotation / Review	Archiving	Authentication
Authorisation	Calendaring	Chat	Content Adaptation	Content Management
Email	Federated Search	Filing	Format Conversion	Forum
Harvesting	Identifier	Mapping	Messaging	Metadata Management
Packaging	Personalisation	Resolver	Scheduling	Search / Browse
Tracking	Service Registry	User Management	Whiteboard	

- e-Learning Framework http://www.elframework.org
- e-Framework http://www.e-framework.org/



# Digital library core services

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- Content management wiki approach
- Resource discovery: searching & browsing
- Content sensitive linking (object resolver)



#### ABOUT

EGEE Learning

Development

Contribute

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Discovery

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Page updated: 01/06/2005 About the website

## Welcome to EGEE Learning

This website contains information and prototype services for an initiative, EGEE Learning, to pilot e-learning for the Enabling Grids for E-science (EGEE) project which aims to develop production grid infrastructure for scientific purposes. The e-learning pilot is part of EGEE Networking Activity (NA3) to provide user training and induction.

#### News:

 The EGEE NA3 e-Learning initiative has been announced at the 3rd EGEE Conference. See "e-Learning: Requirements, Service Options and Plan" presentation. 20/04/05

**Grid in General:** What is grid computing? How does grid relate to e-science? What is *EGEE*, *CrossGrid*, *LCG*, *OSGA*, *Globus*, *GGF*? What are the toolkits available for developing grid applications? Learn more..



is a middleware produced jointly by different academic and industrial research centres from the EGEE Project to underpingrid applications. Learn more..

# Library Quick Search Enter keyword(s): Sort by: Title Go More advanced search options

more advanced search options available from "discovery" menu.

## **Current Modules**

- gLite
- Grid in General
- Using GENIUS
- XML
- WSDL

More...



# Digital library by EGEE I

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- Annotations and comments services
- Personal/localised resource collection management
- Interoperability with other digital library & e-learning environments (export/import)



# Infrastructure implementation

Enabling Grids for E-science

- Develop open source repository Fedora
- Storing both metadata and data as managed assets
- Web services (SOAP) APIs for accessing/management repository objects
- Standardisation of access API based on the de facto SRW/U and OpenURL protocols fedora

- Resource discovery services based on Fedora API
  - Simple and advanced search
  - Browse resource (based on type)
  - Results navigation
- Extension to the Fedora API to enable filtering of resources based on distinct" type and years within a results set
- Searching external repositories



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Page updated: 01/06/2005 About the website Found: 64 matches , displaying 1 - 15

□ + + 1 2 3 4 5 → → □

- "combined" LCG + gLite UI installation & configuration / Presentation / Emidio Giorgio
- Architecture of gLite WMS / Presentation / Salvatore Montforte , Marco Pappalardo
- Architecture of gLite WMS / Presentation / Marco Pappalardo , Salvatore Monforte
- Biomed developer's tutorial / Event
- Comparing LCG-2 and gLite (no-longer available) / Presentation
- Comparison of LCG-2 and gLite v1.0 / Presentation / E.Slabospitskaya
- Convergence of LCG-2 and gLite / Presentation / James Casey
- Current status of gLite / Presentation / Erwin Laure
- Deployment Process and gLite Transition / Presentation / Markus Schulz
- · Experience and plans using gLite (Biomed) / Presentation / Ignacio Blanquer
- Experience and plans using gLite (Biomed) / Presentation / Ignacio Blanquer
- Experience and plans using gLite (New applications) / Presentation / Giuseppe Andronico
- · Experience and plans using gLite (New applications) / Presentation / Giuseppe Andronico
- Experiences and plans using gLite in HEP / Presentation / D. Liko
- Experiences and plans using gLite in HEP / Presentation / D. Liko

#### **Library Quick Search**

Enter keyword(s):

Sort by:

Title ▼

Go

More advanced search options available from "discovery" menu.

