CernVM-FS Status

WLCG GDB

December 8th 2010

ian.collier@stfc.ac.uk

CernVM-FS Status

There seems to have been a marked increase in interest in CernVM-FS, especially from Tier1 sites in the last few weeks.

Tier 1 Tests & Plans

- Detailed client performance tests at PIC in summer
  - Job performance scaled better than NFS
  - Saw problem starting many simultaneous jobs when client and squid caches are all empty
  - Had problems with automount configuration
- RAL has been testing load on the squid
  - Have run through thousands of Atlas hammercloud and user analysis jobs – load on squid(s) much, much less than on NFS software server
- Nikhef have had to change default install to comply with site requirements
  - Severe problems on clients when they interrupted the connection to the squids – about to check with latest client
  - Unhappy with automount setup

Tier 1 Tests & Plans

- RAL
  - About to start doing scale tests for LHCb
  - Atlas planning to experiment with using just CernVM-FS for all work until data taking resumes in February
- Nikhef
  - Planning scaling tests for their use cases
- CNAF
  - Planning at least to test cvmfs
  - primarily in response to requests from experiments (LHCb)

Other sites

- QMUL – Using just CVMFS
- Bristol (part of Southgrid) looking at supporting Atlas jobs for first time so investigating CVMFS
- Many Atlas T3s – especially in US – using just cvmfs
- University of Victoria is testing (seen on mailing list)

Current Status of tool/Service

Until the service is fully supported at CERN (and the repository is mirrored elsewhere) it should, for Tier 1s at least, be regarded as experimental

- rpms for client 0.2.53 just released (26/11/2010)
- CERN IT & developers working on full support of service (will not be in place before late January – but no firm date)
- Security audit in progress (as offshoot of HEPiX virtualisation working group)
  - A number of (minor so far) issues already identified

Plans & Developments

- Grid sites are a very different use case from CernVM
  - Sites are identifying different requirements
  - Active discussion on best way to meet all requirements
  - Discussions also taking place on best ways for grid sites to contribute to development, testing etc.
    - CernVM team is small – and have delivery priorities WRT CernVM
- RAL are working with developers to test and document process for mirroring CernVM-FS web repository
  - once recipe is worked out this will be repeated elsewhere
  - Note this is just the web repository – release on to cvmfs still happens at CERN
  - Have prototype almost working as of today
  - This will remove single point of failure for software availability

Links & Further info

- Can contact Jakob Blomer (jakob.blomer@cern.ch) or Ian Collier (ian.collier@stfc.ac.uk) off line for configuration & other info.

- Technical paper: https://cernvm.cern.ch/project/trac/cernvm/export/1693/cvmfs-tr/cvmfstech.preview.pdf

- Jakob Bolmer's talk at CHEP: http://117.103.105.177/MaKaC/contributionDisplay.py?contribId=39&sessionId=111&confId=3

- Security Audit: https://twiki.cern.ch/twiki/bin/view/Main/CernVM-FS-SecurityReview

- RAL CernVM-FS Page (under construction): https://www.gridpp.ac.uk/wiki/RAL_Tier1_CVMFS