Open Science Grid

OSG Operations

March 14, 2014

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Mission

The mission of OSG Operations is to maintain and support a production quality computing environment for research communities.

This is accomplished by:

- Operating and maintaining infrastructure services in a user-oriented, robust, and reliable manner.
- Developing a professional and skilled staff dedicated to a service philosophy.
- Managing resources responsibly, efficiently, and with accountability.
- Evaluating and continually improving the actions, methods and processes that allow a production quality compute facility.

OSG Operations Structure

- Operations Support
  - Support Desk
  - Ticket Tracking
  - Community Notification and Communication

- Operations Infrastructure
  - Compute Services
  - Distributed
    - IU, FNAL, UCSD, UNL, UC

Focus Areas

- Maintaining All Services at SLA Levels
  - This includes compute and support services.
  - All compute services at 99.41% Availability
    - Only missed a single monthly metric for MyOSG in July 2013
  - All critical services 99.92% Availability
    - Outage could lead to mass job failure
    - This is approximately 12 hours between June 2012 and February 2014.
  - Service Desk – No exceptions to SLA

Focus Areas (Continued)

- Inter-Area Communication and Coordination
  - Bring all area coordinator together weekly for production meeting
- Staff Development
  - Worked with senior staff to develop management capabilities
  - Staff Training Events
    - PerfSONAR, GlideInWMS, Software Packaging
  - Attendees at summer Grid School
  - Communication with GRNOC

Focus Areas

- OSG PKI
  - Moved from DOE supplied credentials to commercial DigiCert supplied credentials
  - Made the OSG PKI infrastructure independent of the Certificate Authority (CA)
  - Began issuing certificates March 2013
  - Updated to SHA2 Certs February 2014
  - Usability Survey Completed
    - Results are being analyzed

Focus Areas (Continued)

- Operations Services
  - Additional Customer Facing
    - OASIS
    - OSG PKI
    - CERN GlideIn Factory
    - PerfSONAR display on MyOSG
    - OSG-Flock
    - Web Pages
  - Additional Internally Facing
    - LVS
    - KVM
    - RHEL6
    - Real Time Operations Notification Environment
  - Deprecating Obsolete Services
    - Pacman Repos
    - Resource Selection Service (ReSS)

Focus Areas (Continued)

- Standardizing Operational Environment
  - VM Infrastructure allows quick replacement of services leading to better stability
    - Most are a one touch operation
  - Allows efficient addition of new services
  - Maintenance causes little to no service downtime for most services
    - Easy to keep OS software up to date and secure
  - Reduces training time (and possibility of human error) as most services have the same installation, rebuild, and disaster recovery procedures

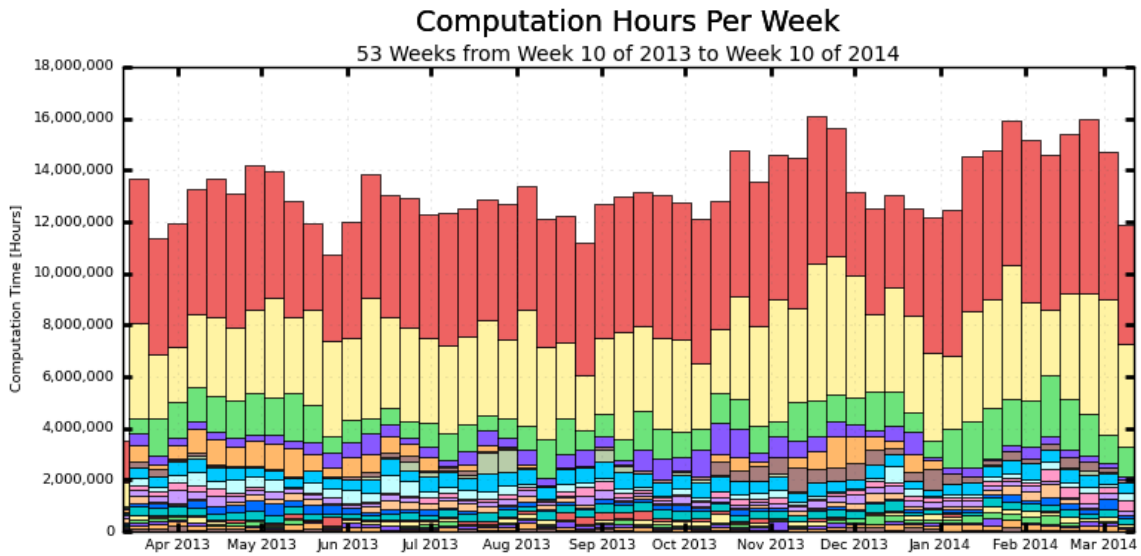
The Operations Team (10.75 FTE Total)

