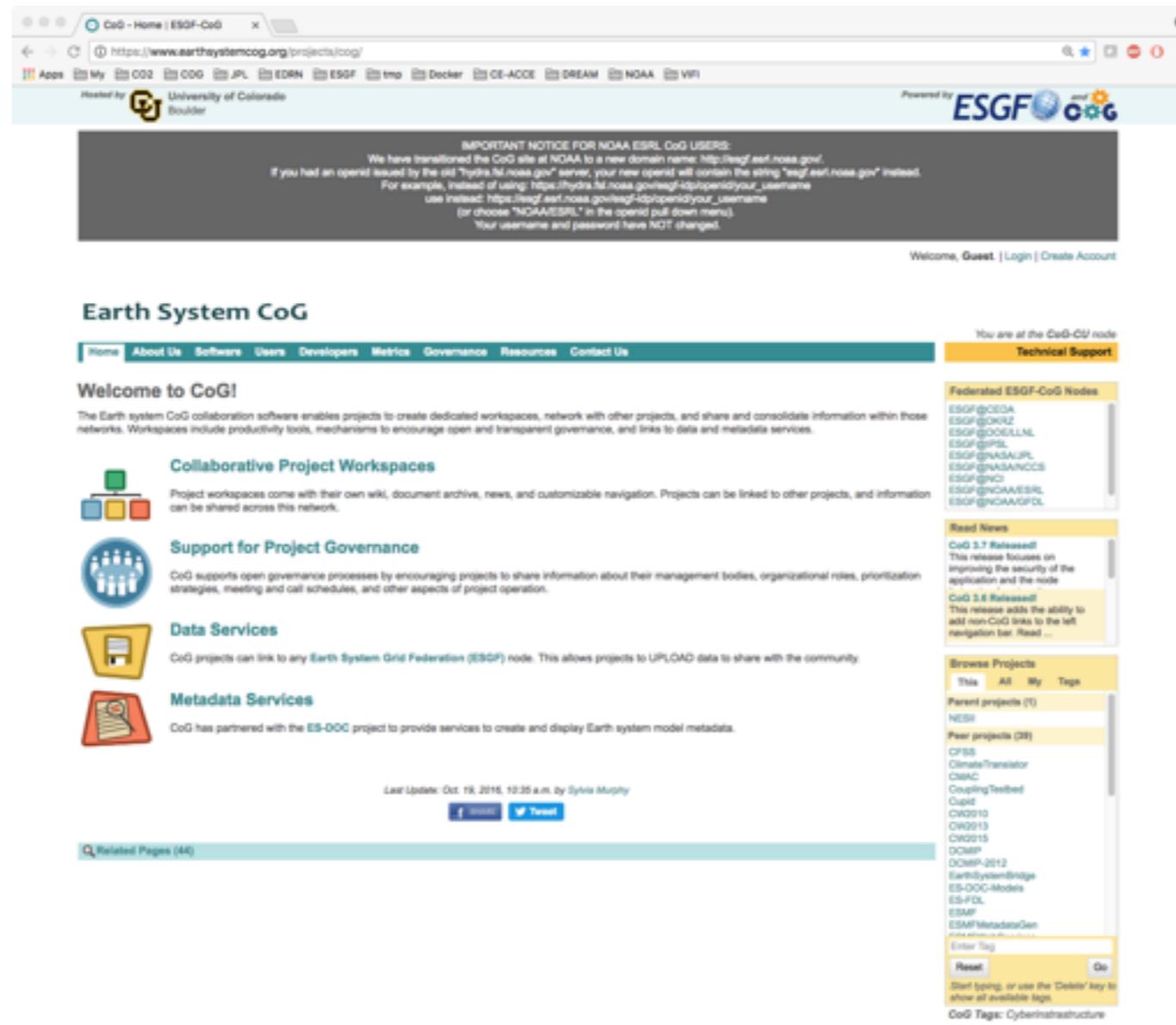


# **ESGF USER INTERFACE WORKING TEAM PROGRESS UPDATE & FUTURE ROADMAP**

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- 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



The screenshot shows the Earth System CoG web portal. At the top, there is a navigation bar with links for Home, About Us, Software, Users, Developers, Metrics, Governance, Resources, and Contact Us. A prominent banner at the top center contains an "IMPORTANT NOTICE FOR NOAA ESRL CoG USERS" regarding a domain transition from hydra.fsl.noaa.gov to https://esgf.noaa.gov. Below the banner, the main content area is titled "Earth System CoG" and features a "Welcome to CoG!" message. The main content is organized into four sections: "Collaborative Project Workspaces", "Support for Project Governance", "Data Services", and "Metadata Services". On the right side, there is a sidebar with several widgets: "Federated ESGF-CoG Nodes" listing various nodes like ESGF@CEA, ESGF@DWRZ, etc.; "Read News" with a "CoG 3.7 Released!" announcement; "Browse Projects" with a search bar and a list of project tags including NESI, CFSS, ClimateTranslator, etc.; and "CoG Tags" with a search bar and a list of tags like Cyberinfrastructure.

## 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

- 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)

- 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 ?

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