Open Science Grid

State of the OSG Software Stack

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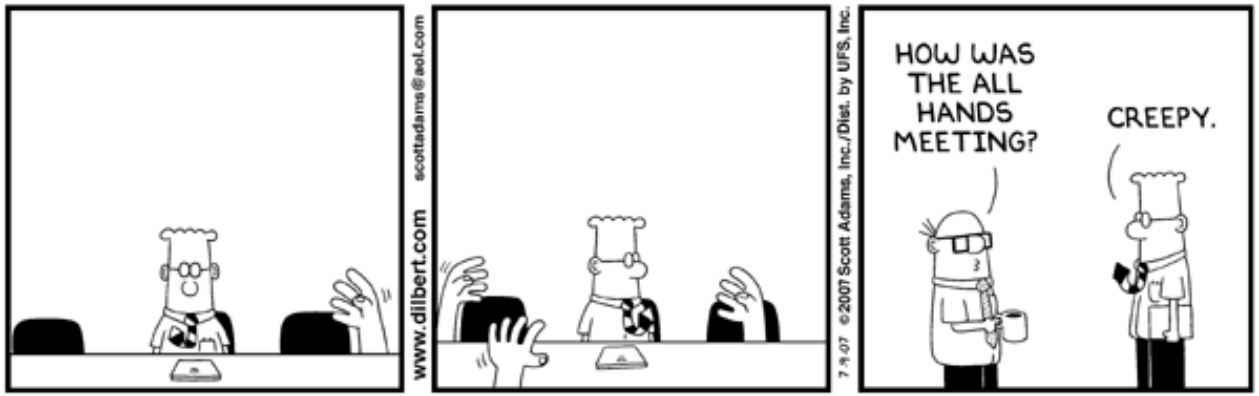
OSG Software Coordinator



The Current State

- OSG 1.2.7 is the latest release
  - Being released today
  - Security update
- OSG 1.2.x will be the current stable release for the foreseeable future
  - No current plans for OSG 1.4
  - Incremental updates coming in OSG 1.2
  - Take home reading:
  - `https://twiki.grid.iu.edu/bin/view/SoftwareTeam/MajorMinorUpdates`

Coming soon in OSG 1.2

- New software additions planned soon-ish
  - FTS client tools
  - edg-gridftp-client
- Software updates (minor upgrades)
  - Bestman/Xrootd
  - CEMon
  - Glexec/PRIMA
  - Gratia probes

Beginning to think about

- Globus/GRAM 5
  - Much better GRAM scalability
  - A few issues blocking deployment but not testing
  - Can be installed alongside GRAM 2
- CREAM
  - Much better scalability than GRAM 2
  - Much more complicated to deploy than GRAM 5, but may be better long-term option
- With Igor Sfiligoi, currently investigating and understanding effort and obstacles

Improved communication

- State of the world:
  - OSG 1.2.x will be updated indefinitely
  - Running in production means we need to be cautious about software update
- Problem:
  - We don't communicate software stack changes to you well enough: we need to clearly inform and listen
- Proposed Solution:

Software Evolution Proposals (SEP)

  - Clearly define set of upcoming changes
  - Process for moving from draft proposal to accepted set of changes
  - Somewhat formal, not too rigid

`https://twiki.grid.iu.edu/bin/view/SoftwareTeam/SEPIndex`

Three SEPs exist

- SEP 1: SEP Purpose and Guidelines
- SEP 2: How to Retire Old Platforms
- SEP 3: Retiring RHEL 3, Debian 4, and equivalents

Say, do you mind if we drop RHEL 3 and Debian 4 support?

Native Packaging: Why are we behind?

- By now, I hoped to have glexec & worker node RPMs available
- In fall, we took a detour: LIGO's urgent need for native packages
- Took longer than we thought:
  - Both RPM & Debian—a lot to learn, and subtle differences between them
  - Different mindset than Pacman—took a while to adjust
  - We were encouraged to make excellent packages, and they came out really well and we learned a heck of a lot

Native packages: Where are we today?

- Separate LIGO packages
  - Globus subset + MyProxy + GSIOpenSSH + UberFTP
  - Source & binary packages
  - Debian & RPM
  - Really native (FHS-compliant, etc…)
- OSG/CMS Hadoop RPMs:
  - Donated by Michael Thomas, help from Abhishek Rana
  - Based on Pacman-version of VDT
- EGEE/WLCG RPMs
  - Binary only
  - Used in gLite

That's right: four separate native package distributions!

Native packages: What comes next?

- Glexec RPM: Real soon now (March)
  - Initial version will be simple
    - Install glexec
    - Touch up install a bit

Note the lack of a precise timeline here…

  - Will gradually improve to be done well
- Worker node software
- Client software
- Services (GUMS, VOMS, CE)…
- Merge the multiple distributions

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There's a lot to do!

