



ESGF Persistent Identifier services for CMIP6

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The Earth System Grid Federation (ESGF) has seen continued development to support the CMIP6 operational phase, which is expected to start this year with first data products to be prepared and delivered. As part ESGF services dedicated specifically to CMIP6, there are now two approaches for assigning and managing Persistent Identifiers: A low-level solution based on Handles, and a high-level solution based on DataCite DOIs. The Handle-based solution provides fine granular identifiers for every file and dataset in CMIP6, but does not facilitate citability and cannot be used to give proper credit to data authors. In contrast, DataCite DOIs are offered as a standard way of giving credit, but there is a limit to the depth of granularity to which they can be used to precisely identify the data used in a study.

ESGF now offers a data cart referencing service, which can be used to assign a Handle to an individual data collection. While not citable directly, data cart collections can be used as additional references to allow everyone reading an article to discover and possibly acquire the data used. Giving proper credit is done through the already established DataCite DOIs for the supersets of data items in a cart. Creating data carts and using them in articles could partially bridge the granularity gap. The contribution will highlight the technical details of the service, present user workflows and discuss policy implications.