THE CREAM-CE ALICE SETUP: STATUS AND REQUIREMENTS FOR THE SITES

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INTRODUCTION

- ALICE is interested in the deployment of the CREAM-CE service at all sites which provide support to the experiment
  - Focus: Direct CREAM-CE submission
  - WMS submission not required
  - CREAM-CE proxy renewal feature not required
    - *48h voms extensions ensured by the security team@CERN*
    - *Enough to run production/analysis jobs without any addition extension*
- The experiment has began to test the CREAM-CE since the beginning of Summer 2008 in a fully production environment
  - This talk will focus on the experiment experiences using CREAM-CE, the expectations and requirements for all the sites

THE FIRST ALICE CREAM-CE SETUP

- Test CREAM-CE instance provided by GridKa
  - Tests operated through a second VOBOX parallel to the already existing service at the T1
  - Access to the CREAM-CE
    - *Initially 30 CPUS (in PPS) available for the testing*
    - *Moved in few weeks to the production ALICE queue (production setup)*
  - Intensive functionality and stability tests from July to September 2008
    - *Production stopped at the end of September of 2008 for CREAM-CE upgrades at the site*
    - *Confirmed the deployment of new version last week at GridKa (tested and perfectly working)*
- Excellent support from the CREAM-CE developers and the site admins
  - Thanks to Massimo Sgaravatto (Padova-INFN) and Angela Poschlad (GridKa) for the continous support

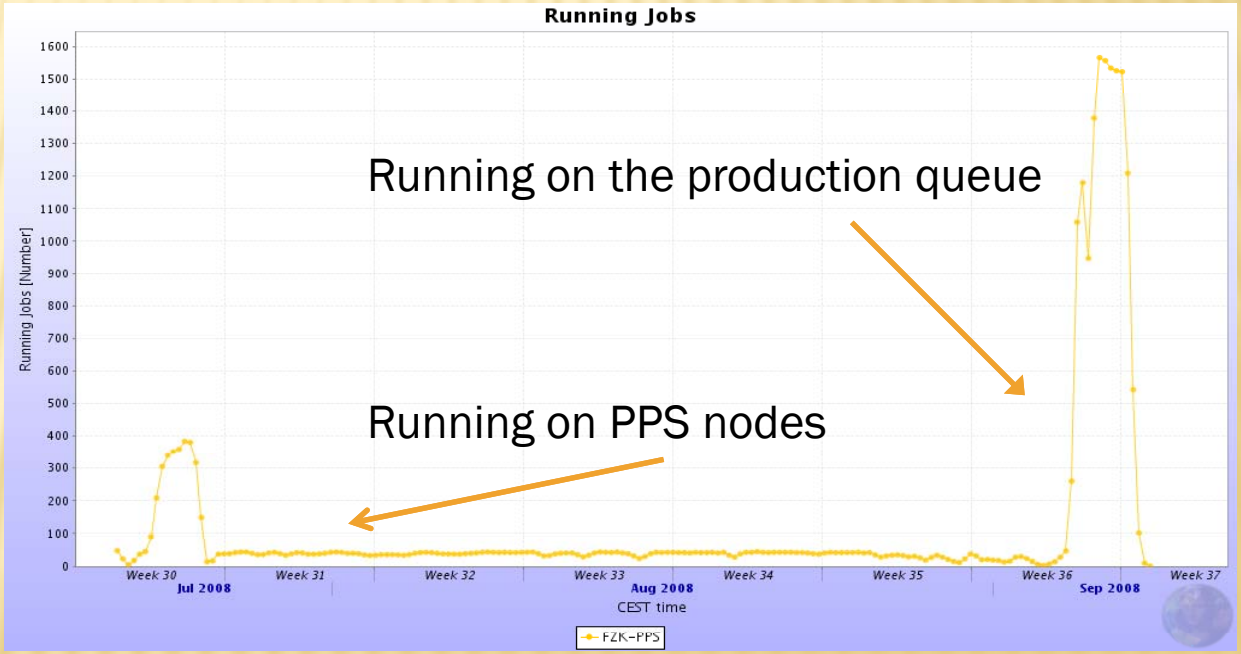
JOB EXECUTION THROUGH THE CREAM-CE

- More than 55000 jobs successfully executed through the CREAM-CE in the mentioned period
- No interventions

