Infrastructure Software Delivery

Team: Brian Lin[4], Brian Bockelman[1], Tim Theisen[4], Mátyás Selmeci[4], Carl Edquist[4], Edgar M Fajardo[2], Diego Davila[2], Aaron Moate[4], Derek Weitzel[3], Marian Zvada[3]
Institutions: [1]Morgridge Institute for Research, [2]UC San Diego, [3]University of Nebraska–Lincoln, [4]University of Wisconsin–Madison

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**.

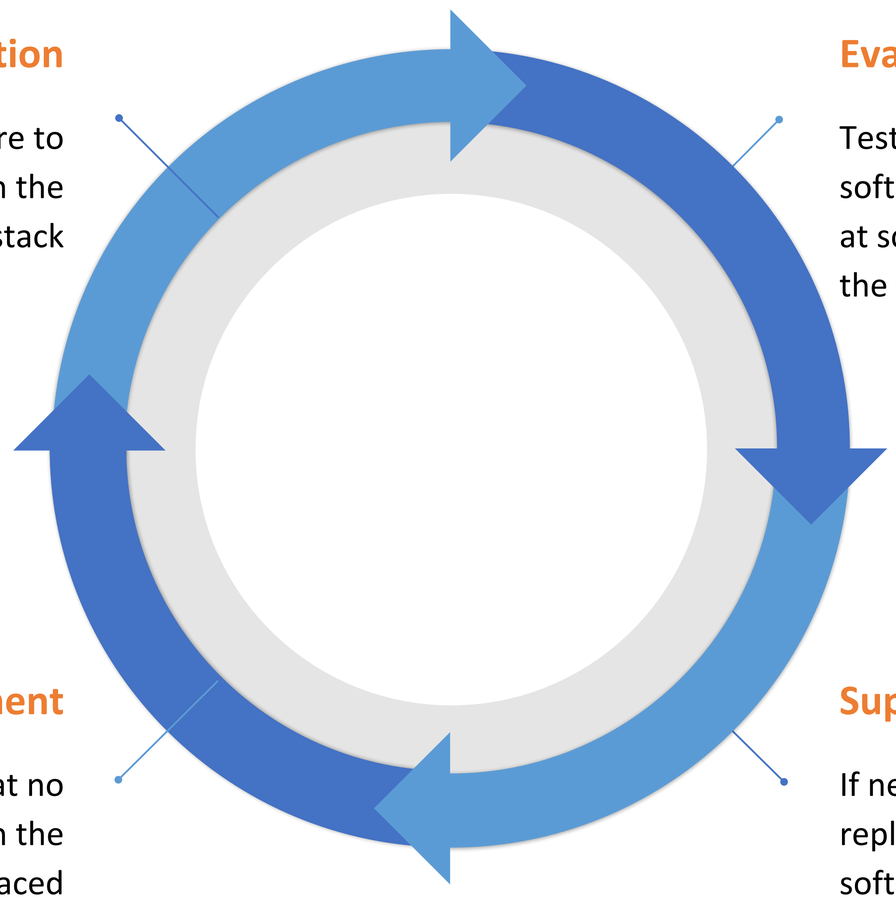
OSG-owned

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

Support

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

Retirement

Remove software that no longer serves a role in the grid, or has been replaced by new software

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 SLATE†.

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**.

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