

COG: THE NEW ESGF WEB USER INTERFACE

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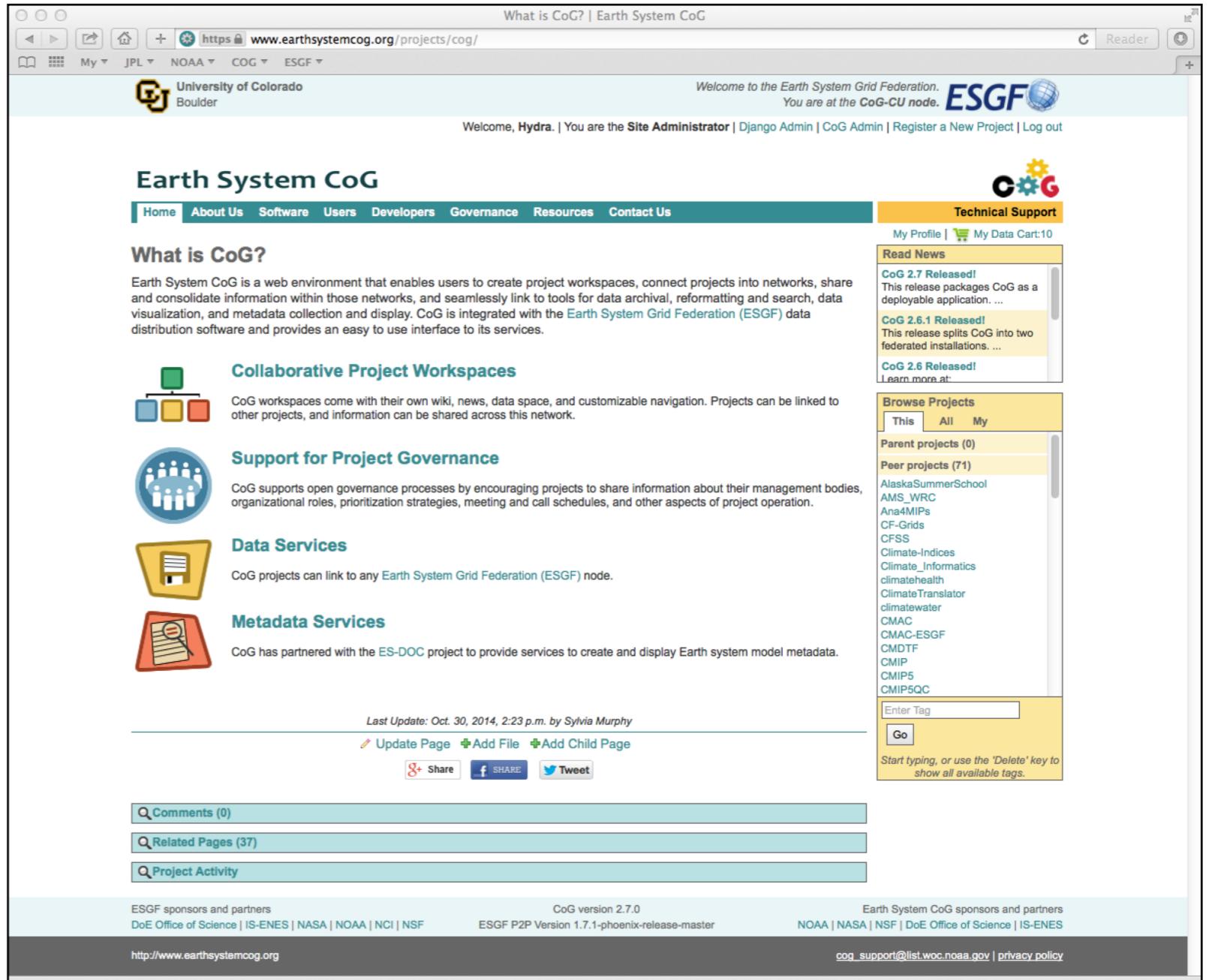
[1] California Institute of Technology & NASA Jet Propulsion Laboratory

