

## JRA1 Technical Status

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- Integration-Build System.
- Testing.
- Technical Coordination Group.
- Information Systems.
- GLUE.
- VOMS/VOMS-Admin.
- Site Access.
- Data Management.
- Workload Management.
- gLite 3.0.
- gLite 3.1.
- Time-lines.
- Bug-fixing.
- Consolidation.

Software build now in the hands of ETICS.

- Now up to  $\approx 300$  (622) modules.
- Work underway to build on SLC4.
  - gLite 3.1 now being built on SLC4
  - Using VDT 1.3.(10?)
  - Implies GT4 functionalities are “available”.
- 64-bit build work continues
  - Also implies use of VDT 1.3.(10?)
- Configuration now done by YAIM.

- Testing (certification) now handled by SA3.
  - Dedicated testbed: CERN.
  - Installation of self-consistent RPM sets.
  - gLite 3.0.2 RC2 in certification.
- **Test development:** functional, regression.
  - Scalability test more for PPS now.
- **Testing of release candidates** from the integration team.
  - For gLite 3.0 much fast-track testing of critical components.
  - Many release candidates (5?) for gLite 3.0.1.
  - Already 4 release candidates for gLite 3.0.2.

## Work plans sent to TCG.

- Development clusters submitted prioritized work plans to the TCG:
  - Information Systems.
  - WMS and CE.
  - Security\*.
  - L&B and JP.
  - Data Management.
- Plans look towards Sept/Oct of this year.
- Prioritized with respect to the TCG work priority list:  
<https://uimon.cern.ch/twiki/bin/view/EGEE/PriorityList>

- **R-GMA** deployed by SA1 on PPS in gLite 3.0.
  - No demand to move from basic servlet technologies to WSDL.
- **The coding of the new R-GMA design is well underway:**
  - “New” (LCG 2.7.0) API, supports multiple Virtual Databases, authorization, very large result sets.
  - The APIs have been designed for Java, C++, C and Python.
  - Complete set of tests. API tests, system tests, resilience tests.
- **R-GMA Issues**
  - R-GMA certification had problems, bad version went to the PS.
  - R-GMA in poor state for about 2 weeks.
- **Service Discovery** component APIs in C (C++) and Java.
  - Uses information system “plugins”. R-GMA, BDII and File.
  - APIs provided. Used by services and by end users.
- **APEL** accounting system uses R-GMA, deployed by SA1.

## BDII in gLite 3.0

- Works alongside R-GMA.
- Integrated into ETICS.
- Can represent data in the GLUE format.

## GLUE

- The merge between LCG and gLite releases into gLite 3.0 implied the adoption of latest GLUE Schema spec and info providers implementation.
- New features of GLUE Schema 1.2 are used at the site level for every service coming from LCG.
- gLite CE and gLite WMS will support new GLUE Schema 1.2 features in gLite 3.1.

## VOMS in gLite 3.0 (1.6.16-8), in gLite 3.1 (1.7.2)

- CERN VOMS servers run gLite 3.0 VOMS, March 15th.
- Support for new features requested by experiments and deployment teams added.
- Support of the VOMS Java APIs has been transferred to CNAF.
  - Improvements are being added.
- Work the compilation using a new VDT version has started.

### Issues:

- Still rapid testing/fixing for gLite 3.0.
- **There are still bugs that need close follow-up.**



## VOMS-Admin in gLite 3.0 (1.2.16), in gLite 3.1 (1.2.18)

- CNAF now handles first-line support of VOMS-Admin.
- gLite 3.0 experience shows:
  - VOMS-Admin needs work for heavy loads.

### Issues:

- Still rapid testing/fixing for gLite 3.0.
- **There are still bugs that need close follow-up.**
- **Need to comply with the JSPG “policies” doc.**
- Tracking down the memory problems in VOMS-Admin.

### VOMRS

- Only the CERN VOMS Servers run VOMRS.
- Automatically checks each new user registration with CERN's Human Resource database.
- The VOMRS uses the interfaces provided by VOMS Admin.
- **Compliant with the JSPG policies doc.**

- **glexec**
  - A site-controlled component with setuid capability.
  - Provided in gLite 3.0.
  - Designed for use on the CE (privileged).
  - Much discussion about use with pilot (glide-in) jobs.
    - ▶ Has overridden the “original” intent.
    - ▶ JSPG policy clarifies situation.
- **LCAS/LCMAPS.**
  - Provided in gLite 3.0.
  - “GUMS and SAZ plugins for the LCAS/LCMAPS framework done by August 1st”
  - Used in Globus Dynamic Account Service (KK 19/06/06).
- “Site proxy” - or however it will be called...
  - Dynamic Connectivity Service (DCS). On hold for now.

