



CREAM

Report from developers

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On behalf of the gLite job
management PT

Now in production

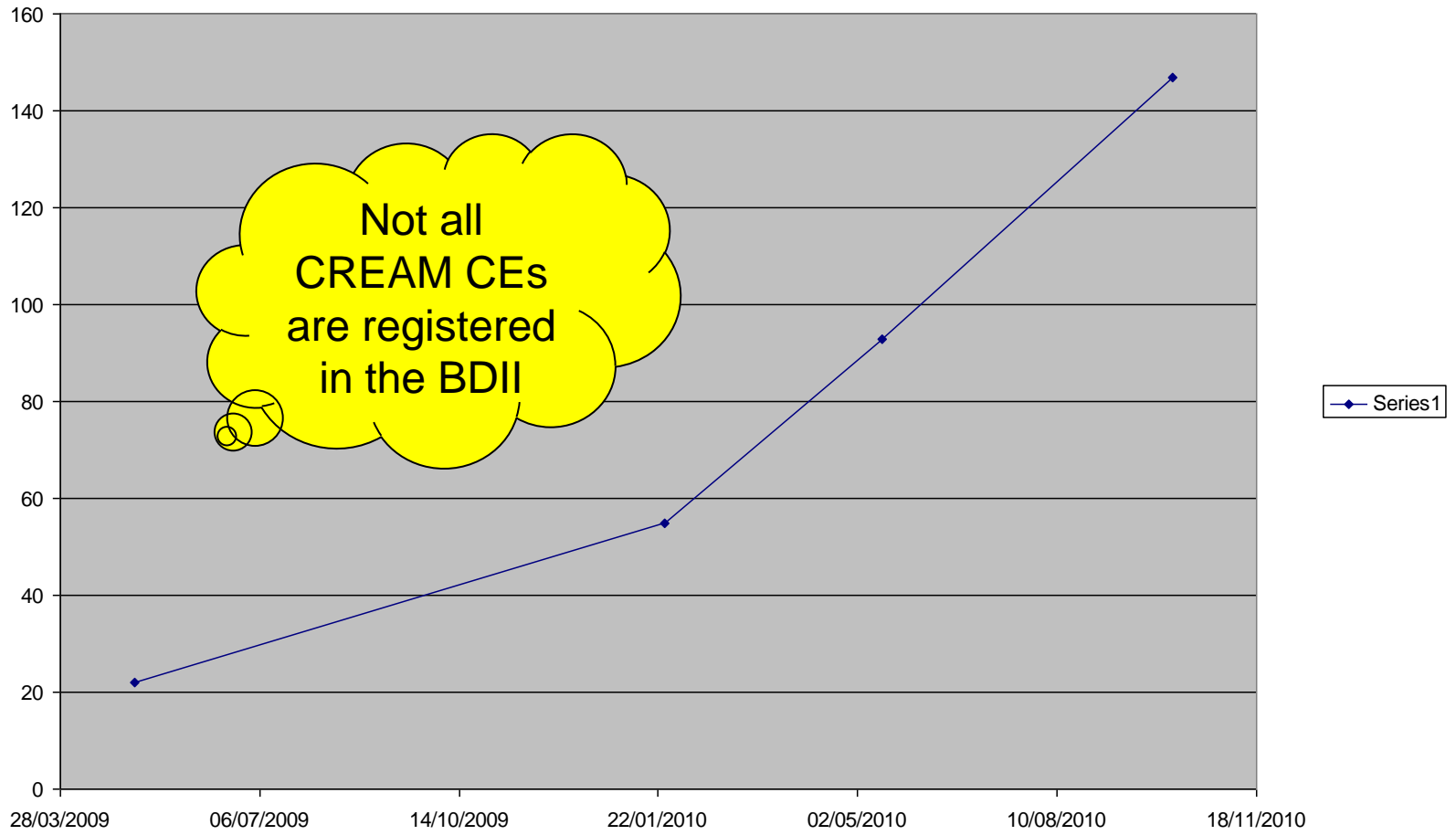
- For gLite 3.2 SL5_x86_64: CREAM CE 1.6.2
- For gLite 3.1 SL4_ia32: CREAM CE 1.6.1
 - It was not possible to release a CREAM CE 1.6.2 also for gLite 3.1 because we were waiting for an update of util-java / trustmanager
 - Now available
- *glite-ce-service-info* <CREAMhostname> tells you what is the version installed on a certain CREAM CE
 - This information is available with CREAM CE 1.6.3