[2] University of Colorado CIRES and NOAA Earth System Research Laboratory

Introduction

- CoG is a web portal environment intended to facilitate scientific research:
 - ▶ Supports and connects multiple scientific projects
 - ▶ Enables collaborative research and documentation
 - ▶ User interface for ESGF data services: search, download and analysis

- CoG will be replacing the current web-front-end as the new ESGF UI in early 2015
 - ▶ Improved and expanded functionality
 - ▶ More maintainable and upgradable code base
 - ▶ Software based on Python and Django

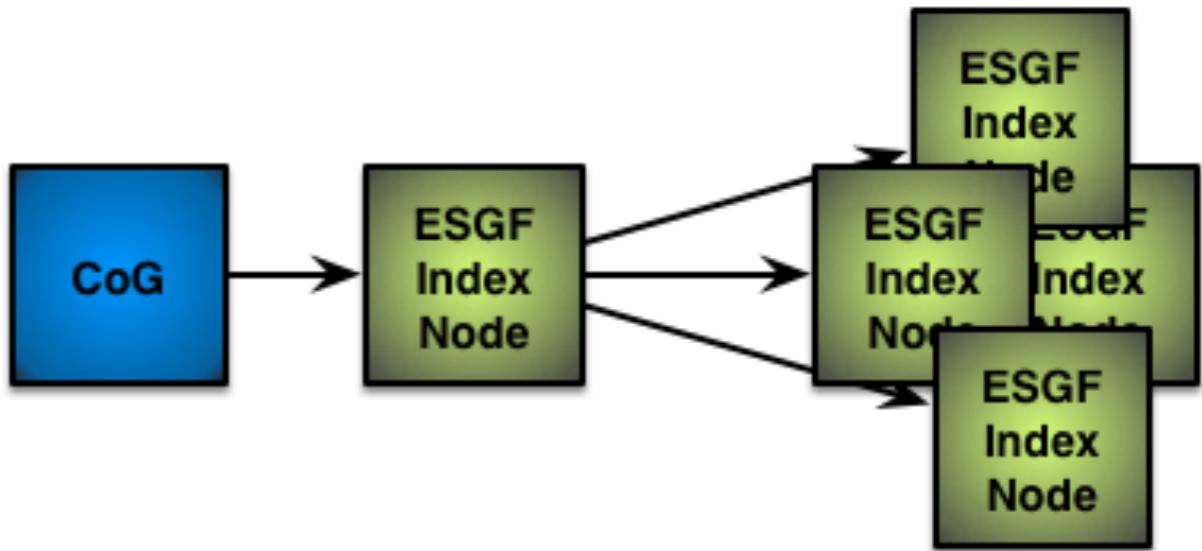
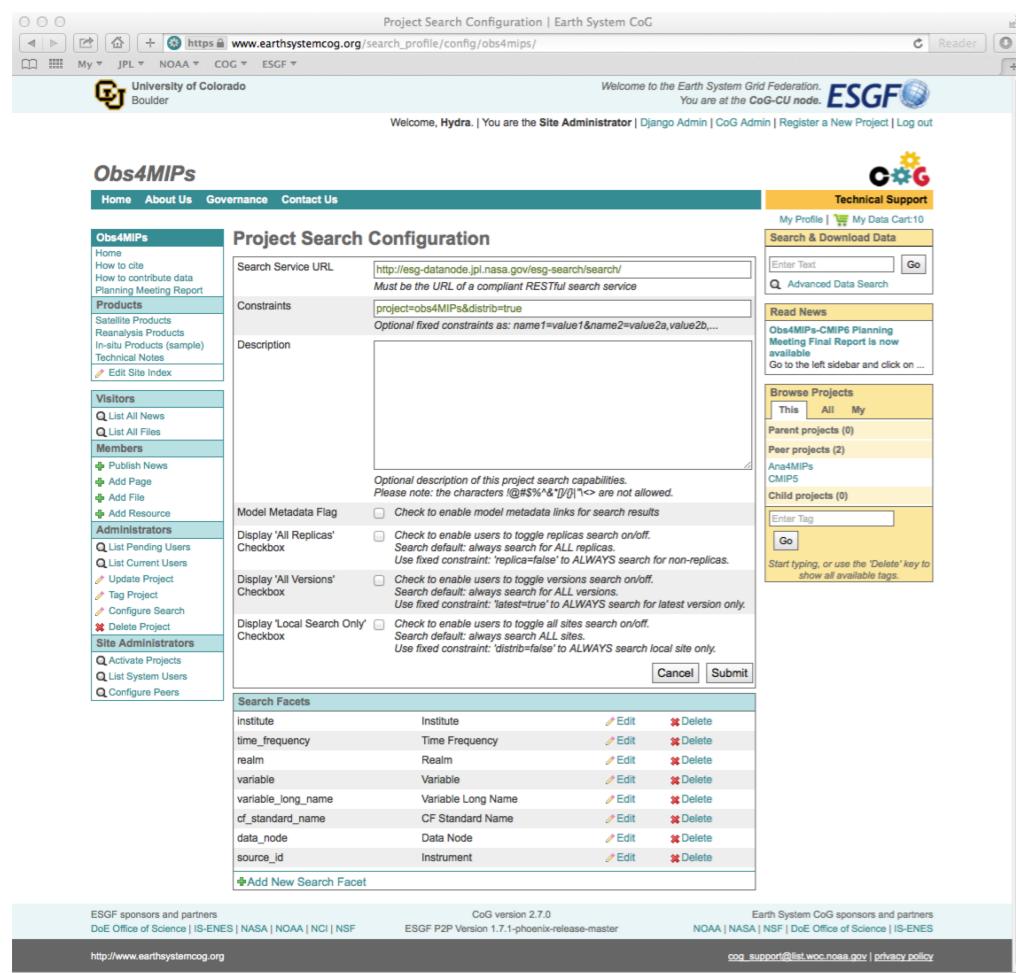


