

# Technology Investigations Update

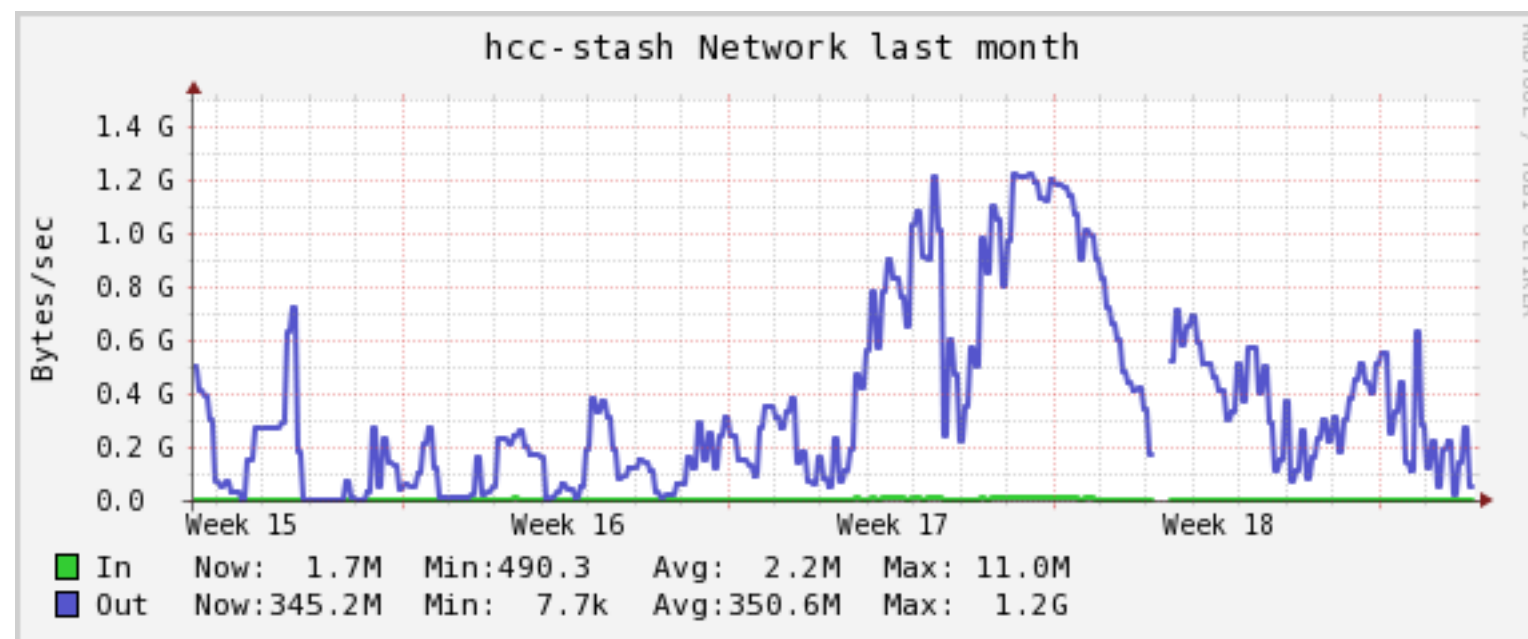
Brian Bockelman  
Area Coordinator's Meeting - May 10

# Highlights

- GRÅCC: accelerated deploy!
- StashCache: heavy use & increasing interest from LIGO.
- BDII retirement! 🎉🎉🎉🎉
- PEARC17 paper submitted / accepted. Working on a paper for Singularity use on OSG.

# OSG Storage

- OSG Storage usage continues to ramp up - hundreds of TB per week.
- About a dozen overall users, including LIGO.
- StashCP-only metrics below



Stashcp - numbers

**639,299**

Transfers

**112.6TB**

Data copied

**5**

Unique users

**4**

Unique projects

**38**

Unique sites

**9**

Unique servers

# LIGO and OSG Storage

- LIGO use drives the authenticated aspects of OSG storage.
  - The authenticated portions are still in development mode.
- Two authenticated StashCache instances (Syracuse, Nebraska) in place. LIGO is asking for two more (KISTI, CIT).
- Partnering with LIGO to help figure out how to best utilize RAL / Ceph. Ceph-based cache integration is potentially interesting for OSG sites!

# GRÅCC

- Quote from last report: “Once the punchlist is done, we must decide on transition sequence.”
- Current status: Gratia is completely turned off and replaced by GRÅCC.
  - Due to external events, GRÅCC transition was compressed from a few months into a few deadline-driven weeks.
- Focus for next few weeks on cleaning up the loose ends left by accelerated GRÅCC transition to operations.

# Singularity

- OSG VO using in production where available. 17M containers launched.
  - Has eased use of complex stacks such as TensorFlow.
- CMS integration in production: 2.5M containers launched at about 8 sites. Waiting for the first brave site to remove glxexec.
- Working on meeting FNAL traceability requirements using HTCondor-CE. Once done,
- FIFE working on adopting CMS & OSG gWMS scripts for Singularity.

## Example: CMS Usage (jobs in last 24 hours)

Site: Descending ↕ Q	Count ↕
t2_us_nebraska	50,863
t2_us_ucsd	47,530
t2_us_wisconsin	41,900
t2_us_purdue	31,163
t2_ch_cern	28,782
t2_us_caltech	27,660
t3_uk_scotgrid_gla	3,302
t2_tw_nchc	2,170
t3_us_osg	840

# SRM Retirement

- SRM retirement progressing along nicely: work has been at the CMS / ATLAS side.
- Documentation for load-balanced GridFTP in the hands of admins (**thanks all who helped!**).
- Otherwise, nothing new to report from our side!

# Authz overhaul

- Authz overhaul is progressing!
- Plugin code, RPMs, osg-configure changes: all have been shipped!
- Updated authz template received modest improvements. Down to 56 entries: probably could be reduced another 25%.
- Note: we need to start sharing information on this with sites / stakeholders. Docs!
  - Otherwise, quite pleased with the month-over-month progress.
- At least one Nebraska CE has successfully removed GUMS integration!



# Concerns

- StashCache and GRÅCC are both in the growth phase at the same time -> difficult to time-share personnel between projects.
- OSG 3.4 work starts now!