

Technology Investigations Update

Brian Bockelman
Area Coordinator's Meeting - June 29

Highlights

- StashCache: first production workflow successful.
- HTCondor-CE-BOSCO: Handful of test instances, starting to launch pilots.
- GRÅCC: July development milestones nearly complete.
- Still active in getting LIGO running across more sites.

StashCache

- CVMFS 2.2.0 (and significant rewrite of default configuration) shipped.
 - Some site support issues from config overhaul: believe they are solved? Most are from sites whose configs were setup in very early CVMFS days.
 - Beta version of improvement Stratum-1 replication daemon done.
- Significant repo news:
 - stash.osgstorage.org: Updates have been reliably processed - about once an hour - in the past two weeks. On about 20% of OSG VO pool.
 - nova.osgstorage.org: Automatically synchronizing some new directories. Actual usage remains unclear.
- Had at least one OSG VO user convert a production workflow to use stashcp. Some intermittent failures, but works with automated retries.
 - Smaller-scale use case: 200MB / job, 50k jobs / workflow.
- Summer student at UChicago is working on stashcp improvements. Fixing timeout bugs, will have stashcp automatically try stash.osgstorage.org as a source.
- Xrootd caching performance improvement is not yet released; under heavy testing by a few StashCache sites.
- Migrating from ITB infrastructure to production infrastructure (redirecter.osgstorage.org).

HTCondor-CE-BOSCO

- Released to the software stack.
- Testers at Utah, IIT, MIT, and UNL.
- Docs: <https://twiki.grid.iu.edu/bin/view/Documentation/Release3/InstallHTCondorBosco>
- Still waiting on the first Gratia records! Needs investigation...

GRÅCC (Gratia V2)

- Trying to keep development documentation updated: <http://opensciencegrid.github.io/gracc/>
- GRÅCC is caught up with Gratia production databases; ingests records at 5-10x rate of Gratia.
 - 30 days of summarization complete in 15 seconds. Plan is to simply re-summarize the last 30 days of raw records every 15-30 minutes.
 - Currently: 600M job records, 178M transfer records.
- Bulk of July development done. Currently working on packaging; debugging next.
 - Once July deployment is done, will start to engage accounting “consumers” to start migration of scripts and such.
- Starting to put together list of tickets for September.

Other

- LIGO now has two pipelines that support OSG.
- Can run more reliably on GA Tech and VIRGO sites. Validating the Dutch (NIKHEF) and Canadian (SCINET) now.
- Working with one CMS site (Nebraska) to remove SRM. 95% complete. Notre Dame next (?).
- Not much visible progress on CMS stakeholder request for another round of scale testing.

Concerns

- Would like to see a few more big opportunistic sites upgrade to CVMFS 2.2.x.
- Will need a wider range of folks (mostly software) working on adapting GRÅCC between July and September.
- All Technology staff are pretty busy: not been active in retiring BDII in the last few months.