

# Technology Investigations Update

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Area Coordinator's Meeting - May 4

# Highlights

- CVMFS-over-StashCache: CVMFS 2.2.x will make May release; CVMFS 2.3.x progressing nicely.
- HTCondor-CE-BOSCO will make May release.
- Started work on “Gratia V2”.
- Investigating some potential technologies for documentation.
- AMS is no longer keeping us (technology) busy; LIGO and IceCube are! CMS is waiting in the wings...

# CVMFS-over-StashCache

- CVMFS 2.2.0 and corresponding default configurations will be moved from “upcoming” to “release”.
  - The GSI fixes needed for LIGO were sufficiently invasive that they decided to deem them “CVMFS 2.3.0”. A prerelease is in osg-upcoming-testing; LIGO has validated this works.
- Significant repo news:
  - [stash.osgstorage.org](http://stash.osgstorage.org): Lots of bullet-proofing to make updates more reliable in the last week. Available at Nebraska and MWT2 (and [login.osgconnect.net](http://login.osgconnect.net)).
  - [ligo.osgstorage.org](http://ligo.osgstorage.org): Works by default when taken from osg-upcoming-testing.
- Once the release happens next week, we’ll start working on updated Stash usage instructions for user support and “knocking on doors” of friendly sites.
- In the next 2 months, expect a significant Xrootd upgrade for caching proxy performance.
- We are working on some infrastructure improvements for the Stratum-1 servers to get them to process updates more quickly.

# HTCondor-CE-BOSCO

- First version will be part of May release.
- Have lined up testers at UChicago, MIT, and UNL. UNL endpoint is already installed.
- Should have more to say at the next update.
  - Particularly excited to have Gratia information from BOSCO endpoints!

# Documentation

- To assist in making progress on documentation, decided to split off the technology aspect.
- With Derek, came up a github-based workflow that closely mirrors how various Open Source software projects manage docs.
  - Aligns much better with how I'd like to see OSG Software-type install docs.
- See a few converted documents:
  - <http://opensciencegrid.github.io/docs/>
- Wide-ranging topic, across several areas. Probably will have a long discussion on the topic next week.
  - A slide doesn't do this topic justice; neither does a multi-page email. Will likely need to do a demo.

# Gratia V2

- See fledgling documentation <http://opensciencegrid.github.io/gracc/>
- Broke the basic functionality into about 4 agents that need to be developed; about halfway through the prototypes.
- In addition to the development, will use (new) ElasticSearch DB @ UNL and RabbitMQ @ GOC.
- On track for a July milestone (basic functionality replacement for the Gratia collector + DB).
  - At that point, will switch work to hardening the product and working on the
  - Goal is to have all features done by September and have the *possibility* of replacing Gratia DB at the end of the calendar year.

# Other

- Been working with LIGO to expand set of sites to include VIRGO (CNAF, IN2P3, NIKHEF and some non-WLCG ones).
  - Helping LIGO-Caltech install & validate HTCondor-CE on their cluster. Waiting on pilots...
  - And now they are inquiring if OSG has the capability to submit pilots to Microsoft Azure...
- IceCube is also spreading its wings in terms of sites and capabilities (running on GPUs).
- Working to create a CMS stakeholder request for another round of scale testing.
  - Original request is for 500k glideins; not convinced this is pragmatic.