OSG User Support Recap

October 2011 to June 2012

Support of Communities

NEES (Gabriele / Marko)

- Provided support for the integration of the NEESHub portal (Purdue) with OSG resources.
    - Issue: no requests to use the infrastructure for production loads yet.
- Supporting simulation jobs of Andre' Barbosa (UCSD) for his PhD thesis.
    - Finished the production-demo phase of NEES on OSG
    - Running finite element calculations on the response of building structures to simulated earthquakes traces.
    - Produced 12 TB of data, running 17,000 jobs for 500,000 CPU hours.

DES (Gabriele / Marko)

- Supporting Brian Yanni and Liz Buckley-Geer of DES at FNAL.
    - Porting DES data management pipelines to run on FermiGrid using OSG interfaces.
    - Demonstrated the ability to process 100 images in 15 hours. Target production process 300 images within 24 hours.
    - Challenge: staging in and out 5.4 TB/day per day.

Electron Ion Collider (Marko / Gabriele)

- Supported Thomas Ullrich and Tobias Toll from the Nuclear Physics community at BNL
    - Calculated momentum amplitudes for 4 different ions for the simulation of collision processes in the new accelerator.
    - Producing 3 TB of data, running 160,000 jobs for 600,000 CPU hours
- Bootstrapped OSG User Support personnel at BNL to take over this relationship

LSST (Gabriele / Marko)

- Created LSST VO and Support Center.
    - Working with the production area to provide opportunistic cycles for the new VO at sites. Issue: currently only 2 sites support the LSST VO.
    - Planning on the migration of LSST simulation from the NWICG VO to LSST VO
- Supporting the Dark Energy Science Collaboration (DESC) of LSST in the design and definition of a request system for simulation jobs.

GEANT4 (Gabriele / Tanya)

- Discussed new Geant4 VO requirements on application distribution. Initiated the discussion with the area coordinator in line with the OASIS proposal. Currently Geant4 is running only on EGI, waiting for a CVMFS-compatible deployment on OSG.

SLAC (Gabriele / Marko)

- Started a focused activity with SLAC management, IT personnel, and scientific communities to improve the integration of the site with the consortium.
- Supported Stefan Hoeche of the SLAC Phenomenology group to complete the proof-of-principle phase
    - Produced multi-particle quantum chromodynamics calculations using Monte Carlo methods for the searches for new physics.
    - produced 2 TB of data on OSG, running 9,000 jobs for 100,000 CPU hours.
- Supporting Steffen Luitz and Armando Fella of the SuperB VO
    - preparing for their simulation production in Sep 2012 at SLAC, Calthech, Ohio Supercomputing Center and, opportunistically, at Fermilab.
- In collaboration with the OSG site coordinator, organized meetings of the SLAC security team with their peers at FNAL and BNL to converge on more “community friendly” network policies at SLAC.

New Sites (Gabriele)

- PNNL - Supporting PNNL in the installation of OSG interfaces, mainly in support of the Belle collaboration. Made progress in the installation and OIM registration.

- Oregon State - Service deployment discussion with OSU for the support of NEES (OpenSEES) applications

- Ohio Supercomputing Center - Planned and executed the deployment of OSG services and WN software in accordance to OSC specific configuration requirements. Made progress on the CE installation. Collaborating with the SuperB VO for testing the site.

- UMD-IGS - Working on the installation of the CE; 1) making progress at a slow pace; but, 2) their motivation feels more related to PR than to scientific needs.

OSG as XSEDE SP (Mats)

- Designed a XSEDE/OSG integration framework; using a glideinWMS submit host at the GOC
- Worked with XSEDE staff to get the service provider implemented, documented and registered
- Interface consists of a Submit host is tied in with both the allocation/accounting system from XSEDE (AMIE) and the accounting system from OSG (Gratia). Allocations and user accounts are propagated from the XSEDE central database, and usage is recorded in Gratia, with summary usage records flowing back to XSEDE central database; required some Gratia integration and addition of "project-id" attribute.
- OSG is now an XSEDE service provider; currently have six active XSEDE allocations, but the resource is still new and we expect this to grow over the next year.

Public Storage using iRODS (Tanya)

- Ready for limited Deployment (with 1 or 2 VOs)
  - Integrated iRODS with OSG SEs
  - Wrote scripts and irods rules that allow to register resources and users, manage quota, etc
  - Wrote irods condor transfer plugin and necessary script for fronted modification to install irods client on the worker nodes, submit jobs via pilot and upload files using condor plugin
  - Tested the deployment with multiple test users, VOs and resources
  - Conducted performance tests that validated performance
  - Presented phase I outcome to Technology and Operation/Production teams
- Challenges and items still to be addressed
  - Hardware that currently used for test deployment is old and is out of warranty
  - Main challenge: identify a new user community to validate system in production

Support of Engage VO Users (Mats)

- Support has been continued for existing Engage VO users
- Tickets and requests on the mailing list has been handled in a timely manner
- Certificates have been verified and issued, acting as a DOE RA for Engage VO
- The Engage VOMS has been maintained
- Minimal system maintenance has been done to ensure continued operations of Engage services (submit host, VOMS, OSGMM instance for software deployment / site maintenance)

RENCI-Engage Transition (Chander)

Plan developed and being executed in the "background". A key requirements is not to disrupt active researchers doing science; https://twiki.grid.iu.edu/bin/view/VirtualOrganizations/EngageVoTransition

- Rehome flocking arrangements
- Move new community incubators to other environments
- Continue to handle VOMS (vo=engage) as a shared asset
- Move individual users to other environment if they cause a support burden on McGee's team

Outreach

- Published paper at CHEP 2012 “Supporting Shared Resource Usage for a Diverse User Community: the OSG Experience and Lessons Learned”
- Written newsletter articles for the major milestones reached with engaged communities
- Re-usable presentation for prospective new communities (used about 4 times) in DocDb
- Arranged ~5 new technology tutorials via the VO Forum call
- But VO Forum calls have been phased-out due to low need/attendance by VOs; we use direct contact to address needs (e.g. SURAGrid)

New Work Items

- iPlant
  - Working with the iPlant collaboration through Rion Dooley at TACC
  - iPlant is an NSF-funded project to boost studies of plant biology using computational techniques.
  - iPlant supports a portal for data archiving, job management, and scientist social interactions. By design, iPlant will interface to OSG using a condor job-submission interface; iPlant will maintain a condor scheduler that will be made part of the OSG front-end.
  - TACC has started the modification of their portal software to support submission to OSG. The plan is to start testing in July/August (depending on availability of new hires).

- NDSU – Just started working with Martin Ossowski to help them join OSG (introduced by David Swanson)

- Documentation for new Users – draft of roadmap for new users out for review; to be inserted at the "New Users" pointer on the OSG home page