ESGF Publication, Security, and Data Management for CMIP6

Reporting period: Jan 1 2016 to March 31 2016

This is a report of work completed for first quarter of Year 2 for the subaward to University of Chicago: ESGF Publication, Security, and Data Management for CMIP6.

Ongoing maintenance

ESGF 2.2.x releases

Supported testing and updates to the ESGF 2.2.x release for all Globus components. This include fixes to the GridFTP usage parser script, testing patches and support transfer and security components for other administrators testing.

ESGF node at Argonne

Updated ESGF node at Argonne to latest version of the code base. This required rebuild of the machine, install of latest stack and republication of all the data on the node. In addition to production node, deployed a development node that allows for deployment of latest updates and work in progress for testing and sharing with other collaborators. Although Argonne is not a Tier 1 site, installed and deployed Synda on the development machine for testing with Globus transfer use.

CoG integration with Globus

Globus Auth integration with COG

Globus released an updated authentication mechanism for it's services, called Globus Auth, that uses OAuth 2.0 with scopes and tokens for restricted access. Work was started to integrate use of Globus Auth in CoG and remove the legacy integration that was used. This work is in testing phase and will be completed and released in a few weeks.

Managed data transfer and replication in ESGF

Globus integration with CoG for restricted datasets

Design was completed for supporting use of Globus for downloading datasets restricted by access control permissions. While support for public dataset is already deployed, restricted datasets required update and use of the ESGF MyProxy service. The development for this work has been completed and will be released in a few weeks after integration testing. On

going design work to leverage MyProxy OAuth, as deployed at BADC and use of YADIS document to determine the user's MyProxy server is still in progress.

Globus integration with Synda

Completed first integration of Globus transfer capabilities with Synda version 3.3. This allows use of Globus transfer for replication of datasets across ESGF. This has been tested and integrated with the Synda release.

Support Globus endpoints on Tier 1 sites

In partnership with ICNWG, supported installation and use of GridFTP servers and required security configuration, for basic testing of transfer speeds between Tier 1 sites. Participated in the ICNWG to plan next steps and deployment of Globus endpoints for use with Synda.