

## Leveraging and Easing End Users' Climate Data Access by Interfacing Infrastructures

### [Abstract]

End Users of Climate data have nowadays to struggle with accessing the data they need for their research because of the rapid increase in data volumes. The whole climate data archive is expected to reach a volume of 30 Pb in 2018 and up to 2000 Pb in 2022 (estimated). On-demand data processing solutions as close as possible to the data storage are emerging, thanks to newly developed standards, provenance and infrastructures. In Europe several initiatives are taking place to support scientific on-demand data analytics at the European scale. They offer the huge potential of interoperability, as for example the DARE e-science platform (<http://project-dare.eu>), designed for efficient and traceable development of complex experiments and domain-specific services on the Cloud. Also, the IS-ENES (<https://is.enes.org>) consortium has developed a platform to ease access to climate data for the climate impact community (C4I: <https://climate4impact.eu>). The platform is based on existing standards (ISO and OGC), such as WPS (Web Processing Service). DARE will integrate services from the EUDAT CDI, enabling generic access and cross-domain interoperability, as well as providing compliance and integration with the future EOSC platform. The DARE platform will use containerization technologies, so that it can be easily deployed on heterogeneous architectures. A scientific pilot has been designed within the DARE project for the ENES community (climate domain). The objectives are to enable delegation of on-demand computational-intensive calculations to the DARE platform, from the IS-ENES C4I interface, seamlessly. The DARE architecture and the solutions being implemented will be presented, along with the generic and agile approach taken to implement the pilot.

### [Bibtex]

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