ESGF USER INTERFACE WORKING TEAM
PROGRESS UPDATE & FUTURE ROADMAP

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CoG Introduction

- CoG is a web portal application based on Django
- Adopted in 2015 as new ESGF User Interface (replacing the old web front-end)
- Now deployed operationally at all ESGF sites
- All CoGs are federated in terms of users, projects, and data
2016 Progress & Accomplishments

Operations:

• Starting in January 2016, supported deployment of CoGs throughout the federation, as ESGF come back online after the 2015 security incident
• Worked within ESGF to standardize the configuration, look, and partially the content of CoGs at all sites

New functionality:

• Several improvements to the search UI:
  ‣ Import/export of search configurations, for each project
  ‣ Multiple selection options for each facet
  ‣ Widget for searching on datasets with a date less than a given value
  ‣ Post requests to enable generation of massive wget scripts
  ‣ Modifications to enable searching the local Solr shard
  ‣ Display of retracted datasets

• Integrated with Globus online for download of restricted datasets (in addition to public datasets)
• Fixed several security issues (mostly related to cross-site Javascript forgery)

• Several improvements to layout and look and feel

• In 2016 there were 7 major CoG releases and 8 minor releases (from version 3.2.0 in January to 3.8.0 in November)

**Infrastructure:**

• Also, packaged CoG as a Docker image to support easier installation, development, and operations
Development for 2017 is quite open-ended, but it will include these top priorities:

• Implement any additional requirements from ESGF and WIP to support browsing/searching/downloading of major international collections such as CMIP6, Obs4MIPs and CORDEX
  ▸ CMIP6: display quality flags, PIDs, citations, errata
  ▸ CMIP6: integrate with ES-DOC metadata services
  ▸ Obs4MIPs: display matrix of quality indicators

• Migrate authentication protocol from OpenID 2.0 to Oauth2 to OpenidConnect

• Integration with GrADS (Grid Analysis and Display System) - visualization engine from COLA, funded by NOAA

• Other development as need arises
Additional Resources Needed

- **Staff:** rely on ANL for some major development tasks:
  - migration to Oauth2 and OpenidConnect
  - continue support for Globus online

- **Staff:** someone to run the Selenium test suite, and execute a test check-list before each release

- **Staff:** someone to answer CoG support email list and mostly route to ESGF support list

- **Funding:** currently very limited (DoE/LLNL, NOAA/ESRL, DoE/ANL)
Community Feedback from Survey

• Results:
  ‣ 39% of users found the web interface the most difficult part of ESGF
  ‣ 29% of users found the web interface the most useful feature of ESGF

• Conclusions:
  ‣ Perhaps CoG is doing too much?
  ‣ Maybe we just need an entry point to search and download?
Collaborations Needed

Continue collaborations with:

• ESGF Search Working Team - for interfacing search UI to search back-end services

• ESGF QC and Citation Services Working Team - for integration into CoG

• ESGF Support Team - for answering user questions

• WIP - for formulating UI requirements for searching CMIP6 data