Experiment Operations: ALICE Report

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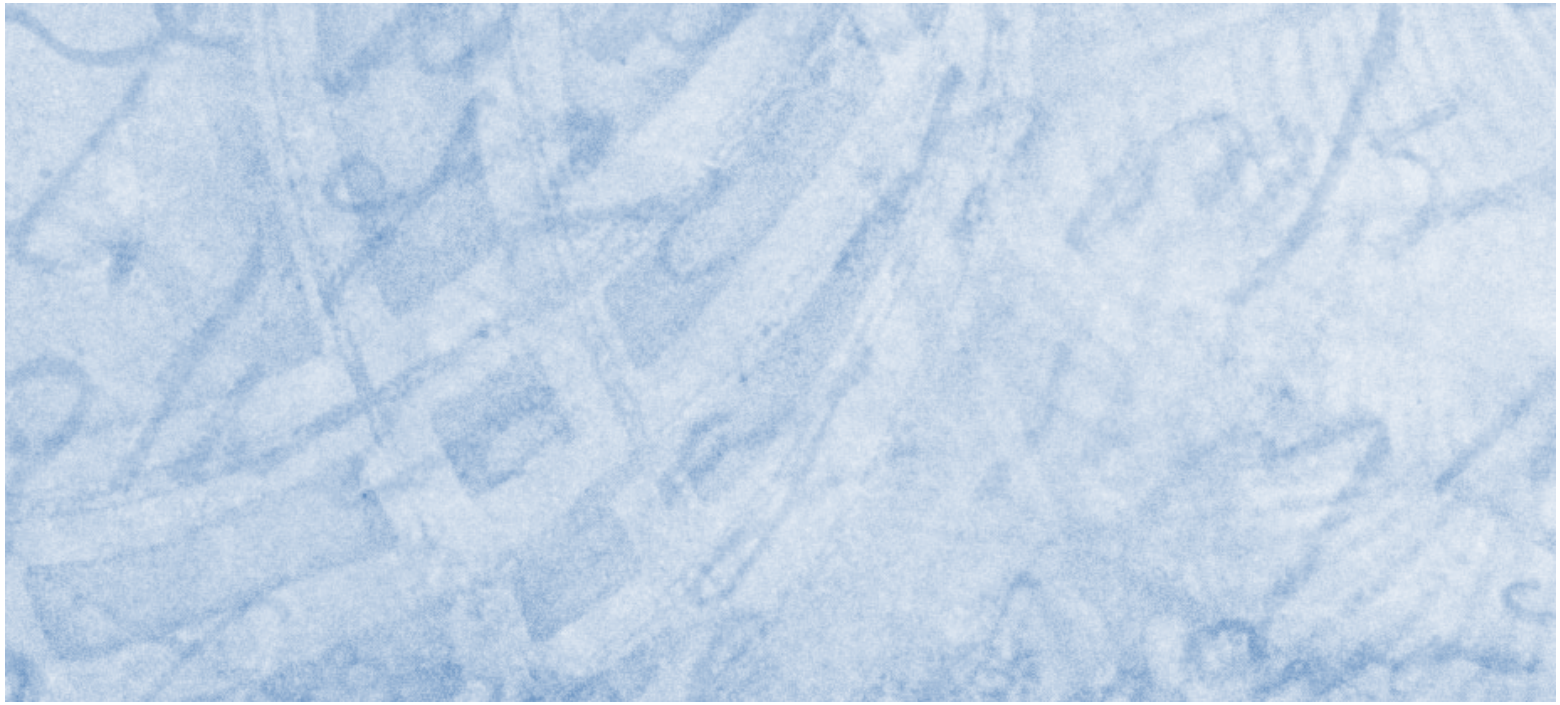

Outlook

- Summary of the last GDB report in one slide
- Status of the CREAM-CE Deployment
- CREAM-CE: site admins and developers feedback
- Status of the gLite3.2 VOBOX: Deployment status and issues
- Status of the SL(C)5 Deployment
- Summary

Summary of the last GDB report in one slide

During the last GDB (09/09/09), ALICE presented the following plans:

- **Deployment of SL5** in all WNs and VOBOXEs (T0,T1,T2 sites)
  - DEADLINE: Mid-September 2009 → Self-imposed and following the recommendation of the MB in terms of pushing T1/T2 to migrate to SL5
- **Deployment of a CREAM-CE** at all sites (T0,T1,T2 sites)
  - DEADLINE: Mid-November 2009 → following the milestones defined in terms of CREAM-CE deployment

In this talk we are going to upgrade the status of these plans

Status of the CREAM-CE Deployment

- Number of sites providing CREAM-CE to ALICE production
  - CERN, KISTI, INFN-Torino, CNAF, RAL, FZK, Kolkata, IHEP, SARA, Subatech, Legnaro, SPbSU, Prague

