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Enabling Grids for E-sciencE

CESGA Status Report

Esteban Freire, Javier Lopez, Álvaro Simón / CESGA

SA3 All Hands Meeting, Praha

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www.eu-egee.org

Enabling Grids for E-sciencE

- **Main Achievements since May**

- **Work on Deliverables/Milestones**

- **Issues/Problems**

- **Next Steps**

Main achievements since May

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- **VM mounted like image files: New testbeds can be easily made only migrating files.**

- **Xen Virtual Machines (Dell Poweredge 1955):**

  – CE/site-BDII: VM SL4 sa3-ce.egee.cesga.es

  – WN: VM SL4 sa3-wn001.egee.cesga.es

  – MON: VM SL4 sa3-mon.egee.cesga.es

  – SE_DPM: VM SL4 sa3-se.egee.cesga.es

- **SA3 TAR_UI installed for testing purposes**

- **NOTE: This task is a joined effort between IC, LIP and CESGA**

- **Integration in LCG-CE SL4 ready**

  - SGE v6.1u3 RPM packages tested

  - Yaim 4.x and SGE scripts developed

    - Glite-yaim-sge-server-4.0.1-4

    - Glite-yaim-sge-utils-4.0.1-12

    - Lcg-jobmanager-sge-3.0.51-3

    - Glite-info-dynamic-sge-2.0.11-2

  - New SGE JM v0.51 released

  - SGE batch system was released to production sites

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- **Integration with CreamCE SL4 in progress**

  - Tested SGE blah scripts with Cream-CE

  - Tested sge-info-reporter to support SGE on Cream-CE

- **Integration with lcg-CE MPI SL4 in progress**

  - New SGE JM for MPI jobs support has been wrote

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- **Certified Patches:**

  – Patch #1809 New JobManager for SGE.

  – Patch #2253 New JobManager, Information Dynamic plugin and yaim utils versions for SGE.

  – Tested Patch #1873 (globus improvement packages) with SGE.

Work on Deliverables/Milestones

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- **Task #5804: SL4 SGE enabled lcg-CE (done)**

  – CESGA maintains a SL4 lcg-CE with SGE

- **Task #8089: Write the script for SGE for the Info provider to show response time (in progress)**

  – New SGE IP is written by Keith Sephton from IC

- **Task #8271: SGE MPI Jobs support (in progress)**
- **Task #8270: SGE Cream-CE implementation (in progress)**

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- **Opened bugs:**
  - Testing patch #2253:
    - Bug #42475: BDII failure on Xen VM without TLS libs.
    - Bug #42089: Problems on siteBDII, ldap is not working.
    - Bug #42477: Globus-gatekeeper failure on Xen VM without TLS libs.

- **Issues found:**
  - CE fails submitting jobs to different SGE qmaster server which uses non standard ports.
    - This issue was solved with #2253 patch.
  - Glite environment is not loaded submitting jobs directly using qsub.
    - Solved including: "execd_params INHERIT_ENV=false" option.
  - Job spool files in each node $SGE_ROOT/default/node/job_scripts, can be read by all users.

- **SGE on cream-CE**

  – Write new SGE blahp scripts for Cream-CE integration.

- **SGE and MPI jobs**

  – Write new SGE JobManager to allow MPI jobs using int.eu.grid mpi-start script.

Enabling Grids for E-sciencE

- **SGE Cookbook**

  - https://edms.cern.ch/document/858737/1.3

- **Xen Virtualization @CESGA**

  - https://swe-wiki.egee.cesga.es/cgi-bin/moin.cgi/XEN3_Virtual_Machines_-_CESGA-EGEE

- **SGE Wiki Page**

  - https://twiki.cern.ch/twiki/bin/view/LCG/ImplementationOfSGE