



B2SAFE

**Keep research data safe
via data management
policies**

B2SAFE is a robust and highly available service which allows community and departmental repositories to implement data management policies on their research data across multiple administrative domains in a trustworthy manner. It offers an abstraction layer of large scale, heterogeneous data storages, guards against data loss in long-term archiving, allows optimized access for users (e.g. from different regions), and brings data closer to facilities for compute-intensive analysis.



Features

- Support for data management policies (e.g. registration of PIDs, cross-site replication, data integrity checks)
- Support for policies customised to community and organisational needs
- Support for less frequently used archival data, but can also support active data
- Support for large scale storage resources (e.g up to PB-scale)
- A single namespace across heterogeneous storages
- Supports integration with different kind of storage systems (e.g. Tape based HSM, POSIX filesystems, Object storage)
- Access via GridFTP, Webdav, iRODS commands
- Service offered by a network of EUDAT service providers

Technologies

iRODS

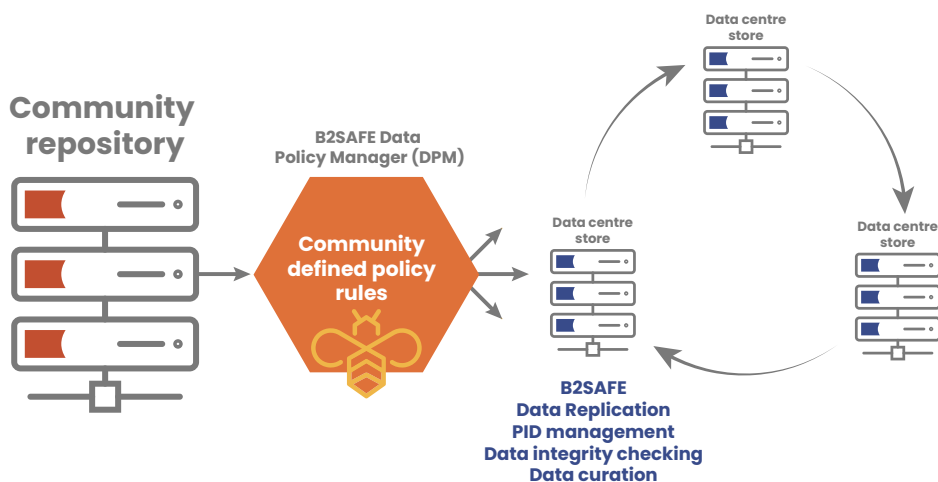
Dependencies

B2HANDLE



How it works

Tomorrow’s research data will be a domain of registered data objects and collections where persistent identifiers (PIDs) identify the data objects and collections, while information associated with the PIDs allows the integrity and authenticity of the data to be checked. Furthermore, data management operations will be governed by formalised policy rules that will also form the basis of any audits to assess quality. To meet this vision, B2SAFE is designed to be based on the execution of auditable policy rules and the use of PIDs, as offered by the EPIC Handle service.



This will increase trust in data and services in the anonymous world of data re-usage and repurposing. Suitable technology that allows the execution of sequences of policy rules will be applied, and the EUDAT data federation will be built on trust agreements, which ensure that ownership rights to the data reside with the originators. To make replicas accessible via community-defined portals, service providers will need to host community-based software respecting all access permissions.



Packages

B2SAFE – For Archival Data

B2SAFE can provide a higher level of abstraction to different underlying Data Archival mechanisms, in order to maintain Data Objects metadata (including also PIDs) and integrating with external tools. This offer targets data which is not frequently used and needs to be stored for long term and offers the option to replicate data across different sites for safe keeping.

B2SAFE – For Active Data

As a standard default mechanism B2SAFE can allow users to simply store data directly in the iRODS File System (iRODS FS), rather than the Object Storage or the Data Archival (as previously described). B2SAFE can create and assign PIDs to data objects, and store metadata associated to files and directories that have been saved to the Posix FS, on users behalf. This offer targets active data which is frequently used.



How to get access?

If you are a Repository Service Provider (Thematic Service Provider) you can do the following:

Request to use B2SAFE

eudat.eu/contact-support-request



Join the EUDAT CDI as a provider

eudat.eu/eudat-cdi/joining



Any community and departmental data repositories that have a proper repository infrastructure supporting PIDs and metadata describing the properties and context of the data being replicated can participate in B2SAFE. The replication service currently relies on iRODS but also supports other federation technologies. Participating repositories can choose to use iRODS and link it with their local repository to enable a tight integration to the EUDAT infrastructure, or use other easy-to-integrate federation approaches and client libraries.

EUDAT will help interested community centres to set up and use this service by running training courses, and providing support for the necessary adaptation work, including offering a service help desk.