#### Results filter

Resource type

 event / exercise / module / presentation / tutorial /

#### Year

unclassified / . / 2004 / 2005 /



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# Architecture of gLite WMS

.ppt .pdf

By Salvatore Montforte Marco Pappalardo

Type: Presentation

## wiki options

Enhance the metadata of this resource.

edit history

export



# Content & metadata management

**Enabling Grids for E-science** 

- Content management in federated contexts:
- Building on the Fedora service API (-M)
- Wiki services for digital library:
  - Metadata wiki based on W3C XForms (rich user interface)
  - Versioning and history
- Interoperability
  - Exporting objects in e-learning and digital library standards
- Metadata enrichment reusing existing metadata







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Туре	Presentation	
Title	Architecture of gLite WMS	
Ву		
	Salvatore Montforte	
	Marco Pappalardo	
Date	≼ yyyy or dd/mm/yyyy	
Language	_	
URL		url,cvs,wsdl,rss etc.
File	Browse	Attach

## wiki options

All edits will be logged as history and subjected to the audit of library editors.

preview save



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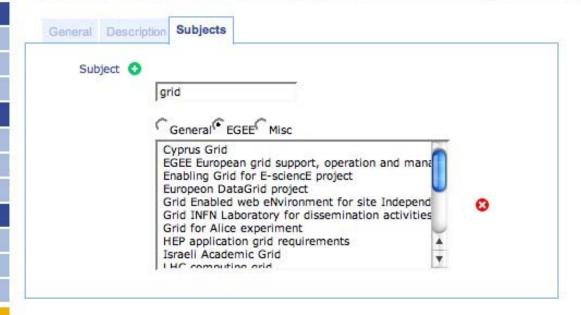
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## wiki options

All edits will be logged as history and subjected to the audit of library editors.

preview save

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# Resource History

#### Metadata

- 2005-10-10, 09:57:42: version: DC.6
   Grid Computing
- 2005-10-10, 09:45:10: version: DC.5
   Grid Computing
- 2005-10-10, 08:45:21: version: DC.4
   Grid Computing
- 2005-10-07, 13:45:59: version: DC.3
   Grid Computing
- 2005-10-07, 13:38:00: version: DC.2
   Grid Computing
- 2005-09-21, 10:20:31: version: DC.1
   Grid Computing
- 2005-09-21, 10:17:18: version: DC.0

#### Files

- 2005-10-10, 10:14:02: version txt.1 : Grid Computing
- 2005-10-10, 10:12:39: version txt.0 : Grid Computing
- 2005-10-10, 10:27:43: version pdf.0 : Grid Computing

#### wiki options

Select a specific edited version to view or edit content

Back



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Туре	Book	<u>*</u>	Select a type best fit the resource.
Title	Grid Comput	ting	
A resour	rce stub is a pie	ce of object	ct that doesn't exist in the library. It is

## wiki options

Create a resource stub by choosing a type with a title.

#### Create



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# **Grid Computing**

Type: Book

## wiki options

Enhance the metadata of this resource.

edit history

export



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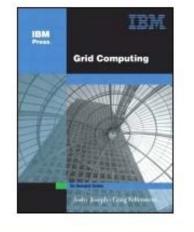
About the website

# **Grid Computing**

toc

ISBN: 0131456601

Type: Book



#### wiki options

Enhance the metadata of this resource.

edit history

export



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# **Grid Computing**



- On Demand Computing Books
- DB2 Books
- More Books from IBM Press
- What is the Importance of this Book?
- What You Can Expect from This Book
- How this Book is organized
- Notes
- Introduction
- Grid Computing Organizations and Their Roles
- The Grid Computing Anatomy
- The Grid Computing Road Map
- Merging the Grid Services Architecture with the Web Services Architecture
- Open Grid Services Architecture (OGSA)
- Some Sample Use Cases That Drive the OGSA
- The OGSA Platform Components



#### wiki options

Enhance the metadata of this resource.

