



Enabling Grids for
E-science in Europe

www.eu-egee.org

JRA1 all-hands-meeting, Padova 15.11.2004



Build Infrastructure & Release Procedures

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Build servers

- Hardware upgrade
 - Two new Dual Xeon 2.4GHz, 1GB of memory
- Migration
 - Moving the NIGHTLY/CONTINUOUS builds to the new/faster machines
- WinXP build server operational on low-end server

- **CONTINUOUS build**
 - Workspace cleared every night
 - Full initial build
 - Incremental builds every 60 minutes
 - Build after CVS commit with the max delay of 60 minutes
 - 100% automated
- **NIGHTLY build**
 - Fully automated
 - Clean snapshot of the HEAD from CVS
 - WinXP in “beta” phase
 - “green” for JAVA components

- **INTEGRATION (weekly) build**
 - Must build (manual process)
 - src, tar.gz, RPMS, quattor templates
 - Installation scripts (per deployment module)
 - Release notes, Documentation, Configuration scripts
 - “stage” area provided as a tarball (all the libraries present)
 - More discussion later


<http://www.glite.org>

- Automatically created content
 - DESCRIPTION
- Build history
 - 7 days presented on our web page
 - 15 days kept on the server
- SLOC Counter at:
<http://glite.web.cern.ch/glite/project/pm.asp#sloc>
- Additional counters/metrics to be added
 - Average number of Methods per Class (MC)
 - Number of Change Requests Submitted (SCR)
 - ... see the Configuration Management Plan


EGEE > gLite - Opera 7.52

http://www.glite.org

Google search 100%



Enabling Grids for E-science in Europe



- ▶ GLITE SUBSYSTEMS
 - ALIEN
 - COMPUTING ELEMENT
 - DATA MANAGEMENT
 - ACCOUNTING
 - LOGGING AND BOOKKEEPING
 - INFORMATION & MONITORING
 - SECURITY
 - WORKLOAD MANAGEMENT
- ▼ DOWNLOAD
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 - SLOC
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 - EGEE JRA1
 - EGEE JRA3
 - EGEE JRA4
- ▶ ABOUT EGEE

EGEE > gLite

gLite

Lightweight Middleware for Grid Computing

What is gLite?

gLite (pronounced "gee-lite") is the next generation middleware for grid computing. Born from the collaborative efforts of more than 80 people in 11 different academic and industrial research centres as part of the [EGEE Project](#), gLite provides a bleeding-edge, best-of-breed framework for building grid applications tapping into the power of distributed computing and storage resources across the Internet.










Want to know more about gLite? Read the following [presentation](#).

gLite News

New gLite web site unveiled (13/09/2004)
 The new gLite web site has officially gone online on Monday 13 September. The web site offers a single point of access to public documentation, installation packages and guides and loads of other useful information. The web site has been developed by the gLite [Integration Team](#) with the collaboration of all project members using original web templates from [TERENA](#).

