

OSG Year 6 Software Work Plan

1. Strategy

In order to better meet the needs of OSG stakeholders, we are moving to a Community Packaging model. This is described in detail in [1], but the essence of it is described as a principle extracted from that document:

Principle of Community Packaging

The OSG Software Team should be a good community citizen when it comes to packaging: When possible, we should use packages from existing and/or broader communities; when that is not possible, we should make our own packaging but contribute them back to the broader communities. Therefore, we should package software only when one of the following is true:

- * The software is not already packaged; or
- * The software is packaged but needs significant changes to be acceptable to our users.
(Different version, extra patches, etc...)

Otherwise we should use the existing packaging provided by external developers or software repositories.

At a technical level, this means we will move away from Pacman packaging because there is no broader community that uses it (we can neither borrow from nor contribute to a Pacman packaging community) and move towards native packages (i.e. RPMs) because our user community uses RPMs. There are many packages provided as RPMs that we can use (usually without modification) from our larger community, and we can contribute back to this community. Moreover, because we are using an community accepted method of packaging, it is clear how people can donate packages to the VDT and thereby not require the core OSG Software Team members to be the only packagers.

In addition to our movement towards native packaging, we are also continuing to support and expand the set of software needed by the OSG community.

2. Requirements

We gather requirements from both our stakeholders and from internal OSG needs. We are working to improve our requirement tracking in coordination with the Project Manager. We will have a publicly viewable list of requests with status, where needed we will discuss the requests within the ABCD team and, if needed with the Executive Team.

3. Tactics

1. **Weekly meetings:** We will have a weekly phone meeting for all OSG Software Team members.
2. **Requirement Tracking:** See Section 2, above.

3. **Packaging:** We are moving from Pacman to RPMs and this is the major focus of our efforts between now and December. Our target is to have five major components production-ready (Xrootd, worker node client, client, VOMS, and CE) by December on a single platform (Red Hat Enterprise Linux 5 and variants). GUMS, CREAM and the Gratia collector may not be completed by December. We will revisit our project goals in December based on progress through then.
4. **Testing and Validation:** Our existing testing processes and infrastructure must evolve to work with RPMs. We will have daily functional testing (pre-release and released versions against a variety of updated OS releases) as well as integration testing. We are currently developing our plan for testing, working in particular with the Batlab at UW-Madison and Suchandra Thapa, and will report back to the Executive Team by the end of August.
5. **Evaluations:** For significant updates to software already in the OSG Software Stack, we will use evaluations (less than one month duration) to decide if the software is ready for our use. Igor will lead and complete two evaluations by December 2011: scalability/usability of Globus 5 from EPEL and readiness testing of RPMs from VDT.
6. **Documentation:** We will work with the Documentation Architect to update the documentation to support the new RPM-based software stack. We will have a documentation fest in the fall (October/November).
7. **Participate in the Community:** We will participate in the EPEL community in order to be aware of changes before they affect us and to provide patches to software that most directly affects us. We will share patches with EMI for software obtained from them.

4. High-level Goals

4.1 Projects (with Date targets)

#	Date	Project
1	8-Aug	Test versions of RPM-based worker node client, client, & VOMS Server
2	31-Aug	Completed plan for testing infrastructure
3	5-Sep	Test version of RPM-based CE ready for internal testing
4	15-Sep	Test version of RPMs for LIGO
5	3-Oct	Conclude first evaluation: suitability of Globus 5 from EPEL
6	3-Oct	Begin ITB testing for RPM-based clients, VOMS, CE
7	?-Oct	ITB fest?
8	1-Nov	Conclude second evaluation: Readiness of RPMs
9	?-Nov	Documentation fest?
10	5-Dec	Completed version of worker node client, client, VOMS server, OSG CE
11	9-Jan	Post-release evaluation meeting: How did release go? What should be next?
12	16-Jan	Summary of evaluation to Executive Team, agree on goals for Jan. to Jun.

4.2 Goals to be prioritized in January

- Support for other operating systems (RHEL 6 variants? Debian 6?)
- Completion of unfinished components (CREAM, GUMS, CMS Hadoop etc)

- Creation of VMs pre-installed with OSG software stack (perhaps in collaboration with technology group)

4.4 Ongoing Tasks

	Activity	Measure
1	Oversee development of OSG-owned software Packaging and configuration scripts (osg-configure), RSV, pigeon tools, discovery tools, pigeon tools	No idea how to measure this
2	Continue interaction with OSG-catalyzed software Bestman, GUMS, Gratia, GIP	No idea how to measure this.
3	Regular report/meeting with the OSG-ET on state of OSG Software Team goals and progress	Meet monthly; report two days in advance
4	Meet regularly with CDIGS project to share status, goals, technical discussions	Meet roughly every six weeks, email report to ET within two business days.
5	Direct user support	Measure?
6	Update software as needed	Measure?
7	Maintain Validation & Integration testbeds	Measure?
8	Maintain documentation	Measure?

5 Staffing Plan: 8.05 FTE

Name	Percent	Duties
John Hover	25%	Integration/Packaging
Xin Zhao	25%	Integration/Packaging
Doug Strain	50%	Software
Neha Sharma	50%	Software
Alex Sim	40%	Storage/Bestman
Igor Sfiligoi	50%	Software/Evaluations
Jeff Dost	15%	Hadoop Integration
Alain Roy	100%?	Management
Matyas Selmecsi	100%	Software
Scot Kronenfeld	25-50%?	Software
Tim Cartwright	50%	Software
UW TBD	100%	Software
Suchandra Thapa	100%	Integration
Haifeng Pi	10%	Evaluations
Sanjay Padhi	20%	Evaluations
Terrence Martin	20%	Evaluations

6 Risks and Concerns:

1. The OSG Software Stack will be less under our control as a result of the adoption of community package and therefore unexpected changes in other software repositories could

break the software we ship. Mitigation: become part of EPEL, nightly testing against updated repos.

2. We require significant reworking of our documentation by the end of December, but we are losing Robert Engel—the transition could delay the needed changes to documentation.
3. We do not yet have a clear plan for our testing infrastructure. We are developing it now, but it is likely to require significant effort.
4. I need guidance from the Executive Team on how to prioritize requests for work from LIGO.

7 Notes

[1] <https://twiki.grid.iu.edu/bin/view/SoftwareTeam/CommunityPackagingProposal>