Same situation presented one month ago

- For the mentioned sites Alice is running in stable production mode
  - New sites providing the CREAM-CE will be put in production immediately
- Situation of CC-IN2P3
  - CREAM integration with BQS (local batch system) done
  - ALICE local support testing the system
  - Next step: deployment of the system in production for ALICE testing

CREAM-CE: Deployment status

- CREAM1.5 has been deployed in production by the **6th of October (patch #3259** for SLC4/i386)
  - Patch details: https://savannah.cern.ch/patch/?func=detailitem&item_id=3259#options
    - Important bug fixes for the ALICE production included in this new version (next slide)
  - It contains also fixes for two vulnerability reports:
    - Associated to security issues for the sites
    - http://www.gridpp.ac.uk/gsvg/advisories/advisory-55615.txt
    - http://www.gridpp.ac.uk/gsvg/advisories/advisory-55616.txt
  - **Migration of sites to CREAM1.5 is highly encouraged and ALICE fully support it for all sites providing this service for the experiment**

ALICE would like to mention the excellent support and assistance provided by the CREAM-CE developers team in special from Massimo Sgaravatto

CREAM-CE: site admins and developers feedback (I)

- **Purge issues:**
  - ALICE REPORT: Wrong report of job status. CREAM's vision of running jobs de-synchronized
  - ALICE REQUIREMENT: Method to purge jobs in a non terminal status
  - CREAM STATUS:
    - CREAM job status can be wrongly reported because of some misconfigurations or because of these two bugs in the BLAH Blparser (Solution Status: integration) candidates for CREAM1.6
      - #55078: « Possible final state not considered in BLParserPBS and BUpdaterPBS »
      - #54949: « Some job can remain in running state when BLParser is restarted for both lsf and pbs »
    - Finally there is an specific bug which covers the ALICE requirement
      - #55420: « Allow admin to purge CREAM jobs in a non terminal status » (Solution Status: in progress)
      - IMPORTANT NOTE: The script provided to the ALICE site admins are indeed the bug fix. As soon as the relevant patch is release, the script will be part of the CREAM rpm
  - CURRENT RISK FOR ALICE: Low once the developers provided site admins with the corresponding purge script (very high before)

CREAM-CE: site admins and developers feedback (II)

- DISK SPACE issues (reported by Subatech): Areas to monitor and purge or clean
  - ALICE REPORT: The local mysql DB grown up to 2.5 GB
  - CREAM STATUS: Issue associated to mysql engine. While deleting entries from the DB, the relevant disk space is not released (therefore the CREAM DB does not decrease). But the space is reused when new data added in the DB
  - CURRENT RISK FOR ALICE: low

  - ALICE REPORT: purge of the input Sandboxes in /opt/glite/var/cream_sandbox
  - CREAM STATUS: Solved in CREAM1.5
    - #48144: « Problems with purge in CREAM when the mapped group name is different than the VO name »
  - RISK FOR ALICE: none once sites upgrade to CREAM1.5

CREAM-CE: site admins and developers feedback (III)

- DISK SPACE issues (cont.)
  - ALICE REPORT: issues regarding /opt/glite/var/log and /var/log
  - ALICE REQUIREMENT: Cleaning policy required for these files, otherwise files can grow forever
  - CREAM STATUS: policies exist for all these files and can be costumized file by file:
    - Only the blah accounting log files are out of the CREAM developer's control (files cannot be deleted before having been processed by the accounting system)
    - For /opt/glite/var/log/glite-ce-cream.log and /opt/glite/var/log/glite-ce-monitor.log, the policy is defined under /var/lib/tomcat5/webapps/ce-cream/WEB-IFN/classes/log4j.properties and the default values can be changed
      - Relevant info under: http://grid.pd.infn.it/cream/field.php?n=Main.KnownIssues
    - For /opt/glite/var/log/glite-xxxparser.log the policy is available under /opt/logrotate.d/glite-xxxparser
    - For /etc/logrotate.d/globus-gridftp manages the gridftp log files under /var/log
  - RISK FOR ALICE: low since the size is manageble by site admins

CREAM-CE: site admins and developers feedback (IV)

- DISK SPACE issues (cont.)
  - ALICE REPORT: issues regarding /opt/glite/var/cream/user_proxy
  - CREAM STATUS: bug reported and accepted not available in CREAM1.5
    - #49497: « User proxies on CREAM do not get cleaned up »
    - CREAM developers could increase the priority of this bug if needed
  - RISK FOR ALICE: waiting for site admins feedback

CREAM-CE: site admins and developers feedback (V)

