OSG User Support & Campus Grids

Rob Gardner • University of Chicago
Mats Rynge • ISI

OSG Area Coordinator's Meeting, **June 22, 2016**

Open Science Grid

In brief (from 4/13; updated 6/22)

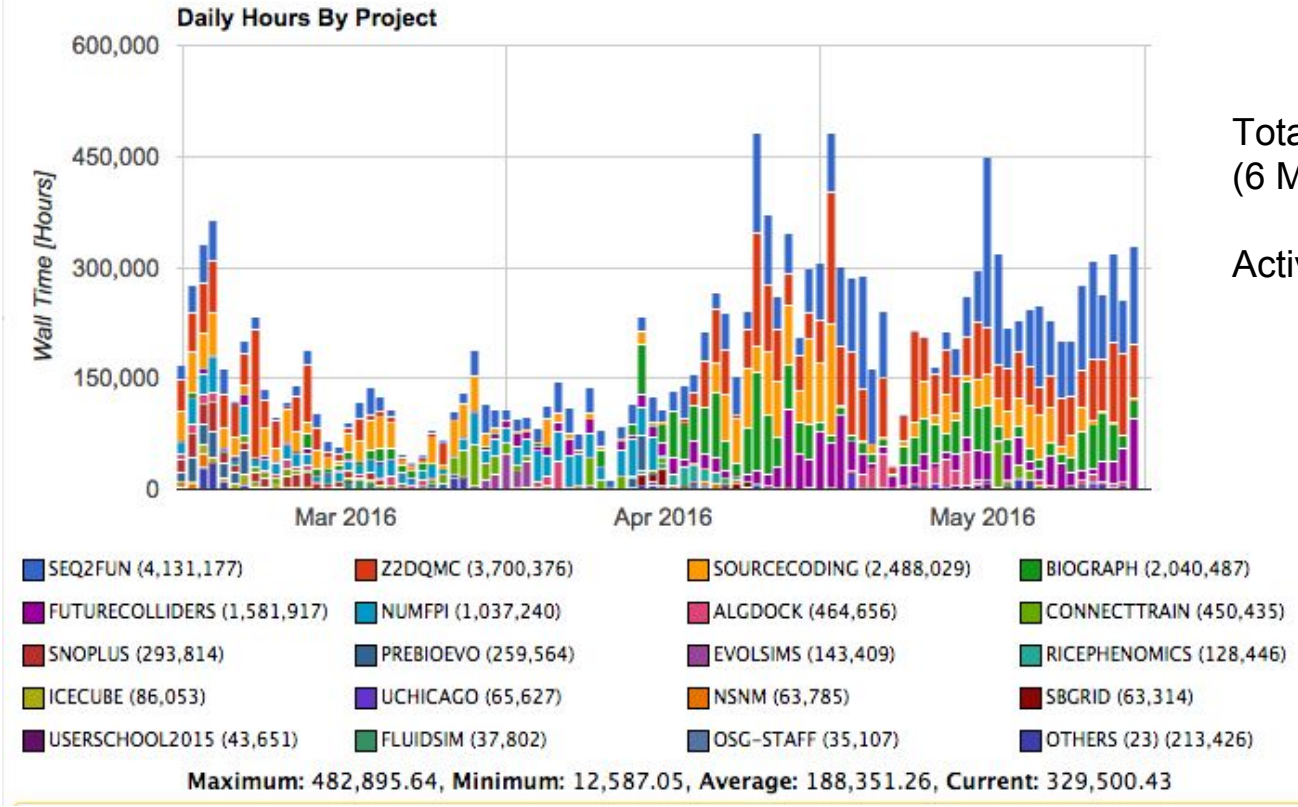
- Overall things are humming along fine given the available manpower & scope
  - A steady stream of user support requests are handled daily
  - Kyle to join triage effort for process and operations coordination **(policy doc in review)**
  - Deep engagements with Xenon1T and soon South Pole Telescope **(both, going well!)**
  - New FreeSurfer execution service - now validated, ready to roll out **(imminent!)**
  - New tutorials for CCTools makeflow tools
  - New user software in OASIS modules
  - New campus “quick connections” (Utah in process, potentially VaTech); EOI’s from Stanford & OSU
  - New submit host to handle heavy users
  - New sign-up process given Globus changes
  - New hire (0.5 FTE) at Chicago pending H1B visa **(Benedikt Riedel, started 6/1)**
  - New CS summer student to work on StashCache (Xrootd) and job analytics **(Tony Aburaad)**
  - Discussing liason & coordination XSEDE 2.0 campus engagement facilitators
  - Looking forward to availability of production CE-ssh and SC over CVMFS
- No significant risks or issues given current scope

OSG VO: 3 Months (Mar-May)

	Active Projects (3/15-5/15)	Active Projects (3/16-5/16)	Total Wall Hours (3/15-5/15)	Total Wall Hours (3/16-5/16)
OSG Connect	32	42	2,969,855	17,328,316
XD Login + OSG Direct	29	30	31,885,771	26,932,345
UChicago CI Connect[1]	4	4	15,446	1,346
Duke CI Connect[2]	2	6	395,917	1,010,660

