The B2 SERVICE SUITE

www.eudat.eu/services

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http://www.eudat.eu/services
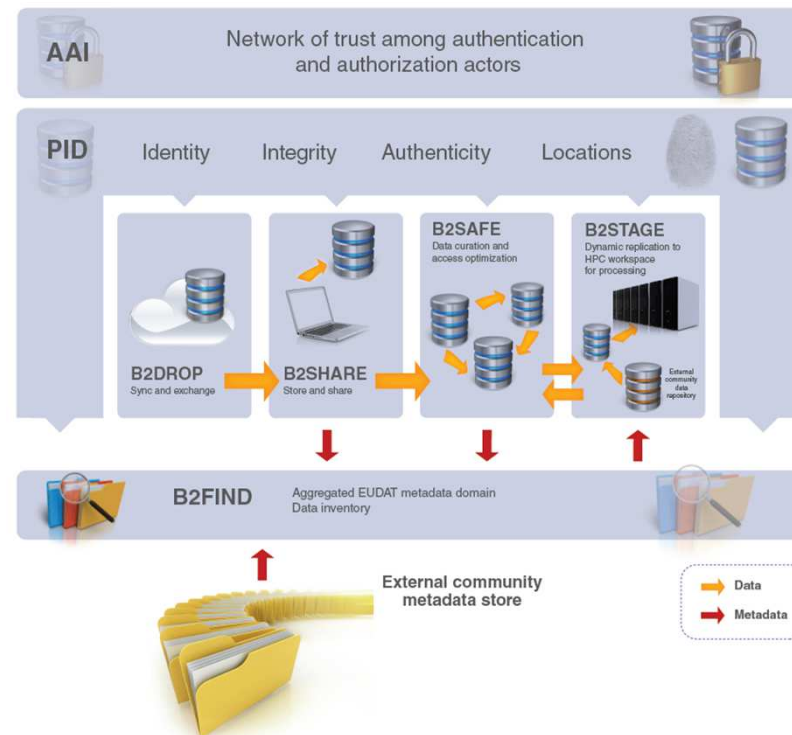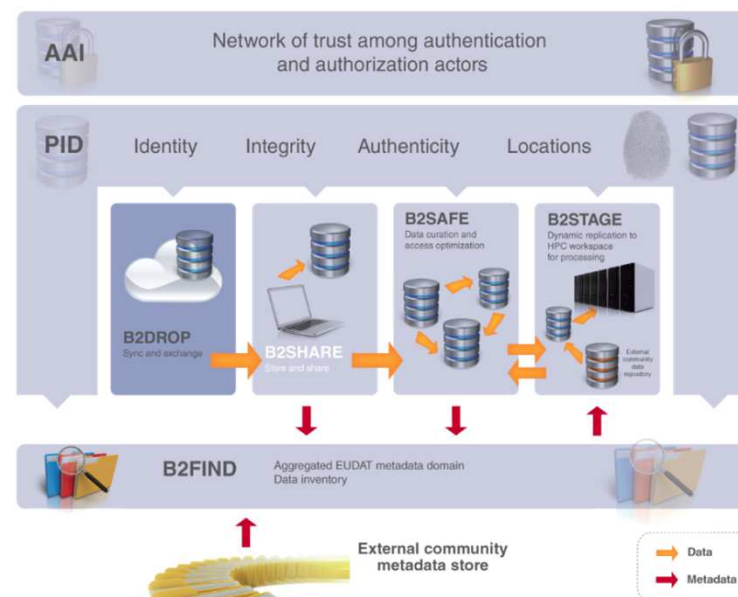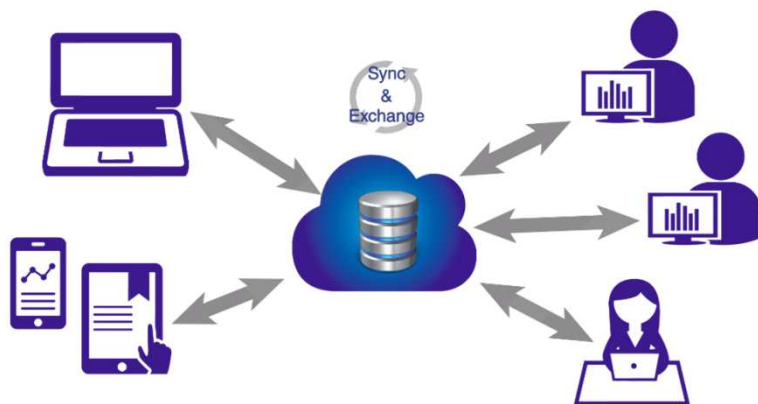
B2DROP is a **secure and trusted** data exchange service for researchers and scientists to keep their research data **synchronized** and up-to-date and to exchange with other researchers.