The screenshot shows the "What is CoG? | Earth System CoG" page. At the top, there's a navigation bar with links to Home, About Us, Software, Users, Developers, Governance, Resources, and Contact Us. The main content area has several sections:

- Collaborative Project Workspaces:** Describes how CoG workspaces come with their own wiki, news, data space, and customizable navigation.
- Support for Project Governance:** Describes how CoG supports open governance processes by encouraging projects to share information about their management bodies, organizational roles, prioritization strategies, meeting and call schedules, and other aspects of project operation.
- Data Services:** Describes how CoG projects can link to any Earth System Grid Federation (ESGF) node.
- Metadata Services:** Describes how CoG has partnered with the ES-DOC project to provide services to create and display Earth system model metadata.

On the right side, there's a sidebar with "Technical Support" and "Read News" sections, and a "Browse Projects" section listing various projects. At the bottom, there are links for "Comments (0)", "Related Pages (37)", and "Project Activity".

CoG is still a client to the underlying ESGF Search services infrastructure, but it offers a much improved interface than the current web-front-end in terms of configurability and usability

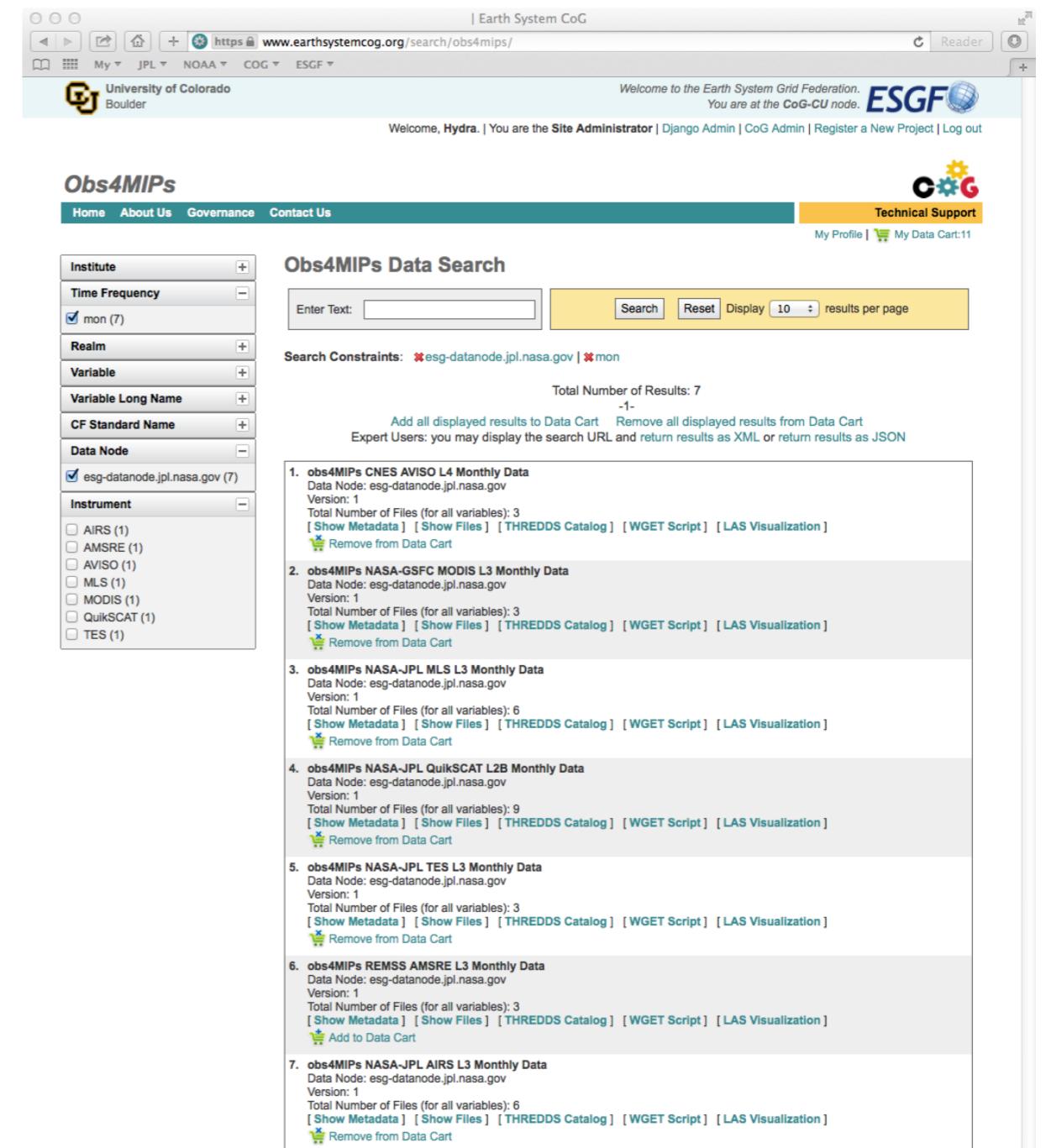



The screenshot shows the 'Project Search Configuration' page for the 'Obs4MIPs' project. The URL is https://www.earthsystemcog.org/search_profile/config/obs4mips/. The page includes fields for 'Search Service URL' (set to <http://esg-datanode.jpl.nasa.gov/esg-search/search/>), 'Constraints' (with a fixed constraint 'project=obs4MIPs&distri=true'), and 'Description'. On the right, there's a sidebar with 'Technical Support' links like 'My Profile', 'Search & Download Data', 'Advanced Data Search', 'Read News', 'Browse Projects', and 'Enter Tag'. The main menu at the top includes 'Home', 'About Us', 'Governance', 'Contact Us', and 'Obs4MIPs' (selected). The left sidebar lists 'Visitors', 'Members', 'Administrators', and 'Site Administrators'.

