ESGF Publication, Security, and Data Management for CIMP6
Reporting period: July 1 2015 to September 30 2015

This is a report of work completed for third quarter of Year 1 for the subaward to University of Chicago: ESGF Publication, Security, and Data Management for CIMP6.

Support the Science DMZ solution for ESGF data node deployment

Globus Connect Server for ESGF

In the last reporting period, work was started to enhance the deployment of GridFTP and MyProxy services that are distributed from the Globus Toolkit. ESGF data node uses GridFTP servers and index node uses the MyProxy server. The goal is to improve installation and configuration experience with these services, and update them to newer versions.

Work was continued towards that goal with focus on integrating this with ESGF node installer, the mechanism used by all ESGF sites for new and updated install. Work was completed to add Globus Connect Server to the installer, replacing the source based install which provides a) faster install with use of binaries, b) simpler configuration mechanism, and c) making the onerous process for obtaining a certificate optional in the setup. This also automatically registers an endpoint with Globus so Globus Transfer can be used to move data in and out of ESGF endpoints.

Updated ESGF installer

For the upcoming ESGF release, we worked on updating the ESGF installer to use binary installs, more recent version of servers and Globus Connect Server mechanism for installation. This require building RPMs for ESGF use on RedHat Enterprise Linux, CentOS, and Scientific Linux, versions 5 and 6. The installer was updated to use the RPMs, configuration prompts and script around the install was updated.

Significant efforts were invested to test and deploy this for production release with ESGF release. Collaborated with other ESGF installation working group members to rebuild and update installer to satisfy dependencies of subsequent releases of Globus Toolkit RPMs, and other changes.

Managed data transfer and replication in ESGF

We also supported implementation efforts to integrate Globus Transfer with new ESGF portal, COG. The first version of this has been completed, with lead from NASA JPL, along with a command line client access to data on the portal. This integration was for a specific use case where the data is public, and will need to be modified to support secure data. With the ESGF sites down for security reasons, this has not been widely deployed, but was tested and used by a few users at NASA JPL.