edit history

export

#### OGSI.NET Middleware Solutions

Publisher: Prentice Hall PTR Date: December 30, 2003

ISBN: 0131456601

Type: Book

Url: http://safari.oreilly.com/0131456601

A business-focused guide to the grid computing revolution Best practices, case studies, and resources from IBM's experts Drive unprecedented value from your existing IT investments Simplify IT administration in heterogeneous environments Build flexible, resilient infrastructures that deliver resources instantly IBM Business On Demand Series: Your business blueprint for leveraging the grid computing revolution. When you turn on the light, the power grid delivers exactly what you need, instantly. What if computers and networks could work that way? Now they can...and that will transform the way you do business. Grid Computing is about the "Business on Demand" revolution: delivering the exact technology resources you need, anywhere, anytime, without complexity or high cost. You can do it all, starting right now, starting with your existing systems. Whether you're an executive, strategist, architect, technologist, or developer, this book will show you how. Master the fundamental concepts underlying grid and utility computing Learn how to start and which applications to start with Understand the state-of-the-art in technologies and standards Use grid computing to maximize the value of existing resources Build more flexible, resilient, and available operational infrastructures Deliver instantaneous access to data and resources on a "sense and respond" basis Eliminate the burden of administering disparate, non-integrated systemsIn Grid Computing, leading IBM experts bring together best deployment practices, practical guidance on integrating existing resources, and up-to-the-minute case studies: all you need to drive business value from the grid computing revolution.



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# **Export Resource**

Metadata:

C Dublin Core Learning Object

Package:

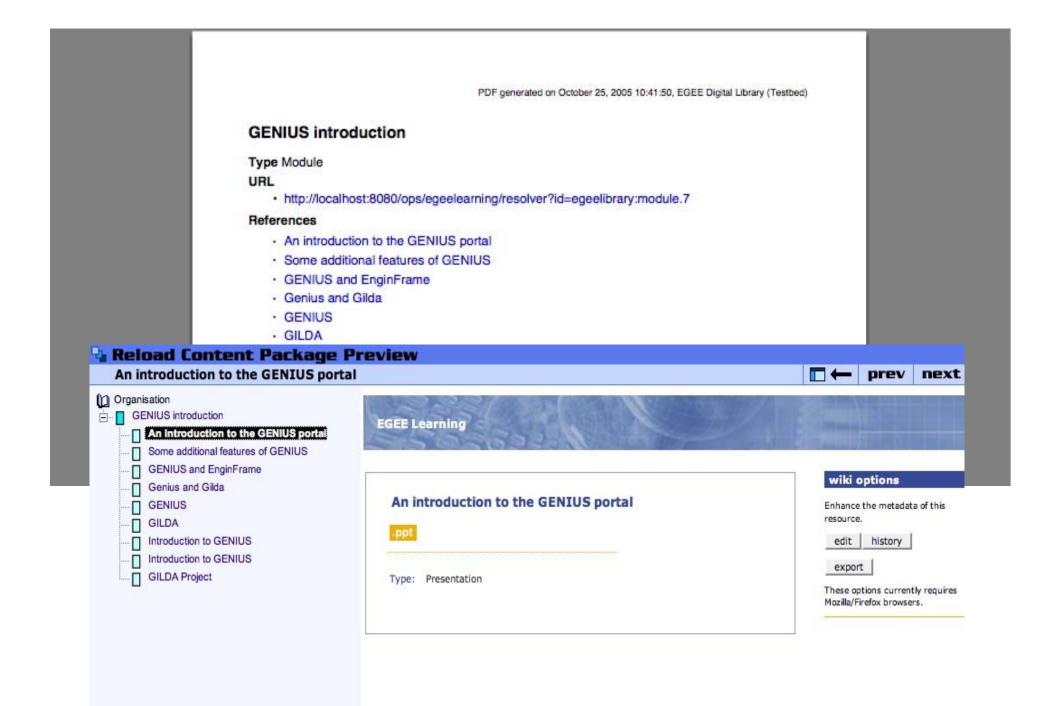
IMS Content Package (XML)

#### wiki options

Select a format and export the resource.

export pdf

back





# Information

- Development details and testbed:
  - http://wiki.nesc.ac.uk/read/egee-elearning/
- Email
  - boon.low@ed.ac.uk