1. Expect to increase as Xenon1T and SPT ramp up
2. Episodic usage from glass dynamics group (Chemistry)

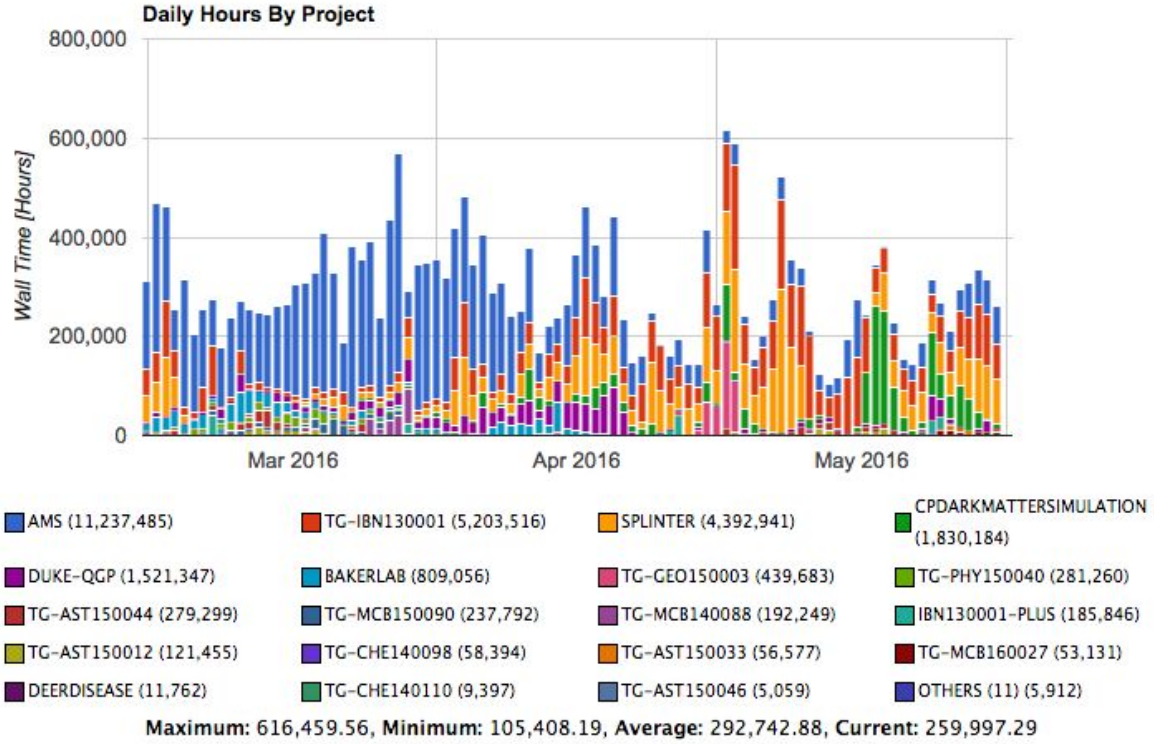
OSG Connect: 3 Months (Mar-May)



Total wall hours = 17 Million
(6 Million Wall Hours/month)

Active projects = 41

XD + OSG-Direct: 3 Months (Mar-May)



Total wall hours = 27 Million
(9 Million Wall Hours/month)

Active projects = 30

Stashcp testing

- Tony Aburaad (summer student) working with lija Vukotic doing systematic load testing
- Goal is to help bring StashCache into production for real users
- Developments to the stashcp client:
  - Improved monitoring and error reporting (retries, code versions, etc.)
  - Correctly handling insufficient local space.
  - Correctly propagating and reporting xrdcp exit codes.
  - Fixed code doing timeouts of slow transfers.
  - Collecting data in elasticsearch for analysis
- Next steps
  - More testing simple stashcp and cache stability and performance
  - StashCache-over-CVMFS

FreeSurfer - FSurf

- FSurf is a service Suchandra developed to provide the FreeSurfer community easy access to OSG - collaboration with Don Krieger
- Current status:
  - Client tool (fsurf) allows users to run standard FreeSurfer workflow
  - Completed internal testing by user support team & Lauren (UWisc)
  - User documentation: http://bit.ly/freesurferopensciencegrid
  - Releasing to FreeSurfer development team (Martinos Lab) today
- Next steps:
  - Release current version to FreeSurfer community pending Martinos feedback
  - Implement better monitoring of ongoing and completed workflows (next release)
  - Allow users to run customized workflows (next release)

Xenon1T Software / Computing

- Ongoing efforts:
  - Setting up OASIS external repository (xenon1t.opensciencegrid.org) to allow collaboration to use deployHQ for software deployment
  - Helping to extend current workflows to use dagman and GFAL2 tools
  - Will install GFAL2 client tools in OASIS/modules
- Completed efforts:
  - Provided scripts for running reconstruction of raw data
    - Used to reprocessing Xenon100 data on OSG (~27TB on Stash) several times from login.ci-connect.uchicago.edu
  - Installed Xenon1T tools (PAX, CAX, HAX) in OASIS

Xenon1T Storage / Data transfer

- Ongoing:
  - Working with collaboration to create Rucio/FTS3 infrastructure to automate data transfers and replication
- Completed Efforts:
  - Providing storage for Xenon100 runs (~30 TB) on Stash
  - Provisioned SRM SE to allow data on Stash to be used by jobs running on OSG
  - Assisting UChicago RCC in setting up and optimizing SRM SE instance for Xenon1T Tier1 center

SPT

- Software pipeline is based on IceCube framework
- Setting up software repository for SPT in OASIS
- Configuring analysis and archiving infrastructure for the south pole
- Computing infrastructure and upgrades for analysis facility at UC