- Project Administrators: each project can configure its search to best serve its audience:
 - ▶ Main target ESGF Node
 - ▶ Base constraints (one or more project, distributed search, others...)
 - ▶ Facets and facet groups
 - ▶ Add custom text to search page

- Users:

- ▶ Checkboxes to select multiple options
- ▶ Bread-crumbing
- ▶ RESTful URLs
- ▶ Display full URL and return XML, JSON
- ▶ Faster generation of files list (by querying only one Index Node)
- ▶ Faster generation of wget scripts (grouped by Index Node)
- ▶ Distributed Data Carts
- ▶ More complete metadata display
- ▶ More intuitive usage of file-matching expression to select files by variable
- ▶ Expose links to THREDDS catalogs, OpenDAP URLs, LAS,...
- *May send multiple datasets to LAS
- ▶ Updated invocation of ES-DOC services



Earth System CoG

Welcome to the Earth System Grid Federation.
You are at the CoG-CU node.

Obs4MIPs

Home About Us Governance Contact Us

Obs4MIPs Data Search

Enter Text: Search Reset Display 10 results per page

Search Constraints: *esg-datanode.jpl.nasa.gov | *mon

Total Number of Results: 7 -1-

Add all displayed results to Data Cart Remove all displayed results from Data Cart
Expert Users: you may display the search URL and return results as XML or return results as JSON