- LOAD issues (reported by Subatech):
  - ALICE REPORT: UNIX load going up to 5 (during startup or high rate of submission)
  - CREAM STATUS: problem reported by GRNET and the origin of the problem was a missed index in the CREAM DB
    - #52876: « The extra_attribute table in the CREAM DB has no key/indexes defined » solved in CREAM1.5
  - RISK FOR ALICE: low once upgrading the CREAM version
  - ALICE REPORT: When tomcat restarted the system can take up to 15 min before submitting new jobs
  - CREAM STATUS: The slow start of CREAM is also due to the problems coming from jobs reported in wrong status
    - #51978: «CREAM can be slow to start» bug in progress, not included in CREAM1.5 but will be released in CREAM1.6
  - RISK FOR ALICE: Purge actions should speed this startup and therefore decrease the risk for the experiment

CREAM-CE: Summary of issues

All reported issues are:

→ Solved in CREAM1.5

OR

→ Known by the developers and they are working on their solutions to include them in CREAM1.6

OR

→ Developers have provided workarounds for ALICE

gLite3.2 VOBOX: Deployment

- « Pre-PPS « version announced at the beginning of October
  - Patch #3205 (SL5 VOBOX) and #3040 (WMS UI fixes) installed at CERN for testing purposes
    - Put in production for ALICE
      - to gain familiary with the system and to submit to CREAM-CE
    - Experience used to help other sites while installation the system
  - Instructions provided by GD and distributed through ALICE TF to sites, specifing:
    - It is a testing patch to gain familiary with the system and its installation
  - New rpm issues stopped the deployment of the patch for almost 4 weeks
    - **ALICE sites have been informed about any advance and issue at any moment**
    - Two sites more had migrated the VOBOX already: KISTI and ITEP
    - No actions were taken and we tested the new system
  - The patch is in production since yesterday

ALL SITES ARE NOW ENCOURAGED TO UPGRADE ALL VOBOXES

gLite3.2 VOBOX: Issues

- Thanks to the available gLite3.2 VOBOXES, the experiment was able to find a compatibility problem associated to the libs
  - The libs needed by the new VOBOX for its normal operations (proxy-renewal, etc) entered in concurrence with those provided by AliEn
- Status: SOLVED
  - Changes in the environment setup before and after any VOBOX specific operation
- Further issues: NONE
  - The current gLite3.2 VOBOX should not show any further problem for the experiment or the site admins
    - Very easy installation and configuration

Status of the SL(C)5 Deployment (I)

Status of the ALICE sites on regard with the SL5 deployment

SITE	SITUATION
CERN	2 VOBOXES in SLC4 and one in SLC5, submitting to both types of WNs
KISTI	1 VOBOX in SL4 and 1 in SL5 (CREAM VOBOX), submitting to both types of WNs
SUBATECH	2 VOBOXES in SL4, small cluster available in SL5 (behind CREAM)
RAL	2 VOBOXES in SL4, cluster available in SL5 (behind both LCG-CE and CREAM-CE)
ITEP SPBSu	Full site migrated to SL5, but only one VOBOX available Full site migrated to SL5 and 2 VOBOXES available
KALKOTA	1 VOBOX in SL4 and 1 in SL5 (CREAM VOBOX), submitting to both types of WNs
IPNL,RRC-KI GRIF_DAPNIA	Full site migrated to SL5 BUT the VOBOX (still SL4)
IHEP	Migrated to SL5 (WNs) site admins looking for a SL5 VOBOX for future upgrade

Status of the SL(C)5 Deployment (II)

SITE	SITUATION
JINR, Troitsk	Installing and testing SL5 WNs these days, JINR already done. Installing and testing new VOBOX this week
Trujillo	some trouble for the site, if CREAM-CE under Sun Grid Engine is not ready. It's still under precertification stage,

- Hybrid (worse) situation: WNs in SL4/32b and SL5/64b
  - This is the situation ALICE wanted to avoid in September
  - The experiment can manage this situation if and only if:
    - 2 VOBOXES are provided (each one will run an independent PackMan service)
      - and this independent of CREAM!
    - 2 different software areas (per VOBOX, per cluster) are provided
    - The sw version changes with the architecture
    - The support infrastructure has to be doupled

Useful info for the sites

SL4	SL5	32b	64b	
X	X	X	X	→2 VOBOXES
X		X	X	→2 VOBOXES
X		X		→1 VOBOX
X			X	→1 VOBOX
	X			→1 VOBOX

- VOBOX multiplicity comes defined by the arquitecture
- 32b VOBOX can work with 64b WNs although not optimal (compatibility issues)
- Therefore a site with SL4/64b and SL5/64b will require ideally 2 VOBOXES

Summary

- All sites providing CREAM-CE to ALICE are encouraged to migrate to CREAM1.5 asap
- The gLite3.2 VOBOX is now in production and sites should migrate their nodes also inmediately
- ALICE keeps the requirement of the migration of WNs to SL5
- Independent of CREAM, sites are encourage to provide homogeneous setups for ALICE in terms of WNs and VOBOXES
  - This will ease site admins and experiment lives
  - **And now it is the time!**