COG:
THE NEW ESGF
WEB USER INTERFACE

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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
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.

- **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
CoG Search UI

- **Users:**
  - Checkboxes to select multiple options
  - Bread-crumbling
  - 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
CoG Federation

• 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
Each CoG project browser lists all projects in the federation (under the “This”, “All”, “My” tabs)

Each user maintains only one profile

Each CoG chooses its federation peers!

Each CoG lists all ESGF registration URLs
CoG Governance

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
Roadmap

• 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