

LAL and GRIF Site Report

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Main HW Changes

- 12 quad Opteron 2,2Ghz being installed
 - All for GRIF T2
 - IBM x326M dual CPU dual core, 8 MB of memory
 - Installation problematic with SL3.05
 - PCI Express BCM5700 not supported by installer and difficult to integrate (integration easy with SL4.2)
 - LCG 2.7 doesn't work off the shelf on SL4
- 9TB more installed on SE (DPM)
 - Total = 18 TB
 - 2 Linux machines connected to SAN (QL2340)
 - Single attachment
 - Plan to look for path failover later (Hitachi HDLM)
 - SATA extension to HDS 9570V
 - Acceptable cost, easy integration in current LAL infrastructure
- Plan to look at LinuxHA for databases and Web servers

OS Updates

- Scientific Linux (3.0.5, 32-bit) everywhere
 - Upgrade of RH 7.2/9 machines completed
 - All machines (grid and non grid) reinstalled with Quattor
- Started to look at SL4.2 32-bit
 - Will start to look at SL 4.2 64-bit (x64)
 - Plan to use it on disk servers, web servers...
- LCG UI on all LAL physics servers (30)
 - Done with Quattor : easy to install and maintain
 - VOMS with local VOs for non LHC users

Tool Update

- Migrating from CERN Agenda to Indico
 - Not so easy : CERN dependencies, threading issues on multi CPU machines (SL3)...
 - Good support from CERN
 - Almost complete : still some issues with migration of attached documents
- Trac/Subversion usage increasing
 - Not only for SW development projects
 - Documentation + issue tracking / roadmap
 - Subversion (CVS replacement) used for system administration
 - Versioning of system configuration (e.g. Apache)

GRIF : A Tier2 in IdF

- A unique LCG resource distributed over several sites
 - 5 sites : LAL, CEA/DAPNIA, LPNHE (Paris), LLR, IPNO
 - Nearly all HEPNT labs in Paris region
 - 1 technical team made of people from each lab
 - Both analysis and simulation
- Open to LHC and non LHC users (VOs)
 - 20% of the total resources
 - All HEP / EGEE VOs
 - Local VOs for users not member of existing VOs
- Resource goals (2008)
 - CPU : 3000 kSI2K (Opteron 2,2 Ghz = 1,5 kSI2K)
 - Storage : 700 TB of disks (disk only, no MSS)
 - Network : 10 Gb/s backbone inside Tier2 if affordable, 1 Gb/s external link

GRIF Current Status

- 1 unified EGEE/LCG site since Oct. 2005 : GRIF
 - Open to all LHC VOs, Planck, ESR/Egeode, Biomed, H1, D0
- 4 active GRIF sites
 - Currently 1 CE/SE per site
 - CE : Torque based, SE : DPM
 - Entire GRIF managed by Quattor (1 configuration DB)
- Current aggregated resources
 - CPUs : 130 CPUs (200 kSI2k)
 - Storage : 50 TB
- Well in advance compared to original planning
 - Almost reached resource level originally planned for end of 2006
- Plan to double resources in 2006
 - Funding asserted

GRIF : 2006 Challenges

- Funding : asking for Paris region support (1,1 M€)
 - To finance HW purchases planned in 2007-8
 - First contacts positive
- CE “unification”
 - 1 CE geographically distributed probably not efficient and not manageable (e.g. firewall configuration)
 - Looking at a multi-cluster approach allowing cross submission between CE (transparently for the MW)
 - LSF best candidate, but Torque 2 seems to have this feature too
 - No time to start any evaluation yet
- Efficient access to data for analysis
 - Looking at xrootd in front of DPM
- GRIF global monitoring
 - Started evaluation of Lemon, very promising...
- Participation to SC4

Quattor Workshop...

- Held at LAL March 22-24th
 - Quattor is a critical tool for LAL and GRIF
 - 25 participants from 15 sites
 - Contributors and users
- Quattor usage increasing (x2 in 1 year)
 - 39 sites using 20 configuration DBs
- Quattor very valuable but steady learning curve
 - Particularly for LCG templates
 - QWG maintainers (Cal and me...) working hard to get templates easier to use (more generic)
 - Huge progress in templates for LCG 2.7
 - Trac site started for QWG templates
 - <http://trac.lal.in2p3.fr/LCGQWG>

... Quattor Workshop

- Many sites interested by GRIF experience with a distributed site and Subversion based CDB
 - Use standard tools (SVN/ant) in replacement for CDB
 - Fully compatible with other Quattor components
 - Much more flexible and reliable
- Most of Quattor development outside CERN
 - CERN focuses on CVS based CDB
 - PAN compiler : Cal
 - Templates : Cal, me, others...
 - Components : CERN components difficult to reuse...
 - More standard component will benefit to CERN and others
 - Means Quattor is not CERN centric, even if heavily used at CERN