Name	Institution	FTE
Rob Quick	IU	0.85
Scott Teige	IU	0.9
Kyle Gross	IU	1.0
Tom Lee	IU	1.0
Soichi Hayashi	IU	0.8
Elizabeth Prout	IU	1.0
Chris Pipes	IU	1.0
Alain Deximo	IU	0.5
Michel Taveres	IU	0.5
Vince Neal	IU	1.0
Fermigrid Ops Team	FNAL	0.25
Glide In Ops Team	UCSD	1.5
OSG Connect Ops	UC	0.25
Brad Hurst	UNL	0.2

Impact to Stakeholders

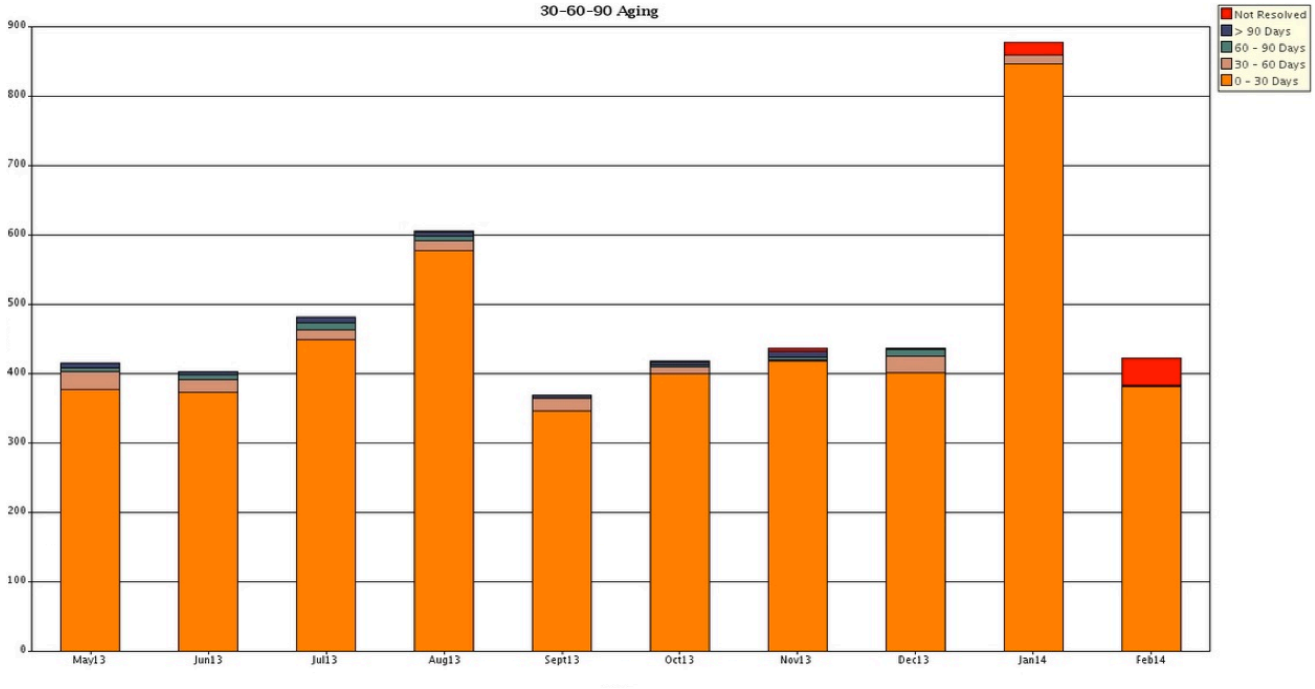
- Stable Operations Infrastructure
- Timely Support for Issues
- Adoption of New Technologies
- Community Notification of Operational Events
- Resource Monitoring

Job Activity



Key Metrics

- Availability of Operational Services
- Production Activity
- Ticket Load and Age



- New and Existing VO Adoption
- EGI Interoperable VOs

Challenges

- Reducing barrier for ~~new~~ all OSG users (in tandem with User Support and Technology)
  - Integrate operations with existing user interfaces and applications
  - Broaden adoption for VOs
- Increasing Capacity for operational services with no impact to overall operations stability
  - iRODs
  - XRootD
  - New OASIS
  - PerfSONAR
  - AutoPyFactory
  - Others as identified

Challenges (continued)

- Providing better interoperability for peering infrastructures researchers
  - WLCG, XSEDE Campus Bridging, EGI-Inspire

Challenges (continued)

- Build a stronger sense of community for users, resource suppliers, and OSG staff
  - Built in continued quasi-daily one-on-one interactions
  - Done in dialogues not monologues
  - Caring is necessary for community building

"What should young people do with their lives today? Many things, but the most daring thing is to create stable communities…" Kurt Vonnegut