Infrastructure Software Delivery

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Infrastructure Software Sources

Externally-owned
Most infrastructure software distributed by the OSG comes from external sources with active maintenance. Much of the external software comes from within the LHC community.

Abandoned
Sometimes externally-owned software is abandoned by its original maintainers so the OSG adopts maintenance of the software to ensure the stability of the production grid.

OSG-owned
The OSG provides additional software and packaging to improve integration of infrastructure software from external and abandoned sources.

OSG Technology Team

Software Lifecycle Management
From the eclectic software sources above, the OSG curates a software stack that provides services necessary for the production grid. The software stack is constantly evolving as stakeholders add new requirements and replacements are found for abandoned software.

Identification
Find new software to address gaps in the software stack

Evaluation
Test integration of new software for performance at scale with the rest of the software stack

Retirement
Remove software that no longer serves a role in the grid, or has been replaced by new software

Support
If new software is replacing existing software, support both solutions concurrently

Release Process
Maintaining the OSG Software Stack requires regular updates for new features and bug fixes:

Package
Monitor software sources for new versions to build updated packages

Test
Coordinate integration tests by internal staff, external stakeholders, and automated means

Release
Announce availability of new stable software in production repositories

Support
Work with sites and external providers to troubleshoot issues; restart the release process with any fixes found

Infrastructure Software Packaging

Container Images
For DevOps-style deployments, the OSG distributes container images of select software via DockerHub. These images can be used standalone or as part of a container orchestration system, such as the ones supported by SLATE¹.

RPMs
The primary packaging format used by sites to install software. All OSG infrastructure software is available as RPMs from OSG Yum repositories.

Tarballs
Some sites prefer installing software from tarballs. Select components of the OSG Software Stack are available as tarballs via HTTPS and CVMFS.