

The Copernicus Data Stores operated by ECMWF

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ECMWF implements the data dissemination services on behalf of two of the Copernicus services: the Climate Change Service (C3S) and the Atmospheric Monitoring Service (CAMS). This is done via the Climate Data Store (CDS) and the Atmosphere Data Store (ADS), both of which share a common architecture which is currently being modernised.

The common architecture data store (CADS) is designed as a distributed system which has been informed by the lessons learned from deploying and maintaining the CDS and ADS instances for over 5 years to a user-base of over 130,000 users. Access to the broad spectrum of data is facilitated via a powerful, and flexible, service-based approach which ensures state-of-the-art performance and reliability. Following the FAIR (Findable, Accessible, Interoperable, Reusable) principles, the CADS uses standardised webAPIs to provide compatibility and synergy with other platforms and facilitates direct use of the data in external applications. Dedicated resources for evaluation and quality control provide users with the assurances required to use the data products available in operational systems.

Here we present the journey to the modernised data stores, from its design in response to user demands on the legacy systems through to the development and implementation of a modularised flexible system using state-of-the-art technologies. We highlight the new features available and guide the audience through how they can make use of the data and services on offer.

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