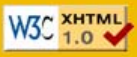
gLite People

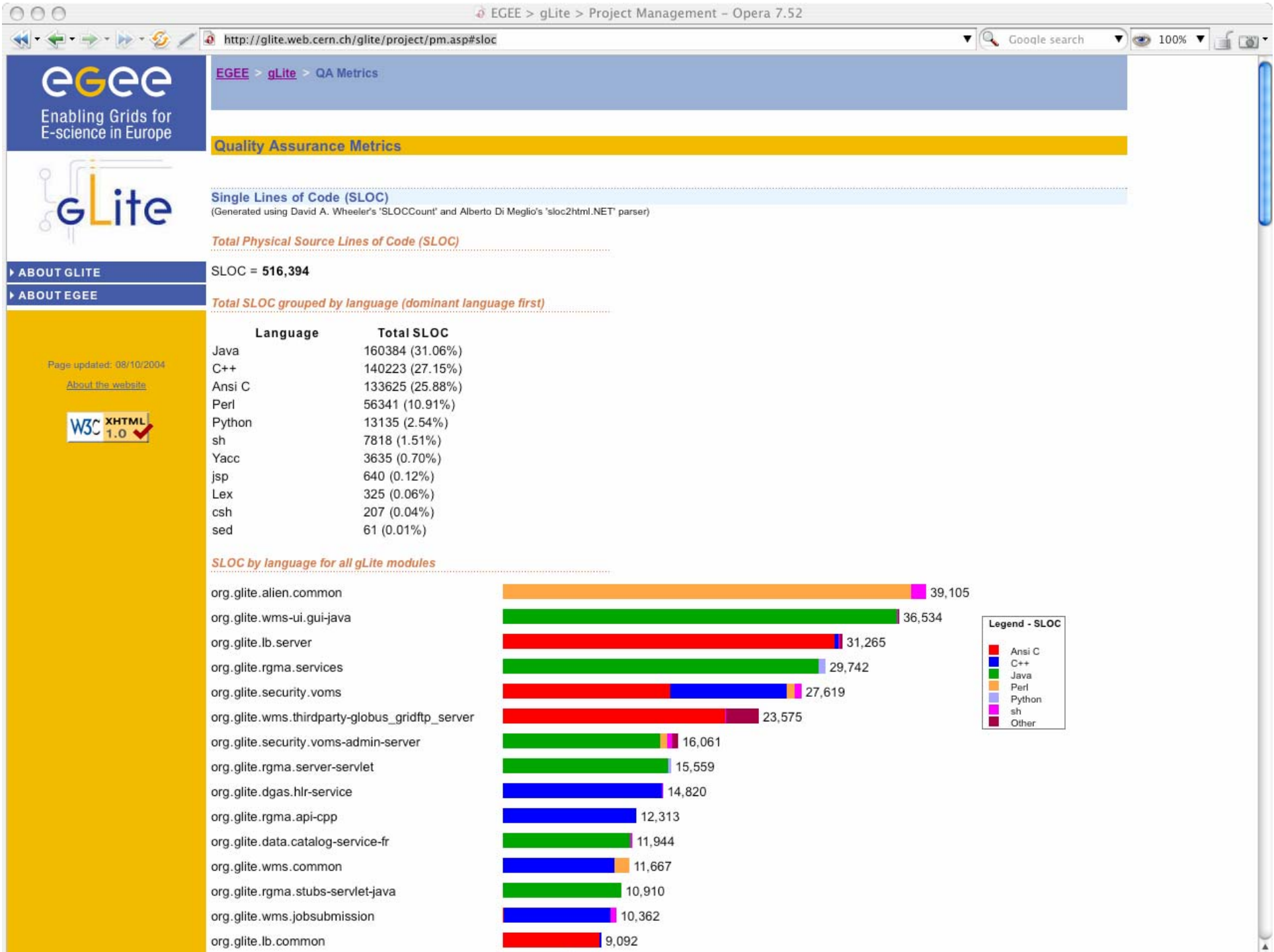
The gLite software is produced as part of the EU EGEE Project funded by the European Communities. The following academic and industrial research centres are collaborating to the development of the software organized in three different Activities: [JRA1](#) (data management, workload management, monitoring, accounting, computing element, logging and bookkeeping), [JRA3](#) (security) and [JRA4](#) (network monitoring and provisioning).