An ideal solution to:

- **Store and exchange** data with colleagues and team
- **Synchronize** multiple versions of data
- Ensure **automatic desktop** synchronization of large files

B2DROP features

- future **integration with the B2 suite of services** to allow user-friendly data sharing
- users decide **with whom to exchange data, for how long and how**
- **up to 20GB of storage space** for research data
- **access and manage permissions** to **files from any device and any location**
- **simple to use and open to all** researchers, scientists, communities alike to **synchronize and exchange data with one or multiple users**
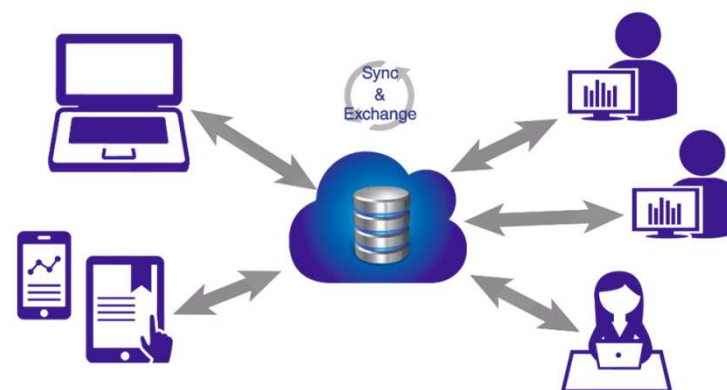
B2SHARE is a **user-friendly, reliable** and **trustworthy** way for researchers, scientific communities and citizen scientists to **store** and **share** small-scale research data from diverse contexts.

A winning solution to:

- **Store:** facilitates research data storage
- **Preserve:** guarantees long-term persistence of data
- **Share:** allows data, results or ideas to be shared worldwide
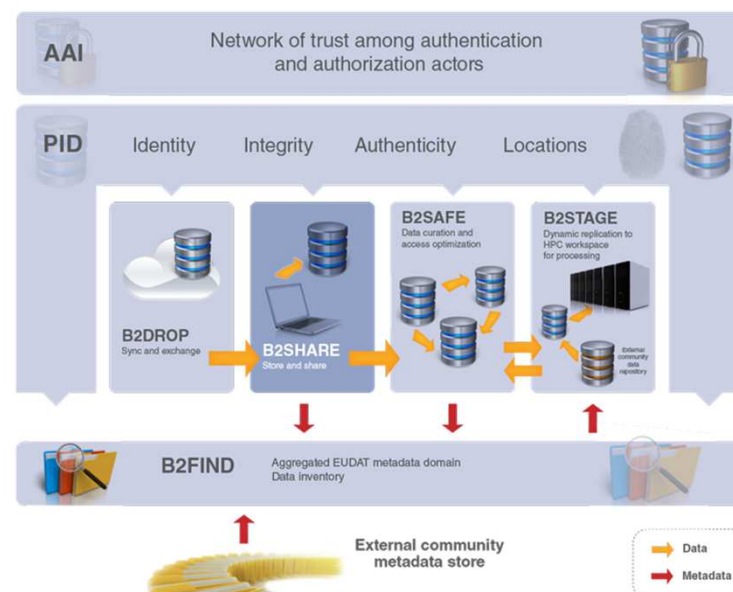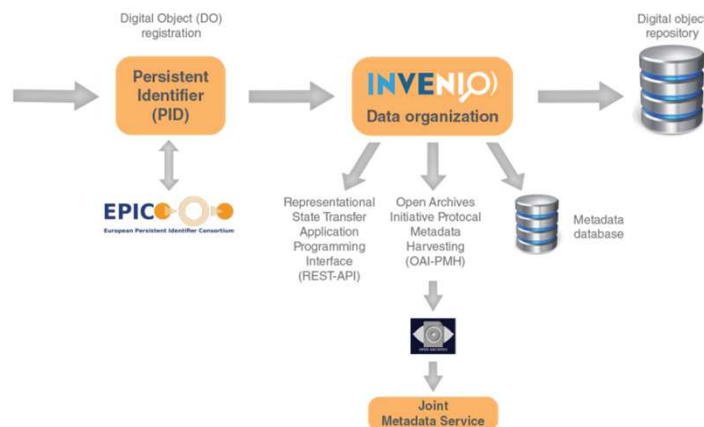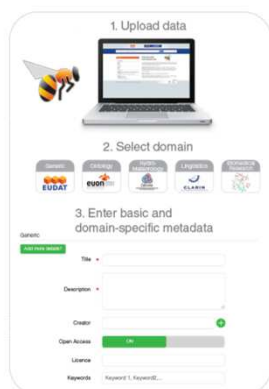
B2SHARE features