1. obs4MIPs CNES AVISO L4 Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 3
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]
2. obs4MIPs NASA-GSFC MODIS L3 Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 3
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]
3. obs4MIPs NASA-JPL MLS L3 Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 6
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]
4. obs4MIPs NASA-JPL QuikSCAT L2B Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 9
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]
5. obs4MIPs NASA-JPL TES L3 Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 3
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]
6. obs4MIPs REMSS AMSRE L3 Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 3
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]
7. obs4MIPs NASA-JPL AIRS L3 Monthly Data
Data Node: esg-datanode.jpl.nasa.gov
Version: 1
Total Number of Files (for all variables): 6
[Show Metadata] [Show Files] [THREDDS Catalog] [WGET Script] [LAS Visualization]

ESGF sponsors and partners
DoE Office of Science | IS-ENES | NASA | NOAA | NCI | NSF

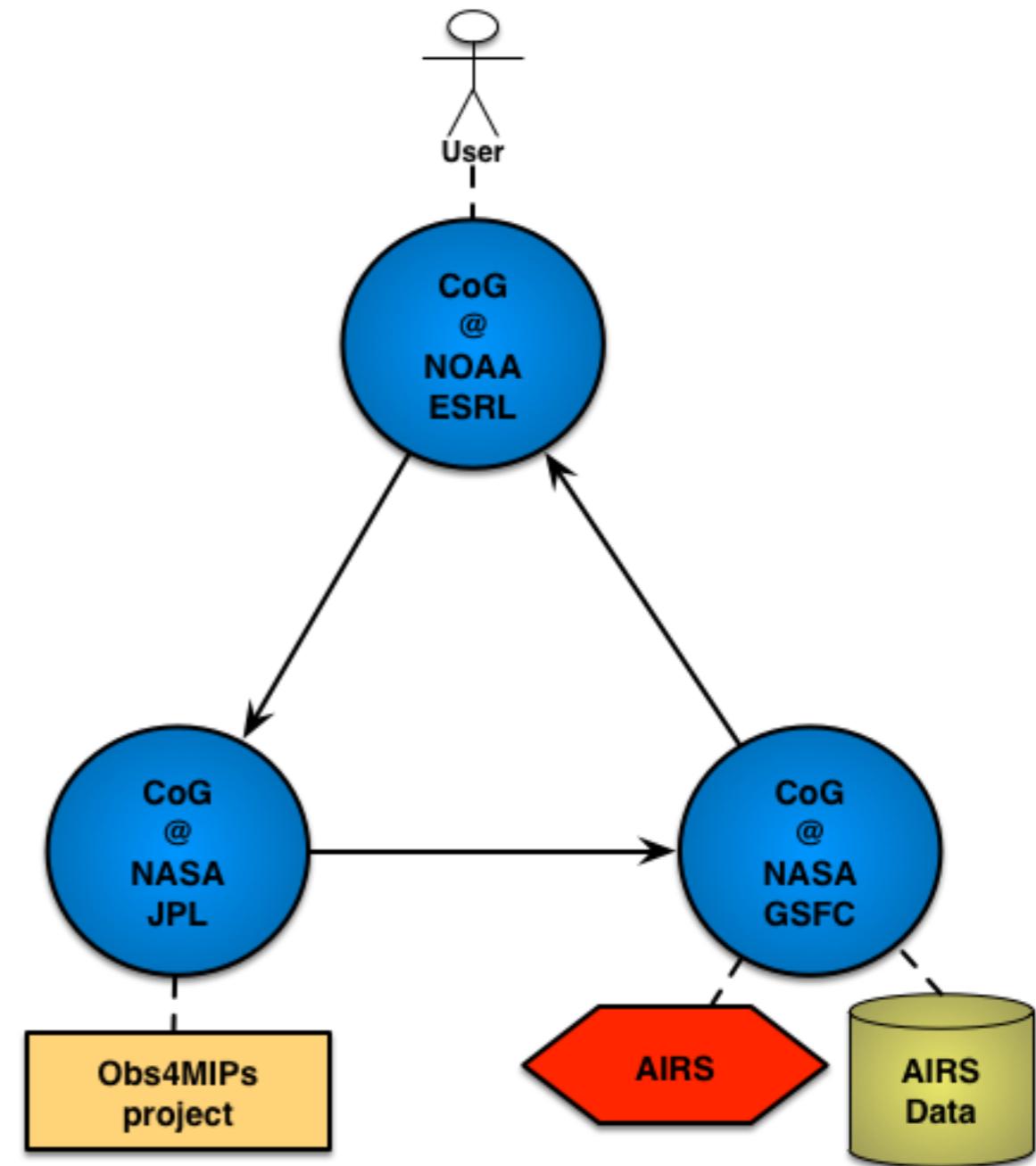
CoG version 2.8.0
ESGF P2P Version 1.7.1-phoenix-release-master

