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C-SCALE Workflow Solutions for Earth system monitoring, modelling, and forecasting

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C-SCALE Workflow Solutions presents a suite of open-source, reusable components designed to facilitate the development and deployment of Earth system monitoring, modelling, and forecasting applications on FedEarthData. These components are derived from various C-SCALE Case Studies, with solutions ranging from hydrodynamic and water quality modelling to real-time satellite-derived surface water area estimates. Users can leverage these pre-built templates to customize their applications for specific applications and geographic areas of interest.

Key features of the C-SCALE Workflow Solutions include data downloading and preparation, model execution, post-processing, and visualization, including analysing data in an interactive Jupyter Notebook environment. By utilizing these readily available components, users can efficiently create tailored workflows for their specific needs, capitalizing on the extensive resources and infrastructure provided by C-SCALE's Cloud and HPC platforms.

The C-SCALE community repositories host these open-source solutions, allowing for seamless deployment on FedEarthData, which offers uniform access to a federation of computing and data providers for Copernicus and Earth Observation workloads. The diverse range of solutions currently available, as well as those under development, demonstrates the potential for further expansion and customization to support Earth system monitoring, modelling, and forecasting applications across various domains.

Other key topic

Key Topic

Data analytics platforms and reproducible open science

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