

Technology Investigations Update

Brian Bockelman
Area Coordinator's Meeting - May 10

Highlights

- GRÅCC: continued whirlwind! Focus is on docs and operations.
- StashCache: improved monitoring and docs.
- OSG 3.4.x initial release! 🎉🎉🎉🎉
- Working on a paper for Singularity use on OSG.
- Globus Toolkit going closed source

GRÅCC

- Status from early May: “Gratia is completely turned off and replaced by GRÅCC.”
- Had first Gratia-free WLCG reporting cycle. Hit an issue with summary data missing HTCondor jobs that were `condor_rm'd`.
 - Was not seen in side-by-side Gratia / GRACC comparisons because the Gratia collector was silently altering incoming records. Altered records were not affected!
 - When primary collector switched from Gratia to GRACC, records were not altered and hence missing from summaries.
 - Good operational exercise: no data was lost, just needed a bugfix plus re-summary.
- Still quite a few loose ends to tie down, operationally. Biggest concern is finishing end-to-end Puppetization of service.
- Docs continue to grow: <http://opensciencegrid.github.io/gracc/>

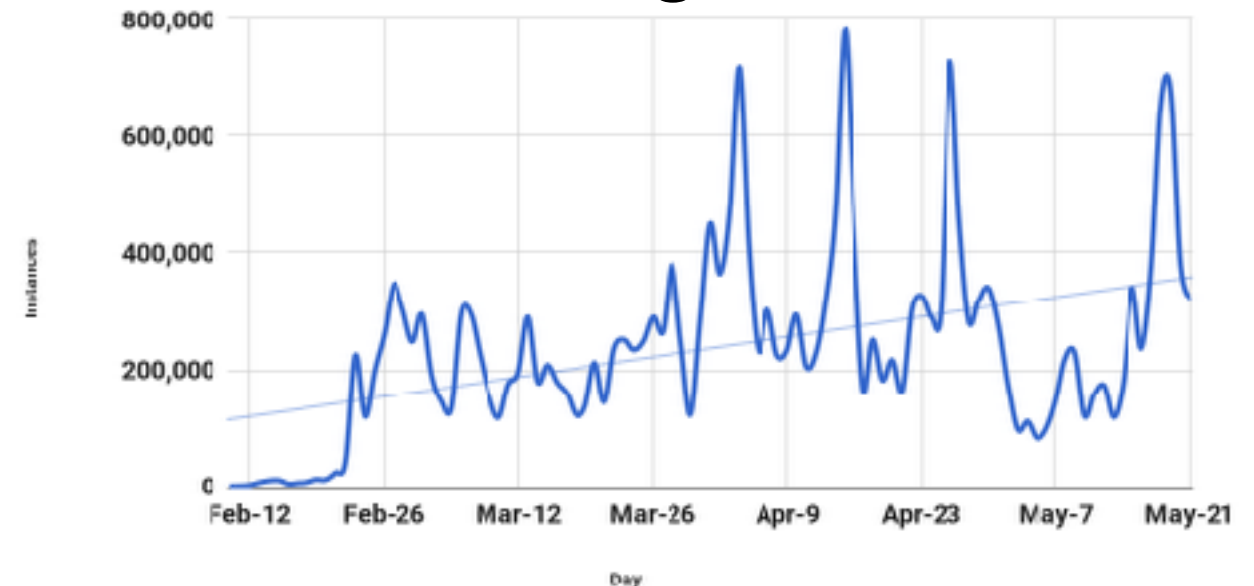
OSG Storage Progress

- Quiet month on the LIGO front - everyone on vacation or working on an NSF review?
- Took the opportunity to overhaul the docs and get the authenticated StashCache release out the door.
 - <http://opensciencegrid.github.io/StashCache/>
- Various osgstorage.org CVMFS repositories are getting packaging and monitoring improvements.
- SciTokens - a collaboration involving UW, Nebraska, NCSA, and Syracuse - was recommended for funding. This would provide effort to replace X509 authentication in CVMFS with an OAuth2-based workflow.
 - Waiting for official funding announcement but starting work July 1.
 - Watch <https://scitokens.org/> for more activity!