Earth System CoG sponsors and partners
NOAA | NASA | NSF | DoE Office of Science | IS-ENES

cog_support@list.woc.noaa.gov | privacy policy

<http://www.earthsystemcog.org>

- Multiple CoG instances can be federated together to support an environment where users can access data and documentation that is administered by independent sites
- CoG federation model:
 - ▶ Each project has a home site
 - ▶ Each user has a home site
 - ▶ Each data access control group has a home site
- All CoGs exchange non-sensitive information about projects, users and groups (via RESTful URLs that return JSON documents)
- Each CoG hyperlinks to the “home” CoG to view/edit specific content: project information, user profiles, access control registration



CoG governance: <https://www.earthsystemcog.org/projects/cog/governance/>

- Steering Committee (SC) - meets twice/year
 - ▶ Includes project sponsors and addresses programmatic matters
 - ▶ Jay Hilo (DOE), Tsendgar Lee (NASA), Annarita Mariotti (NOAA), Sylvie Joussaume (IS-ENES)
- Executive Committee (EC) - meets twice/year
 - ▶ Responsible for overall direction of the project
 - ▶ Dean Williams (DOE), Robert Ferraro (NASA), Cecelia DeLuca (NOAA), Stephen Pascoe (IS-ENES), Luca Cinquini (NASA/NOAA)
- User Review Group (URG) - meets approximately monthly
 - ▶ Participates in demonstrations, provides feedback on requirements, design and usability (captured in tickets)
- CoG Core Team - meets weekly
 - ▶ Responsible for design, implementation, user support and metrics collection
 - ▶ Cecelia DeLuca, Sylvia Murphy, Luca Cinquini

- Currently working with ESGF IWT to make CoG part of standard ESGF software stack
 - ▶ ESGF release 1.9: installation as standalone component (December 2014)
 - ▶ ESGF release 2.0: installation behind Apache httpd server (January 2015 ?)
 - ▶ ESGF release 2.1: replacement of current web-front-end (February 2015 ?)
- Short term development
 - ▶ OpenID selector
 - ▶ Develop UI for creation of access control groups
 - ▶ Display of all personal access control groups ?
 - ▶ More scalable interface for managing all site users
- Medium/long term development
 - ▶ Support for ESGF Virtual Organizations
 - ▶ Integration with UV-CDAT
 - ▶ Integration with Globus Online
 - ▶ Integration with ESGF computing services