



Enabling Grids for E-scienceE

gLite program of work

Claudio Grandi (INFN and CERN)

John White (HIP)

www.eu-egee.org
www.glite.org



- **For all components, the activity for the developers include:**
 - Bug-fixing
 - Support on the production infrastructure
 - GGUS, 2nd line support
 - Task Forces together with applications and site experts
 - Support for SL(C)4
 - Support for x86-64 and IA64
 - Migration to VDT1.3 (GT4) is needed for the previous 2 items
 - Improve robustness and usability (efficiency, error reporting, ...)
 - Addressing requests for functionality improvements from users, site administrators, etc... through the TCG
 - requirement list at:
<https://uimon.cern.ch/twiki/bin/view/EGEE/PriorityList>
 - Support for IPv6

Requirements in TCG list: example

300	Workload Management	FD	-	-	-	-	-	-	-	-	-	-
301	Configuration that defines a set of primary RB's to be used by the VO for load balancing and allows defining alternative sets to be used in case the primary set is not available	FD	5	0	0	2	0	0	7		UIs may be configured to use a number of RBs (chosen randomly). To do it in a smarter way will take ~1FTE month, but need specifications	
302	Single RB end point with automatic load balancing	FD	0	0	0	2	0	0	2		Design required. Major issue. No estimate	
303	No loss of jobs or results due to temporary unavailability of an RB instance	FD	0	5	2	1	0	0	8		Standard linux HA available now (Two machines, one dies, one takes up) Multiple RB plus network file system (N	

- **VOMS and VOMS-related utilities**
 - VOMS validator – ongoing
 - VOMSAdmin memory leak in util-java – ongoing
 - VOMS server cert in Attribute Certificate in Java API – ongoing (done on server and C/C++ API)
 - VOMSes directory structure VO name restriction support in Java API – ongoing (done on server and C/C++ API)
- **glexec**
 - Test glexec+LCAS+LCMAPS on a CE head node – end-July (313)
 - on a WN with the same code – during the summer
 - Call-out to remote authZ/credential mapping services – end August
 - Distinguish error reported by glexec and by the command – end August
 - Support for file copying and ownership change – end-September
 - Fine grained error codes – end-September (313)
 - Use config. file at hardcoded location – autumn
- **proxy renewal**
 - VOMS-aware renewal within the service – library ready to be certified (103a)
 - Establishment of trust between service and myproxy – ongoing (103b)

- **trustmanager**
 - Namespace enforcement – mid-August
 - Hostname checking on client-side in handshake – end-August
- **LCAS/LCMAPS**
 - Refine proxy lifetime checking (end-July)
 - Implement globus C authZ call-out interface to be able to plug lcas and lcmaps into GT3,GT4 services – end-August (313)
 - Fine grained error codes – end-September
 - Service front-end which allows for a centralized management – not planned yet, 1 month work (313; needed if glexec runs on worker nodes)
 - Wildcard matching in grid/group mapfiles – end-November
 - Call-out to remote authZ and credential mapping services – not planned yet (313)
- **Job Repository**
 - Integration in gLite – end-July
 - Tests with glexec – 1 week work
- **Additions from UvA and UiB PoW**

- **BDII**
 - Supported directly by LCG
- **RGMA**
 - Support for AuthZ – end-2006 (101)
 - Architectural changes to improve usability – end-2006
 - Support for namespaces (multiple virtual-DB) – end-2006
 - queries across namespaces – long term
 - Support for registry and schema replication – long term
 - Support for ORACLE and other RDBMS – long term
- **Service discovery**
 - Query to multiple backends in parallel – end-2006
 - Bootstrapping (avoid config. file) – end-2006
 - Caching – need to understand issues, probably better to let the client implement their caching mechanisms (111)

- **Data Management Group in EGEE JRA1 counts 3 FTEs**
 - The CERN DM group works as a unique rgroup regardless the activity to which members belong
- **Fireman/gLiteO to be replaced; limited support (support biomed)**
- **SRM**
 - SRMv2 compatibility tests – ongoing (122)
 - Add lookup in the information system to determine srm v1/v2 for a given SE – end-June (123)
- **DPM**
 - Migration to gLite build system
 - Common rfiio library with Castor – ongoing
 - xrootd plugin and modifications in DPM to support xrootd – mid-July
 - Migration to gridftp v.2 – end-July
 - DB backup – start in July
- **GFAL**
 - SRMv2 support. Complete support of POSIX calls not supported by SRMv1 – ongoing (123)
 - Support for Encrypted Data Storage – end-June (580,581)
 - Revision of GFAL information system access to provide cache – start in July

- **LFC**
 - Migration to gLite build system
 - database replication tests – ongoing (263)
 - Provide POOL file catalog plugin that supports the new style pool file catalog interface – ongoing (244)
 - DB backup – start in July
 - Revision of GFAL information system access to provide cache – start after July
- **FTS**
 - Revision of agents to remove need for database locking – ongoing (216)
 - Testing retry logic for srm-cp – ongoing
 - Adding delegation – testing over by end-July (216)
 - Remove build dependencies on FireMan from FTS & Hydra – end-June
 - Proxy renewal agent – testing over by end-July (216)
 - Refactoring of components – end September (123)
- **lcg-utils**
 - Retries with different replica(s) in case of failure – end-June
- **Hydra**
 - Key splitting over multiple servers – start in July (582)
- **AMGA – supported by NA4**

- **CE (gLite)**
 - Log files for accounting – in certification
 - Information passthrough – to be certified
 - Migration to Condor 6.7.19 – ready to start as soon as requested (304)
 - Access to job on restricted shell – needs more specification (310)
 - 3 months work if outbound connectivity on WN and inbound on UI
 - more work from security if not
- **CE (CREAM)**
 - bulk submission from WMS to CE – Available for preview (304,311)
- **GPBOX**
 - Available for preview (101/309)
- **APEL**
 - Supported directly by LCG
- **DGAS**
 - To be certified (331) – workplan:
 - certify and activate local sensors and site HLR in parallel with APEL
 - replace APEL sensors with DGAS (DGAS2APEL)
 - certify and activate central HLR. Test scalability to the PS scale
- **CEMon**
 - Available on PS (311,312)

- **WMS/UI**
 - Support for GLUE 1.2 and VOViews – in certification (101/309)
 - Support for GPBOX removed may be added on request (101/309)
 - Migration to Condor 6.7.19 – ready to start as soon as requested
 - Job prologue/epilogue – to be certified (523)
 - support for Short Deadline Jobs – to be certified (512)
 - Bulk match-making (end-October) (304)
 - Hot standby – 3 months work (end-October) (303)
 - High availability – not planned yet (302)
 - Improve input file download (http cache) – end October (306)
 - Improve output file upload – not planned yet (306)
 - Improve round-robin on UI - 1 month work (301)
- **LB and JP**
 - Hot standby – 2 months work (sync. with WMS: end-October) (303)
 - Remove performance bottlenecks (logging events via logd and registering large collections) – end-October (304)
 - Allow queries from authorized users and not only from owner – end-July (324)
 - Produce job statistics on LB (e.g. for JRA2) – end-October
 - Job Provenance - available for preview

- **Non-backward compatibility when migrating to GT4**
- **Need a decision on glexec on WNs**
- **Need a preview system**
 - Job Provenance
 - GPOBOX
 - CREAM
 - other...
- **Support for old Encrypted Data Storage system until the new one is ready**