ESGF Compute Working Team - Terms of Reference (ToR) (2022-onwards)

Version History

Version	Author(s)	Comments	Date
0.1	Ag Stephens (AS) [STFC CEDA]	First draft, to get feedback	10/10/2022
0.2	AS and Carsten Ehbrecht (CE) [DKRZ]	Review and comments.	12/12/2022

Role/Purpose

The ESGF Compute Working Team (CWT) is a collaboration of individuals who manage and develop services to provide global access to climate data (ESGF). Its purpose is to deliver a common software solution that delivers robust web services for remote data access.

Co-chairs

Ag Stephens (CEDA, UK) and Carsten Ehbrecht (DKRZ, Germany) co-chair the CWT. They have experience in developing and running Web Processing Services in production environments.

Specific activities and tasks

The ESGF CWT will carry out the following activities and tasks:

- Maintain regular meetings with the CWT
- Develop and communicate a Roadmap for the CWT
- Implement the Roadmap through collaborative activities within the CWT, and with outside partners
- Develop a common solution for the ESGF Compute Node
- Provide documentation and support for installation of the Compute Node
- Explore new and alternative approaches to ensure that the core solution is fit-for-purpose
- Provide updates to the ESGF Executive Committee (XC)

Monthly meetings

Meetings take place *monthly* in the traditional Monday slot (i.e. morning in the US; afternoon in Europe). The standard agenda focuses on a Roadmap for building new capabilities, integrating them into existing software and deployment at ESGF sites.

Quarterly meetings: Share and Discuss

Every third CWT meeting (i.e. quarterly), the theme of the meeting would be to share and discuss other solutions and technologies to provide compute capabilities. These meetings would provide an opportunity to:

- Investigate other technologies/approaches: e.g. Cloud, Containers, Machine Learning, etc.
- Discuss alternative approaches to the core CWT week (from the group and/or invited speakers)
- Capture new requirements
- Discuss proposals for future developments

- Include/merge with other relevant meetings: e.g. the quarterly Birdhouse meetings

Communication and project planning

The new CWT will conduct itself (as far as possible) in an open manner. We propose using:

- A new GitHub repository at: https://github.com/ESGF/esgf-cwt
    - for communication within, and about, the CWT
- (existing) GitHub *repositories* for code - with agreed procedures for code review, pull requests and releases
- GitHub *issues* to track issues
- GitHub *projects* to manage and communicate the Roadmap
- A GitHub *wiki* to record information about the CWT and minutes of meetings (such as that used by the Birdhouse group at: https://github.com/bird-house/bird-house.github.io/wiki/Meetings)

Etiquette and respect

The CWT should be a place where everyone can express their views and be heard by the group. Discussions should be open and honest and all disagreements should be conducted in a respectful manner.

Should any member want to raise concerns about how the CWT is being managed then they should raise them with the ESGF XC.

Changes to the ToR

Changes to the ToR should be made through consensus within the group. Either within meetings or through fair discussion on the CWT Slack channel.

Appendix: Co-chair details

As Head of Partnerships at CEDA, **Ag Stephens** has 20 years of experience in atmospheric and earth observation data management and software development, including working closely with data providers and users, and handling and processing large and complex datasets. Ag manages the development of the UK Climate Projections User Interface and data services and is the lead developer for the Web Processing Services developed at CEDA. He is the PI on the C3S_34e project which developed the "roocs" software stack to support the delivery of large climate model datasets, such as CMIP6, to the Copernicus Climate Change Service (C3S).

Carsten Ehbrecht is a mathematician working as a computer scientist in the field of geospatial applications since 1997. Developing application software with Geographical Information Systems (GIS) and OGC web services in the context of sensor observation data, meteorological information systems and land-register. Since 2011, Carsten has worked at DKRZ and has been involved in infrastructure projects for C3S, IS-ENES and ESGF. He is the Lead Developer of the Birdhouse framework, working on processing service infrastructure with Web Processing Services for the climate science community.

Appendix: Document URLs

Source document:
https://docs.google.com/document/d/1WFDxM145cv1uBbYubNh8mEui_zvYgZ10tdQSi9JVoq4/edit#
PDF:
https://github.com/ESGF/esgf-cwt/blob/main/documents/esgf-cwt-tor-2022-12-12.pdf