Deployment

- According to SAM tests for ops, today on EGI + API + Canada + LA:
 - 159 CREAM CEs
 - 127 OK
 - 3 WARN
 - 25 ERROR
 - 3 MAINT
 - 403 LCG CEs
 - 366 OK
 - 2 WARN
 - 24 ERROR
 - 10 MAINT
 - 1 NA
- Data collected by Maarten

Deployment

Number of CREAM-CES published in egee-bdii.cnaf.infn.it



CREAM CE 1.6.3 for gLite 3.2

- CREAM CE 1.6.3 being released in production for gLite 3.2/SL5_X86_64
 - Patch in “ready for production”
 - It will be released with gLite 3.2.0 Update 20
- Bug fixes
 - Fix for problem of jobs declared in certain scenarios as finished (failed with reason 999) while it was not the case (savannah #70287)
 - A workaround was suggested waiting for this patch
 - Addressed problem with proxy renewal (savannah #73765)
 - A high rate of proxy renewals could trigger the creation of a huge backlog of commands to be executed
 - Problem reported recently by three sites
 - With this fix, the problem of jobs submitted to the batch system without the staging of the proxy in the WN (ggus #73765, savannah #74539)) will be really rare
 - Fixed a couple of problems in BLAH blparser causing jobs reported in a non-terminal state while they were finished (savannah #70285, savannah #74107)

CREAM CE 1.6.3 for gLite 3.2 (cont.ed)

- Bug fixes
 - Change in BLAH to have staging directives compliant with new (> =2.4.6) Torque (which changed its behaviour in an undocumented and non backward compatible way) (savannah #70808, ggus #60645)
 - Local customizations of sudoers file are not scratched anymore when (re)configuring the CREAM CE via yaim (savannah #69785, ggus #63316)
 - CREAM sandbox dir now relocatable also at yaim level (ggus #59335, savannah #63007)
 - It was already relocatable manually editing the CREAM configuration file
 - Possibility to set the temporary job working directory (savannah #71967, ggus #61322)
 - Other bug fixes

CREAM CE 1.6.3 for gLite 3.1

- CREAM CE 1.6.3 certified for gLite 3.1/SL4_ia32
- For what concerns CREAM, this is the very same software wrt CREAM CE 1.6.3 for gLite 3.2
- Differences for other software components deployed in the CREAM CE node
- This is supposed to be the last CREAM CE release for gLite 3.1/SL4
 - CREAM CE 1.7 will be released only on gLite 3.2/SL5 (see gLite 3.1 retirement calendar)

WMS → CREAM

- WMS 3.2.15 being released in production for gLite 3.1/SL4
 - Patch already certified
 - It includes a couple of bug fixes for problems which prevented the ICE component of the WMS to detect CREAM job status changes in some particular scenarios

CondorG → CREAM

- Condor v. 7.5.3 released last July supposed to address the problems reported by Atlas
- Tested by ATLAS
 - Frequent crashes of condor_gridmanager seen
 - Btw this problem triggered a problem with CREAM proxy renewal (fixed with CREAM CE 1.6.3) because when the gridmanager restarts it does a proxy renewal (→ very high rate of proxy renewals)
 - Fixed with Condor v. 7.5.4
- Not aware of other problems
 - I was told by Graeme Stewart and Rod Walker that results of tests done by Atlas so far concerning CondorG → CREAM submission are ok
- Only yesterday reported problems by Rod Walker and Graeme Stewart
 - Some “looping” in Condor side
 - Jobs reported with a wrong status in Condor (or updated very slowly)
 - To be checked if the issue is in the CREAM or in Condor side
 - On going debugging