	The European Organization for Nuclear Research (CERN)
	Istituto Nazionale di Fisica Nucleare (INFN), Italy
	Datamat Spa, Italy
	CESNET, Czech Republic
	Centre National de la Recherche Scientifique (CNRS), France
	CS Systeme d'Information (CSSI), France
	Royal Institute of Technology, Center for Parallel Computers (KTH-PDC), Sweden
	Universiteit van Amsterdam (UvA), Netherlands
	University of Helsinki (UH.HIP), Finland

Page updated: 31/10/2004

[About the website](#)







EGEE > gLite > Download packages - Opera 7.52

http://glite.web.cern.ch/glite/packages/

EGEE > [gLite](#) > [Download packages](#)

RELEASERS

LATEST BUILDS

PREVIOUS RELEASES

EXTERNAL DEPENDENCIES

ABOUT GLITE


EGEE JRA1

EGEE JRA3

EGEE JRA4

ABOUT EGEE

Page updated: 26/10/2004
[About the website](#)



Latest builds

Build type	Build name	Build date
1.0 series stable release		
1.0 series integration build	I20041020	Wed Oct 20 2004
1.0 series nightly build	N20041104	Thu Nov 4 2004
1.0 series maintenance build		

Previous builds

Releases

Build name	Build date
1.0 Series Stable Builds	
Build name	Build date
1.0 Series Integration Builds	
Build name	Build date
I20041020	Wed Oct 20 2004
1.0 Series Nightly Builds	
Build name	Build date
N20041104	Thu Nov 4 2004
N20041103	Wed Nov 3 2004
N20041102	Tue Nov 2 2004
N20041101	Mon Nov 1 2004
N20041031	Sun Oct 31 2004
N20041029	Fri Oct 29 2004
N20041028	Thu Oct 28 2004
1.0 Series Maintenance Builds	

All gLite Components

Component name	Build status	Build time	Source	Binaries	RPMS	noarchRPMS
org_glite	null	null	n/a	n/a	n/a	n/a
org_glite-bootstrap	passed	12/11/2004 02:02:55	n/a	n/a	n/a	n/a
org_glite_alien	passed	12/11/2004 03:04:53	n/a	n/a	n/a	n/a
org_glite_alien.admin	passed	12/11/2004 03:03:21	src	bin	i386rpm	n/a
org_glite_alien.classad	passed	12/11/2004 02:49:22	src	bin	i386rpm	n/a
org_glite_alien.common	passed	12/11/2004 02:51:15	src	bin	i386rpm	n/a
org_glite_alien.gas	passed	12/11/2004 03:01:46	src	bin	i386rpm	n/a
org_glite_alien.gssapi	passed	12/11/2004 02:59:57	src	bin	i386rpm	n/a
org_glite_alien.gui	passed	12/11/2004 02:58:26	src	bin	i386rpm	n/a
org_glite_alien.monitor	passed	12/11/2004 02:56:57	src	bin	i386rpm	n/a
org_glite_alien.perl	passed	12/11/2004 02:33:52	src	bin	i386rpm	n/a
org_glite_alien.rls	passed	12/11/2004 02:55:26	src	bin	i386rpm	n/a
org_glite_alien.srm	failed	12/11/2004 02:53:31	n/a	n/a	n/a	n/a
org_glite_ce	passed	12/11/2004 02:27:50	n/a	n/a	n/a	n/a
org_glite_ce.blahp	passed	12/11/2004 02:23:17	src	bin	i386rpm	n/a
org_glite_ce_ce-plugin	passed	12/11/2004 02:17:48	src	bin	i386rpm	n/a
org_glite_ce.lsf-plugin	passed	12/11/2004 02:19:35	src	bin	i386rpm	n/a
org_glite_ce.monitor	failed	12/11/2004 02:12:55	n/a	n/a	n/a	n/a
org_glite_ce.monitor-api-java	passed	12/11/2004 02:10:55	src	bin	i386rpm	n/a
org_glite_ce.monitor-client-api-c	passed	12/11/2004 02:25:24	src	bin	i386rpm	n/a
org_glite_ce.pbs-plugin	passed	12/11/2004 02:21:31	src	bin	i386rpm	n/a
org_glite_ce.wSDL	passed	12/11/2004 02:08:55	src	bin	i386rpm	n/a
org_glite_data	passed	12/11/2004 05:37:24	n/a	n/a	n/a	n/a
org_glite_data.api-perl	passed	12/11/2004 04:35:46	src	bin	n/a	noarchrpm
org_glite_data.catalog-api-java	passed	12/11/2004 04:03:11	src	bin	n/a	noarchrpm
org_glite_data.catalog-fas-api-c	passed	12/11/2004 04:12:33	src	bin	i386rpm	n/a
org_glite_data.catalog-fas-api-perl	passed	12/11/2004 04:37:30	src	bin	n/a	noarchrpm
org_glite_data.catalog-file-api-c	passed	12/11/2004 04:15:22	src	bin	i386rpm	n/a
org_glite_data.catalog-file-api-perl	passed	12/11/2004 04:39:23	src	bin	n/a	noarchrpm
org_glite_data.catalog-fireman-api-c	passed	12/11/2004 04:25:29	src	bin	i386rpm	n/a
org_glite_data.catalog-interface	passed	12/11/2004 04:00:44	src	bin	n/a	noarchrpm
org_glite_data.catalog-meta-api-c	passed	12/11/2004 04:18:39	src	bin	i386rpm	n/a

