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Blue-Cloud: Your Open Science platform for collaborative marine research

Tuesday, 20 September 2022 19:00 (1 hour)

The H2020 project Blue-Cloud is developing the thematic EOSC for ocean science, through a collaborative virtual environment to enhance FAIR and Open Science.

Blue-Cloud federated leading European marine Research Infrastructures and e-Infrastructures, allowing researchers to combine, reuse, and share quality data across disciplines and countries with their existing MarineID account.

The project has developed three main assets:

- The Blue-Cloud Data Discovery and Access Service (DD&AS) facilitates access to 10+ million multi-disciplinary datasets. The DD&AS functions as a broker both for metadata and for data access, interacting with web services and APIs from each of the Blue Data Infrastructures federated in Blue-Cloud. This way, it enables users to discover first at the collection level which infrastructures might have data sets interesting for their use case, and next, to identify and download relevant data sets at granule level from those selected infrastructures, by means of a common interface.
- The Blue-Cloud Virtual Research Environment (VRE) enhances collaborative research. Services include Data Analytics (Data Miner, Software and Algorithms Importer (SAI), RStudio, JupyterHub), facilitating to build and run analytical pipelines, Spatial Data Infrastructure to store, discover, access, and manage vectorial and raster georeferenced datasets, and services for provenance, documenting, and either sharing with selected colleagues or make available online any generated product (e.g. analytical methods, workflows, data products, publications, notebooks). The VRE is also accessible through the EOSC federated login.
- This innovation potential is explored by a series of domain-specific Virtual Labs developed by five teams of experts, addressing societal challenges related to biodiversity, genomics, marine environment, fisheries, and aquaculture.

These assets, including specific services developed within the VLabs, are also available via the EOSC Marketplace.

The poster highlights key services developed within the Blue-Cloud technical framework and their potential impact on marine research, ultimately promoting a sustainable and data-driven ocean management.

Any relevant links

<https://blue-cloud.org/>

Topic

A Federated Compute Continuum

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