ESGF Publication, Security, and Data Management for CMIP6

Reporting period: October 1 2016 to December 31 2016

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

Installation and admin guide

Updated the documentation on earthsystemcog.org, describing how to enable Globus in CoG, and deploy ESGF GridFTP server on DTN nodes.

Created the ESGF monitoring system, https://esgf.anl.gov/monitor. The system tests data access to datasets stored on 19 data nodes (HTTP, GridFTP, Globus), and checks expiration time of host certificates used by Apache, GridFTP, and MyProxy server on 19 data nodes and 10 IdP nodes.

ESGF security

Signed certificate requests for host certificates and MyProxy CA certificates from ESGF admins.

Prototype Globus as Identity Provider in ESGF

Continuing the prototype work for Globus as an alternate identity provider, developed python-esgf-auth, a python middleware to support OAuth2 authentication protocol against the ESGF IdP.

Data transfer and replication

After deployment of the ESGF monitoring system, admins from several ESGF data nodes requested assistance with their GridFTP or Globus installation and integration:

- Brian Bonnlader and Eric Nienhouse (NCAR) to fix their Globus Connect Server installation on the NCAR data node (esgf-data.ucar.gov)
- Kai Lui (NSC Sweden) to correct an issue with GriDFTP access to datasets on the NSC data node (esg-dn1.nsc.liu.se)
- Ingo Bethke and Thierry Toutain (Norway) to fix issues with GridFTP server on the NorStore data node (noresg.norstore.no)
- Katharina Berger (DKRZ) to add Globus URLs to all datasets on the DKRZ data nodes

- Jon Smile (Australia) on installing and configuring ESGF software and services on esgf.nci.org.au