Integration testbed

- **Automatic installation** of integrated software for **configuration testing**
- Currently 6 machines running RHELv3 (+updates)
- Always start from the **CLEAN REFERENCE OS** installation
 - Scratch-return-to original configuration within minutes
- **Smoke tests** in collaboration with the **testing team**
- **Repository**
 - gLite Web server for now
 - quattor software repository in the future
 - No quattor service for RHELv3 at CERN
 - We may use in the future to automate/facilitate the installation and configuration testing

CruiseControl

- Framework for a continuous integration process
 - 167 modules (includes deployment components, subsystems)
 - Build time
 - ~ 2.5h if run sequentially (Dual Xeon 2.4GHz, 1024MB of memory)
 - ~ 6.5h (scheduled)
 - web-based interface
 - Custom label incrementers
 - Avoiding the confusion with tags/NIGHTLY builds
- New PRODUCTION server:
- New NIGHTLY BUILD server:
- Windows NIGHTLY BUILD server:

**Please use the JRA1 integration
page as the startpoint**

<http://egee-jra1-integration.web.cern.ch/egee-jra1-integration/cruisecontrol.asp>

- Current issues (we put lots of effort to solve them)
 - Sometimes we need to fix the configuration, dependency problems.
Please use our scripts for subsystem/module creation - this could reduce our efforts significantly
 - Missing components
 - CVS problems in the past
 - CERN Listbox migration
 - Messages bounced to the senders
 - Impact on the CC notification mechanism
 - Quota
 - Slow machines
 - We just have migrated
 - Couple of most memory demanding RGMA modules suffered from the HW issues

- JALOPY in
 - Build system
 - jalopied code is put into the `<module-dir>/src-jalopied` for reference
(e.g. `<my-WorkSpace>/org.glite.ce.pbs-plugin/src-jalopied/org/glite/ce/pbsplugin/MatchStrings.java`)
 - CVS
 - Check against the coding convention
 - Mail notification
 - Commit always allowed (no source modification)
- CodeWizard
 - Present in the build system, but not activated
 - Requires AFS
 - CERN licence limitations: use from the **lxplus** machines (user space)
- Clover
 - To be finalized

- QA infrastructure in place
 - Active QA team inside JRA1
 - Coding conventions discussed and agreed
 - E would be in favour of restricting the rules
 - Policy has to be decided

