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Forthcoming developments in CREAM

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e-infrastructure

Enabling Grids for E-sciencE

- **Now in production**
  - CREAM CE v. 1.5
  - For gLite 3.1/ sl4_i386
  - Patch #3259 (released in production with gLite 3.1 Update56)
  - Use of voms-api-java
    - VOMS cert files not needed anymore (.lsc files are sufficient)
  - IPv6 support (for CREAM, CEMON and BLAH)
  - Fixes for two security vulnerabilities
  - Many other bug fixes

Enabling Grids for E-sciencE

CREAM CE for sl5_x86_64 / gLite 3.2

– Patch #3260 (current state "Rolling-out")

– For what concerns the CREAM/CEMon/BLAH software it is basically the same software used for gLite 3.1 / sl4_i386

  ▪ There is just an extra fix required because of a different behavior of the delegation software between gLite 3.1 and gLite 3.2

– Will be released along with gLite-Torque-Server and gLite-torque-utils

– gLite-LSF-utils for gLite 3.2 / SL5_x86_64 in preparation

  ▪ Found an agreement between INFN and CERN for its support

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Enabling Grids for E-sciencE

- **Fix for a vulnerability problem in BLAH regarding the "forwarding of requirements to the batch system" feature**
  - Risk (as classified by GSVG): Moderate
  - Patch #3289 (current state "Rolling-out")
- **New yaim-cream-ce addressing a couple of problems for which a patch was asked**
  - In particular to allow the check for "the installed capacity"
  - Patch #3438 for gLite 3.1 / sl4_i386 (current state "Rolling-out")
  - Patch #3439 for gLite 3.2 / sl5_x86_64 (current state "Rolling-out")

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- **Glexec → sudo**
  - Glexec used only once per job submission (just to find the uid to be used in the sudo calls)
  - Discussed and approved in MWSG and SCG
  - Better performance
  - Will facilitate the integration with Argus (to be done in CREAM CE v. 1.7)
- **New operation (queryEvent) to be used by ICE**
  - To improve the job status changes detection by ICE
- **New BLAH BIparser model for LSF and Torque/PBS**
  - Using the status/history commands instead of parsing the log files
  - Actually a first release was provided with CREAM CE v. 1.5, but not really usable because of some major problems
  - Old parser still supported

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- **Limiter to protect CREAM when the machine is overloaded**
  - New jobs submissions are blocked when this happens
  - Taking into account load, memory usage, # of file descriptors, etc.
  - Very similar to the limiter used in the WMS
  - Requirement O of the LCG-CE → CREAM-CE criteria
- **SGE scripts provided by CESGA included in BLAH**
  - To support also SGE as batch system
- **Support of file transfers from/to gridftp servers started with user credentials**
  - Asked by Condor
- **Several bug fixes**
  - Slow startup (bug #51978)
  - Cleaning of expired proxies (bux #49497)
  - …
- **Patch #3179 (CREAM, CEMon, BLAH) and patch #3209 (yaim-cream-ce)**
- **Scheduled to be released in certification in January**

- **Now in production**
  - v. 3.1.42-0 (patch #2862)

- **v. 3.1.42-2 released to address a critical bug (#59054)**
  - ICE crash if single quote in the JDL arguments
  - Patch #3489 released for certification very quickly (Current status: rolling out)

- **Coming soon**
  - v. 3.1.44-0 (patch #3494)
  - Current status: In Certification
  - Obsoleted patch #3253 (which was already certified) just to address bug #59054
  - Several bug fixes
    - In particular proper management of scenarios where proxy renewal is enabled (myproxyserver set in JDL) but proxy renewal not done (because user didn't register the proxy in myproxy server/because proxy renewal daemon not working/ ..)

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- **Next ICE version**
  - Better job status changes detection using the new queryEvent operation provided by CREAM CE v. 1.6
  - Of course mixed deployment scenarios will be supported
    - New ICE → CREAM CE v. 1.6: queryEvent is used
    - New ICE → old (v. <= 1.5) CREAM CE: old polling is used
    - Old ICE → new/old CREAM CE: old polling is used
  - Other bug fixes
  - Almost finalized
    - Use of QueryEvent already implemented and tested
    - To be released ~ at the same time of CREAM CE v. 1.6
    - With WMS v. 3.3 ?

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- **Is CEMon with CREAM job sensor still needed ?**

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- **Longer term plans in the JRA1 workplan**
  - https://savannah.cern.ch/task/?group=jra1workplan
- **Other CREAM and ICE related info in http://grid.pd.infn.it/cream**
  - Info for users and for admins