Jobs reported in a non terminal status

- Still some problems (even if now it is much better than in the past) concerning jobs reported in a non terminal state while they instead finished
 - For jobs submitted directly to CREAM or via the WMS
- Known issues addressed in CREAM CE 1.6.3 and in WMS 3.2.15 (being released in production)
 - See previous slides
- The rest are basically configuration problems (BLparser configuration problem)
 - We are checking how to prevent such configuration problems
 - CREAM should not start at all in case of such misconfigurations

CREAM CE 1.7

- Next release (unless it is needed to address some urgent problems first)
 - Foreseen at end of the year / beginning of 2011
 - Content
 - Integration with Argus
 - Optional
 - » Site admin at configuration time will have to choose between Argus and the old (the existing) authorization model
 - Implementation done but testing (in particular stress tests) needed
 - Better support for multi core allocations
 - I.e. support for new JDL attributes SMPGranularity, WholeNodes, HostNumber
 - See:
<http://www.grid.ie/mpi/wiki/WorkingGroup?action=AttachFile&do=get&target=MPIWG-recommendation-1.0-final.doc>
 - Not only required by MPI communities
 - Prototype being evaluated by some users
 - Glue 2.0 support ?
 - To be done for EMI-1 (May 2010)
 - Issues with LRMS support (which includes infoproviders)
 - » After the end of EGEE not too clear who is in charge for the support for the batch systems and for the overall coordination)
 - Bug fixes

CREAM and Argus integration

- Existing authorization model
 - Authorization to the service is managed via custom “gJAF”
 - It simply decides if the operation is allowed or not
 - Glexec used to get the local user mapped to that Grid user
 - Only a glexec invocation per job submission
 - Glexec uses lcas and lcms
 - Operations done on behalf of the local user done using sudo
 - The local user is the one returned by glexec
 - Gridftp also part of the CREAM CE
 - It also uses lcas and lcms, but different conf files needed wrt glexec ones
- Problem: inconsistent decisions could be taken because of e.g. misconfigurations
 - E.g. gJAF can authorize you, while there could be a problem at glexec level
 - “Authorization error: Failed to get the local user id via glexec”

CREAM and Argus integration (cont.ed)

- Authorization model with Argus
 - Authorization to the service managed via Argus
 - It decides if the operation is allowed and specifies the local account mapped to that Grid user
 - Operations done on behalf of the local user done using sudo
 - The local user is the one returned by Argus
 - Glexec not needed anymore
 - Gridftp also part of the CREAM CE
 - Gridftp also integrated with Argus
- Inconsistent decisions can not happen anymore plus the other benefits introduced by Argus
 - E.g. global banning

CREAM client 1.7

- Provision of glite-ce-job-output command
 - But it is already possible to save the OutputSandBox in the CREAM CE and then retrieve it
 - <http://grid.pd.infn.it/cream/field.php?n=Main.OutputSandBoxManagement>
 - We were told that the provision of such command is not urgent because of that
- Bug fixes
- It will be released only for gLite 3.2/SL5 (see gLite 3.1 retirement calendar)

Support and communication channels

- CREAM-BLAH support unit in GGUS
 - We see only tickets assigned to this SU
 - If e.g. a CREAM related problem is addressed in some way by a site admin, we don't know anything unless we are told/we are involved in the discussion
- cream-support [at] lists.infn.it
- CREAM web site (<http://grid.pd.infn.it/cream>)
 - Known issues (along with workarounds when possible)
 - Meaning of error messages
 - ...

Communication channels with experiments

- ALICE
 - The first LHC experiment using CREAM
 - I am subscribed to the ALICE-TF mailing list since a while
 - I can reply to CREAM related questions and see the issues concerning CREAM
- LHCB
 - Reported instabilities in the CREAM CE
 - → I am in CC in the LHCB ELOG tickets submitted by LHCB shifters for CREAM related problems
 - So we can follow the relevant GGUS tickets even if they are not assigned to the CREAM-BLAH Support Unit
- This helps in understanding what are the issues and how serious they are (e.g. if urgent fixes are needed)
- Something similar can be done also for ATLAS and CMS if considered appropriate

CREAM and OSG

- “OSG is thinking about adding CREAM to the OSG software stack. (It's a request from ATLAS.) “
 - Mail from Alain Roy
- We are in contact with Alain Roy and helping him to understand what needs to be installed, configured, etc.



Thank you

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