OSG Production: Status, Strategies, Future Plans

Dan Fraser
OSG Production Coordinator

OSG AHM
March 11-13, 2013
Production Area (late last year)

- OSG Production
- Operations (Rob Quick)
- Software Release Manager (TBD)
  - Currently Tim C. is both S/W & Release
- Campus Program
  - Bosco (Focus on the “Researcher”)
  - OSG CIC (Campus Infrastructure Community)
    - Rob G. is running with this one
Production Area (current)

Production Manager (Rob Quick)
Operations (Rob Quick)
Software Release Manager (TBD)
  ▪ Currently Tim C. is both S/W & Release
Networking (Shawn McGee)
Campus Program
  ▪ Bosco (Focus on the “Researcher”)
  ▪ OSG CIC (Rob Q.)

Congrats Rob! Welcome Shawn!
Overall Production

Computation Hours Per Week
53 Weeks from Week 11 of 2012 to Week 10 of 2013

Maximum: 18,175,680 Hours, Minimum: 6,225,475 Hours, Average: 13,113,751 Hours, Current: 6,847,652 Hours
Production Focus

Transition to RPMs

- 67 sites using RPM based installs
- 37 sites still using Pacman install
  - Frozen for over a year
- Minor RPM work in process
  - Adding new packages (Squid)
  - Fetch CRL
- No outstanding blocker bugs for RPM

Focus now is on EOL for PACMAN (May 2013)

- Transition to Java 7 (Java 6 EOL February 2013)
- Enable a non-root client install
OSG Networking Area

Focus on network monitoring
- Originating as U.S. Atlas initiative to improve data transfer robustness
- A matrix of perfSonar-based network monitoring system between sites
- A dashboard to display information on throughput, latency etc

A wealth of information can be harvested, correlated, etc
- Provides unprecedented insights into connectivity and needs of science community
- Integration of sites, user communities and applications allows novel approaches
- For both research and to improve operational robustness
  - Highly interesting to networking providers, including Internet2, ESnet etc
    - One example how OSG can serve as a perfect “test bed” for CS research

This got a lot of traction worldwide
- Effort in WLCG to deploy perfSONAR(-PS) at all Tier-1 and Tier-2 sites
Key Initiatives in Network Area

- OSG modular dashboard service
  - work to make system more easily configurable and extendable
    - is now in GitHub
      - [https://github.com/PerfModDash](https://github.com/PerfModDash); 30000 lines code in place now
  - Information services (OIM/GOCDB) ready to host status for sites

- Documentation updates: network tools & troubleshooting
  - New draft “triage” document to point OSG users at

- Work on improving perfSONAR-PS toolkit for OSG
  - integration with OSG services and coupling to OSG Dashboard
  - advocating/supporting deployment at OSG sites begun. US ATLAS and US CMS sites pointed at OIM registration

- Defining what the OSG Network Service should look like
  - Operations sub-group needs to spin-up
  - working on improving Dashboard code, accessible and “runnable”
  - Should work with Operations and Software to make sure we agree on a “rough” vision for the service and corresponding timeline
OSG Campus Program

Focus on the Researcher (…or Artist)

- What can we do to increase the throughput of your computing?

Bosco ([http://bosco.opensciencegrid.org](http://bosco.opensciencegrid.org))

- Help ease the motivated researcher into a distributed environment
  - Distributed systems are not trivial
  - [http://display.opensciencegrid.org](http://display.opensciencegrid.org)

Campus Infrastructure Community

- Community building focal point
  - Rob Gardner
Bosco Extends the Researcher’s Reach

A Campus

- PBS
- Condor
- Local Cluster

Bosco

Other Campuses

- SSH Access
- No grid cert needed!

Researcher Workstation (Linux)
But Wait! That’s not all ...
Bosco Plan (release ~quarterly)

- Current Version v1.1.2
  - Invitation sent out to Condor users mailing list
  - Previous Campus grids have been upgraded to Bosco
    - Nebraska, Virginia Tech
  - View on OSG Display
    - (http://display.opensciencegrid.org)

- Working on v1.2 (April, 2013)
  - Focus on reliability, reducing annoyances
  - Scaling to 1000 submissions

- Start on v1.3 (May, 2013)
  - Gratia Accounting (integrated probe)
  - SLURM support
  - Features based on User Survey (TBD)
Campus HTC Infrastructure Direction

- Help the researcher use local HTC resources
  - Run on a local campus cluster
  - Run on several local clusters
    - Use local authentication credentials
- Use/share resources with a collaborator on another campus
- Access to the national cyberinfrastructure
  - OSG (and also XSEDE) resources

*Submit Locally, Run Globally*