- Path from basic glexec RPM to well-done glexec RPM:
  1. Make binary RPMs for each software component
  2. Cope properly with configuration
     - Evolution of configure-osg (or the like) and config.ini as a post-install step to help configure the installed software
  3. Befriend the natives
     - FHS-compliance (or appearance of compliance)
     - Properly set up of services (fetch-crl…)
- This may not look like much, but there is a lot to do here to make RPMs that people will like
- Some steps may be easier for glexec, but if we do them well they will aid us as we move to the other software

Questions?

- None of our future plans are set in stone—this is a great time to give feedback.

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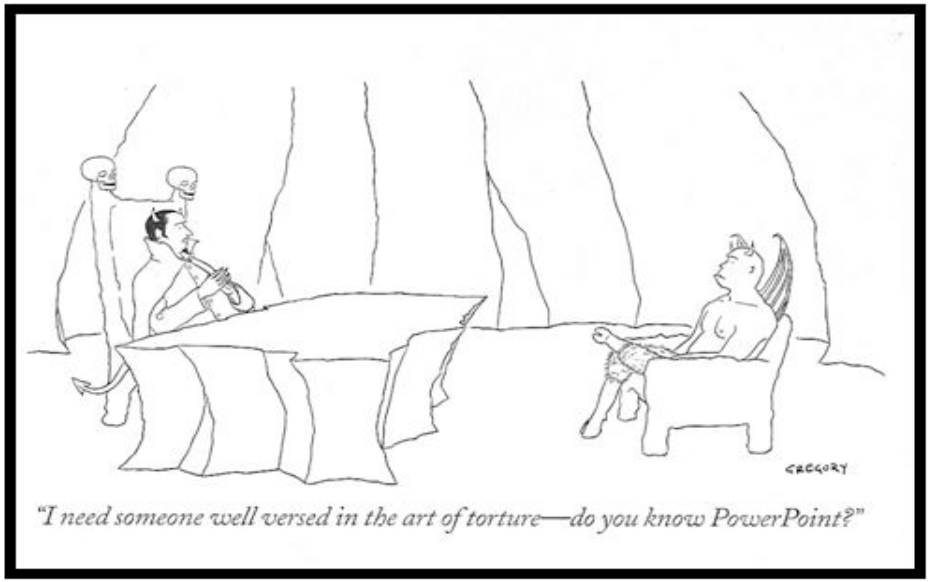
State of Operations

Rob Quick

OSG Operations Coordinator



OSG Ops and the WLCG Start Up

- Support
  - Ticketing
  - WLCG Communications
- Infrastructure Service
  - BDII
  - WLCG Metrics
  - Distributed Services

Ticketing

- Adding Effort for WLCG Tickets
  - Earlier Hours in the US
  - Friday Meetings to Review WLCG Tickets
- Web Services Based Ticket Exchange
  - Removes Email Dependencies
  - Improved Alerts on Failure
  - This is in Place Between GGUS and OSG Footprints

WLCG Communications

- Daily Attendance at the WLCG Ops Meetings
- Discussion of WLCG Items at the OSG Operations and Production Meetings
- Heavy Interactions with EGI SAM and GGUS Groups

Infrastructure

- The real story is not what we are doing, but what we are not doing.

Infrastructure Services

- BDII
  - SLA Adopted in August 2009
    - 99.86% Availability
    - 99.99% Reliability
  - DNS RR Working Extremely Well
    - Major Machine Room Move in October
  - Added Munin Monitoring with Alarms

WLCG Metric Reporting

- RSV Collector (Beginning October 1)
  - 99.67% Availability
  - 99.79% Reliability
- Several Issues with the Messaging Service
  - Records Always Resent Successfully
  - Recalculations as Requested

Distributed Services

- Effort to Bring OSG Services Not Hosted by the GOC Into the Same Forums as the Indiana University Hosted Services
  - Gratia and ReSS
  - Operations and Production Meetings
  - GOC Notifications

Change Management

- Scheduled Release Periods
- Change Management Procedures
- Community Notification Revisited
- Determining What Needs to Be Done and What Needs to Not Be Done

Nature of Operations

- Over 8000 Resolved Tickets
  - Average Time to Touch Any WLCG Ticket: 177 Minutes (About 3 Hours)
  - Average Time to Touch Any WLCG Ticket Submitted Between 9-5: 11 Minutes
- 14 Services (15 if you count MonALISA) 24x7 for 3.5 Years
  - Plus a few deprecated services
  - More if you count Grid3/iVDGL

Questions?