### gLite 3.0 release, some changes/additions:

- gLite I/O and Fireman to be replaced by GFAL/LFC resp.
  - These (DPM/LFC) are migrated to ETICS build system.
- LCG GFAL for POSIX interface to local and mass storage.
- Continued support for Fireman, gLite I/O, AMGA, Hydra. (mainly other-than-HEP)
  - **Until DPM/LFC have the desired features.**

### Issues:

- Interface EDS to GFAL rather than gLite I/O?
  - **Ongoing. Licence issues.**
- Interface the DICOM server with DPM instead of dCache.
  - Feasibility discussed, work planned.
- Decide at what level coherent file-level ACLs are required.
  - 2 or 3 proposals. We have to decide.
- SRMv2 has to be supported by all the relevant components.
  - SRMv1 & 2 must both be supported.
  - **No deployment of SRM v2.1, work on SRM v2.2.**

**WMS LB** in gLite 3.0. Current/future work includes:

- Scaling up job submission chain to handle  $10^6$  jobs per day.
- “short deadline” jobs as requested by the BioMed comm.
- “Bulk” matchmaking for groups of similar jobs (DAG nodes).
- Configuration of WMS services for High Availability / server balancing with a single entry point.
- Support and enforcement of priorities based on VOMS groups/roles, re-ordering of jobs in the WMS Task Queue.
- Support for resubmission of DAG nodes, and general streamlining of DAG handling.
- CE services and CE information accessible from user space.
- Transfer of matchmaking information to the CE for mapping to batch system options.
- Ability to provide local Input Sandbox caches.

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**(Most) Above issues addressed by new CE webservice following specifications of DJRA1.1 and DJRA1.2 (CREAM).**

## Issues.

- With the fast development processes lately.
- No time for code reviews.
- Has a wide impact on deployed code.
- “cleaning” the code after long periods of development and bug-fixing is constantly deferred.
- TCG should provide detailed prioritization and planning for the above items and more.

## Other

- Several components (VOMS, CEMon, BLAH, standalone LB) in VDT toolkit for OSG.
- VOMS and CEMon were already released.
- Standing requests to adopt the LB service in other contexts.
- New Job Provenance service should be integrated more closely with WMS and UI and deployed.

## WMS Proxy Renewal used to provide a generic service.

- WMS renewal code exported into a shared library.
- Either file or DB-based backends can be joined to library.
- Packaged as a separate RPM to reduce (!) dependencies.
- A generic DB-based renewal service would not fit the timescale.
- DB-based renewal daemon will be fit with the FTS agent framework.
- Available in `org.glite.security.proxyrenewal`

## A mixture of LCG 2.7.0 and EGEE gLite.

- LCG 2.7.0 plus:

gLite

FTS/FTA

gLite VOMS/VOMS-Admin

gLite WMS/LB

gLite CE

gLite UI

- Version 3.0.2 RC2 currently in certification.
- gLite 3.0 will need to:
  - Move to new Condor (6.7.19), gLite 3.0.3;
  - Move from SLC3 to SLC4;
  - Move to VDT 1.3.x for GT4.
    - ▶ Need a new gLite 3.0 development branch.
    - ▶ GT4 etc fixes should go here.



## New functionality in gLite 3.0.

- gLite 3.0 plus:

Good question!

HYDRA and clients for encrypted data storage?

AMGA ?

GFAL?

G-PBox?

glexec on the WNs?

- This version for SLC4 and VDT 1.3.x.
- May be certified as 3.2 and released as 3.3.

- gLite 3.0 now on the PPS.
  - Usable, still some problems, testing ongoing.
- gLite 3.1 should be released to the Production Service in **September 2006**.
- Once components are on the PPS they can be evaluated (case-by-case) and see how much (and when) work is needed for the next release (gLite 3.1).

July and August	PPS runs	Holidays!
June	PPS deployment	Experience
- Fixes can be introduced at any time following problems found in the integration/certification/pre-production cycles.

- EMT re-organized to reflect new roles.
  - More driven SA3, rather than JRA1.
  - Expanded to include SA3(Int and Cert), SA1(PPS).
  - More categories with “LCG” components. eg BDII, DPM/LFC etc.
  - Default bug assignments made.
  - New software process defined.
  - Bugs are now “tracked” à la old EMT.
- Bug-fixing numbers not useful due to increase in categories.
  - Proportion of  $N_{\text{bugs}}/N_{\text{bugs}}^{\text{RFT}}$  constant.

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**Given staffing, bug-fixing runs at a constant rate.**

## gLite 3.x underway...

- Build now in ETICS.
- Certification now firmly with our main customer SA3
- TCG process established, workplans approved.
- Site Access work well underway, glexec, LCMAPS etc
- Data management work underway to “new” model.
- WMS/CE still under pressure, correct comparisons should be made.
- gLite 3.0.x releases need to move to SLC4/VDT1.3.
- gLite 3.1 component definition unclear.
- New EMT, more client-driven from SA3.