Release Management

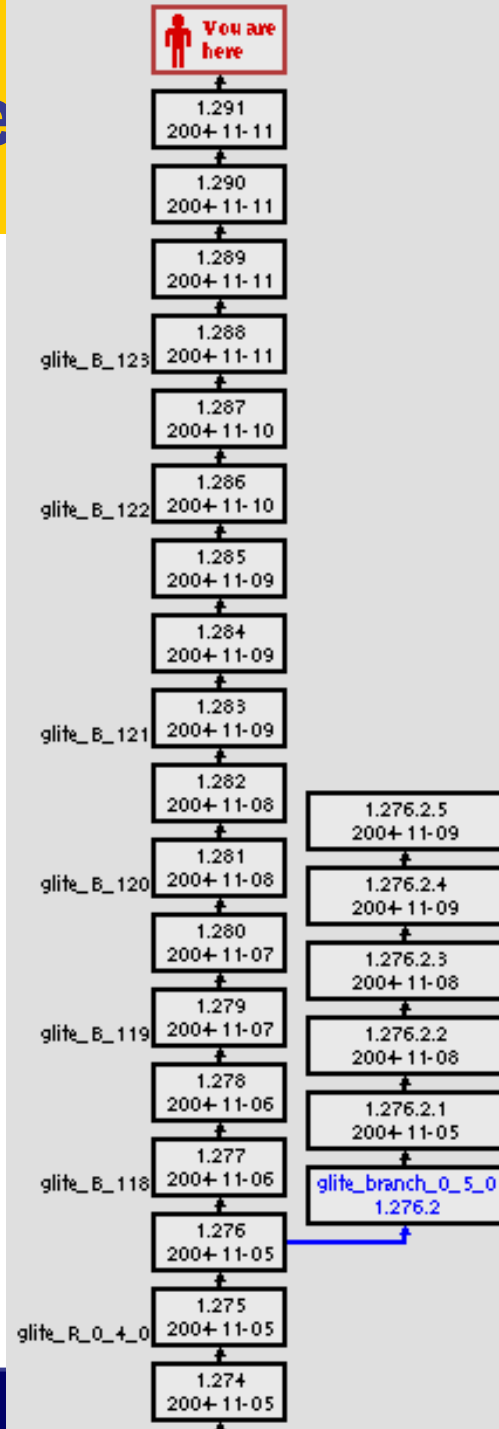
- Based on CVS tags
- Close contact with the cluster release managers
 - Please **tag your components**. You may also want to tag the subsystems, but **we can take care of subsystems for you**.
 - Please **send** your tags before **Friday 10:00** (am preferably)
- 1. **A tag explicitly communicated by the release manager by Friday at 10:00**
- 2. **The same tag used in the previous integration build, if no tag is explicitly communicated**
- 3. **The latest successfully built tag on the nightly build server, if no tag is explicitly communicated and no previous integration build tag is available**
- 4. **The component is excluded from the build if none of the previous tags is available**

Release Management

- Baseline
 - Snapshot of the code in CVS **not yet completely finished**
- Release
 - Snapshot ... **completely finished and functional**; i.e. **ready** for integration and testing
- Branch
 - Useful for **parallel development** of the component taken from the given baseline or release tag for the bug fixes, new functionality, experiments. In the later stage could be merged to into the main dev. branch, persist as variants or die ...

Release

ing)



Release Management (tagging)

- Tagging
 - Using the prepared ant targets (please)
 - `cd <subsystem-dir>`
 - `ant baseline_tag` or `ant release_tag` or `ant branch_tag`
 - Manual
 - Please make sure you are creating the properly formatted tag (should contain the build number)
e.g. `glite-ce-monitor_B_1_2_5_76` (BASELINE), `glite-ce_R_1_2_5` (RELEASE)
 - For the **tagging** make sure you update accordingly the
`<component-dir>/project/version.properties`
 - You are free to use your favourite tag format for your “private” use, but please stick to our standards as much as possible to make life easier
- Currently no automated global tag management toolkit, but considering that for the future
 - Bonsai
 - Web interface
 - ...

Ideas for the future

- Alberto's SLIDE here

Ideas for the future

- Builds on request (?)
- Artifacts area
- Configuration management
- SA1 packages requirements
- Subsystem DESCRIPTIONs present on the gLite web pages
- Additional build system script functionality
 - Move/remove component from the CVS
- Savannah pending issues/bugs
 - Jalopy empty java file processing