in the VOBOX required in the testing phase

- CREAM used

to distribute real (standard) ALICE jobs



RESULTS OF THE TESTING PHASE

- The CREAM-CE requires a delegated proxy for submission purposes
  - The VOBOX already contains it
    - */opt/vobox/alice/proxy-repository/…. Contains already the user delegated proxies*
- ALICE submission procedure
  - Delegation-submission-delegation-submission
  - Procedure used only during the testing phase
  - Quite time consumming procedure
    - *3 seconds estimated per submission*
  - Delegation-submission-submission-submission is the proper procedure to follow

CREAM-CE SETUP INTO THE ALICE S/W

- Small changes are required into the ALICE submission infrastructure to use the CREAM-CE
  - Moreover related to the jdl agent construction:
    - *The OutputSandbox declaration enforces a further field: « outputsandboxdesturi » which declares the gridftp server where to retrieve the output of the job*
  - First test setup:
    - *Leaving the job outputs into the CREAM-CE and retrieving them later via globus-url-copy (derty solution but OK for testing)*
  - Final Setup (required for the production)
    - *GridKa included a gridftp server into the 2nd VOBOX*
- A new CREAM-CE submission module has been included in the last ALiEn version 2.16 (deployed this week at all sites)
  - Based in the experiences gained during the testing phase at GridKa
- ALICE s/w is therefore ready and it foresees the CREAM-CE deploymentat all sites

ALICE REQUIREMENTS FOR THE CREAM-SE DEPLOYMENT (I)

- During the last October pre-GDB meeting it was explicitly mentioned:
  - Unlikely to be deployable as an lcg-CE replacement on this timescale (downtime period), but we can continue with rollout in parallel.
- In addition during the November pre-GDB meeting it was concluded:
  - The lcg-CE replacement will required the WMS submission in place and the resolution of the proxy renewal issue (among more other points related to the service performance)
  - It was encouraged however the deployment of the system in parallel to the LCG-CE

ALICE REQUIREMENTS FOR THE CREAM-SE DEPLOYMENT (II)

- The parallel LCG-CE vs. CREAM-CE setup in terms of ALICE computing model means the deployment of a 2nd VOBOX
  - Each VOBOX is able to submit to a specific backend
  - One VOBOX → LCG-CE OR CREAM-CE submission: replacement approach
  - Two VOBOXES → LCG-CE AND CREAM-CE submission: parallel approach
- This is a temporary solution during the parallel running phase
  - As soon as the replacement is ensured and the LCG-CE is deprecated ALICE will not required a 2nd VOBOX

ALICE REQUIREMENTS FOR THE CREAM-SE DEPLOYMENT (III)

- Remarks for the 2nd VOBOX deployment
  - Non-stop for the deployment of the CREAM-CE
    - *Serious concerns providing a 2nd VOBOX at the T2 sites*
      - Each site will be treated individually
      - Observe the virtual service setup as a temporal solution
  - This is NOT applicable to the T1 sites

ALICE REQUIREMENTS FOR THE CREAM-SE DEPLOYMENT (IV)

- In addition:
  - Setup of the ALICE production queue behind the CREAM-CE
    - *This procedure puts the CREAM-CE directly in production*
  - GridFTP server
    - *Required to retrieve the job (agent) outputs*
    - *Removed from the VOBOX in January 2008 with the deployment of the gLite3.1 VOBOX*
      - It was not longer required by the 4 LHC experiments at that time
    - *No specific wish for the placement of this service*
      - It can be provided into the VOBOX but this site decision

FINAL REMARKS AND SUMMARY

- There are 3 sites currently providing CREAM-CE (plus all the further requirements including a 2nd VOBOX):
  - GridKa (Germany)
  - VECC (India)
  - IHEP (Russia)
- ALICE encourages all sites to provide a CREAM-CE during the LHC downtime
  - The latest AliEnv2.16 is ready to use the CREAM-CE in parallel to the LCG-CE (WMS submission only. RB fully deprecated)
- The experiment foresees the CREAM-CE system in full production (if ready) before the real data taking
- The test/feedback and the support by the experiment and the CREAM-CE experts is available for all sites