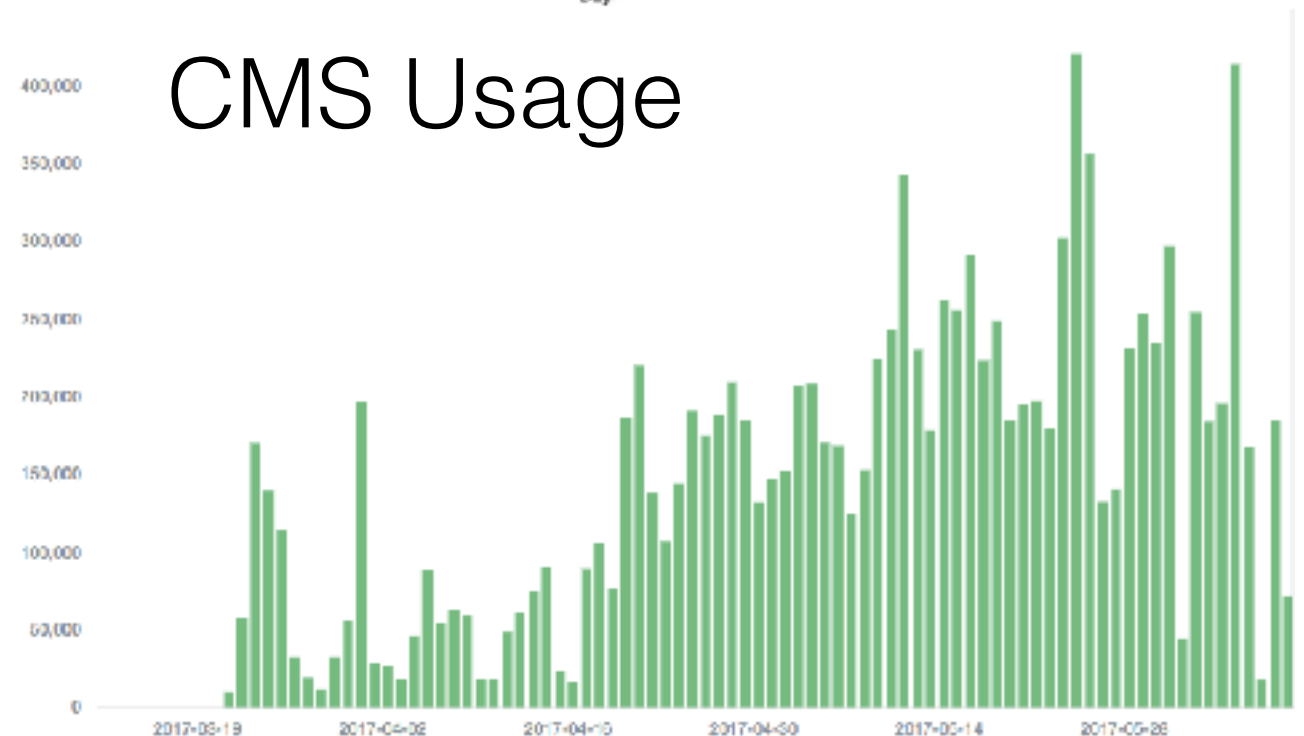
Singularity

- OSG VO using in production where available. ~30M containers launched.
 - Continuing to figure out how to best organize OSG VO image management.
 - CMS similarly around 30M containers launched.
 - Working on a journal paper describing the setup.
- **Question:** Does anyone know FIFE status?
- Working on meeting FNAL traceability requirements using HTCondor-CE. Expecting an HTCondor-CE PR in the next week or so.
- gWMS working on upstream software support.
- EPEL now distributes the desired version of Singularity (2.2.1); OSG doesn't have to!
- Expect to work without setuid in RHEL 7.4 - or in a RHEL 7.4 update.

Instances/Day OSG Usage



CMS Usage



Authz overhaul

- Authz overhaul continues to progress!
- Current authz template actually looks correct!
- Documentation has had a few rounds of feedback from testers.
- Icmaps-plugins-voms is starting to hit the adventurous sites.
 - Correspondingly, had a round of bugfixes.
- Just like last time, I am quite pleased with the month-over-month progress.

Retirements

- OSG 3.4.x series began the retirement clock for GUMS, VOMS-Admin, and bestman2.
 - `bestman2` was well on its way and reported here several times. Still a few remaining instances, but well-trodden path to follow.
 - AGLT2 and Nebraska successfully retired GUMS on the CE.
 - Nebraska has yet to cut over storage services to `lcmaps-plugins-voms`. Nearing endgame!
 - VOMS-Admin will be a drawn-out process: replacement approach is incompatible with `edg-mkgridmap`.
 - How we actually execute this should be a **topic for the planning retreat**.

Globus Toolkit -> Closed Source

- Policy statement: <https://opensciencegrid.github.io/technology/policy/globus-toolkit/>
- TL;DR — OSG will support our stakeholder's usage of Globus.
 - Open-ended for as long as it is needed.
 - Mostly revolving around GSI and GridFTP code. Similar scale to bestman2 + GUMS codebases (but simpler dependencies).
- In parallel, OSG will help nurture authorization and transfer systems that are not reliant on Globus.
- To lighten burden, looking at some sort of partnership with CERN IT or EGI.

Concerns

- GRÅCC puppet-ization process has proceeded slower than expected.
- Would still be a very manual process to rebuild from scratch and reload data from tape archive.
- Needs continued time & effort.
- Globus Toolkit planning is going to be a big time commitment over the next year.