Geophysical Research Abstracts
Vol. 16, EGU2014-11472, 2014
EGU General Assembly 2014

Adoption of the B2SAFE EUDAT replication service by the EPOS community

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B2SAFE is the EUDAT service for moving and replicating data between sites and storage systems for different purposes. The goal of B2SAFE is to keep the data from a repository safe by replicating it across different geographical and administrative zones according to a set of well-defined policies. It is also a way to store large volumes of data permanently at those sites which are providing powerful on-demand data analysis facilities. In particular, B2SAFE operates on the domain of registered data where data objects are referable via persistent identifiers (PIDs). B2SAFE is more than just copying data because the PIDs must be carefully managed when data objects are moved or replicated.

The EUDAT B2SAFE Service offers functionality to replicate datasets across different data centres in a safe and efficient way while maintaining all information required to easily find and query information about the replica locations. The information about the replica locations and other important information is stored in PID records, each managed in separate administrative domains. The B2SAFE Service is implemented as an iRODS module providing a set of iRODS rules or policies to interface with the EPIC handle API and uses the iRODS middleware to replicate datasets from a source data (or community) centre to a destination data centre.

The definition of the dataset(s) to replicate is flexible and up to the communities using the B2SAFE service. While the B2SAFE is internally using the EPIC handle API, communities have the choice to use any PID system they prefer to assign PIDs to their digital objects. A reference to one or more EUDAT B2SAFE PIDs is returned by the B2SAFE service when a dataset is replicated.

The presentation will introduce the problem space of B2SAFE, presents the achievements that have been made during the last year for enabling communities to make use of the B2SAFE service, demonstrates a EPOS use cases, outlines the commonalities and differences between the policies for B2SAFE, presents new developments towards a common service layer interface and a data policy management framework.