- integrated with the **EUDAT collaborative data infrastructure**
- free **upload and registration** of stable research data
- data assigned a **permanent identifier**, which can be retraced to the data owner
- **data owner defines access policy**
- **community-specific metadata extensions** and **user interfaces**
- **openly accessible** and **harvestable metadata**

- **representational state transfer application programming interface (REST API)** for integration with community sites
- **data integrity ensured by checksum** during data ingest
- **professionally managed storage service** – no need to worry about hardware or network
- **EUDAT user support**
- **monitoring of availability and use**

![EUDAT logo]

B2SAFE

B2SAFE is a **robust, safe 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.

eudat.eu/b2safe

A solution to:

- Provide an **abstraction layer which virtualizes large-scale data resources**

- Guard against data loss in long-term **archiving and preservation**

- **Optimize access** for users from different regions

- Bring data **closer to powerful computers** for compute-intensive analysis

B2SAFE features
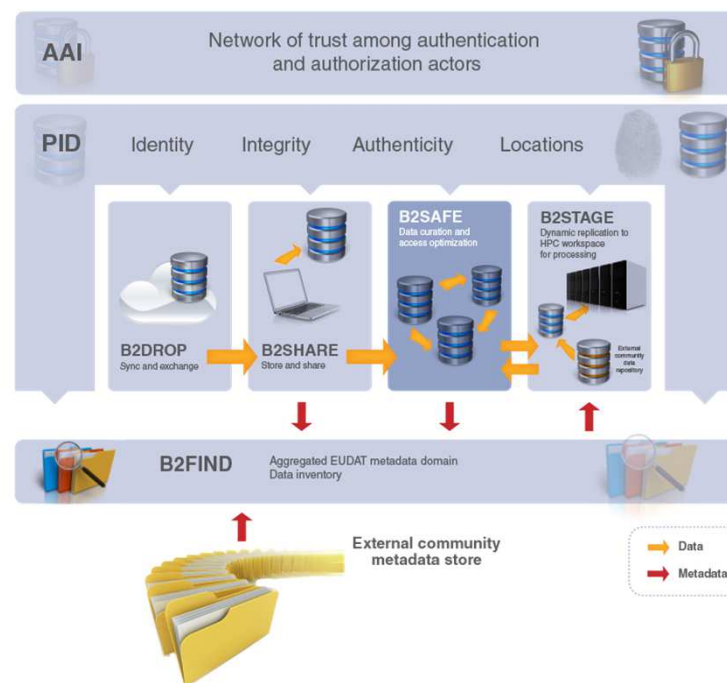
- based on the execution of **auditable data policy rules** and the use of **persistent identifiers (PIDs)**

- respects the **rights of the data owners** to define the **access rights for their data** and to decide how and when it is made **publicly referenceable**

- data policies are **centrally managed via a Data Policy Manager**, and the policy rules are implemented and enforced by **site-local rule engines**

- able to **aggregate data from different disciplines** into a storage system of **trustworthy and capable data service providers**

- support for **repository packages** (e.g. DSPACE, FEDORA) and a **lightweight HTTP-based solution**
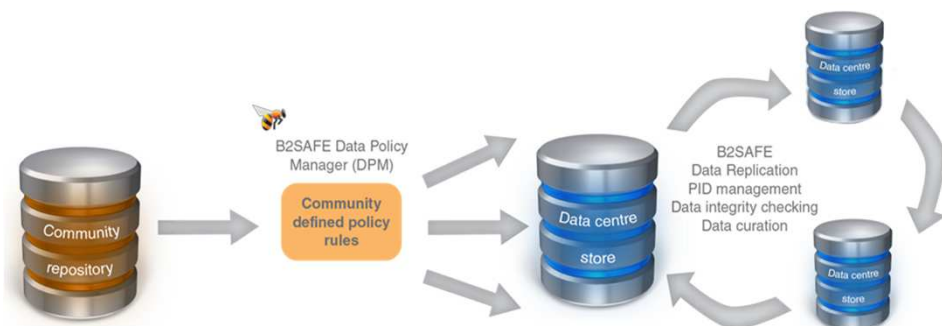
Who benefits

- repositories lacking the **capacity and / or funding** to **offer reliable storage and access services** over longer periods of time
- repositories **without adequate compute capacity for data-intensive computational services** based on their data
- **data producers** who need to be sure that **trusted centres are taking care of their data**
- consumers wishing to access **optimized services on data sources of interest to them**
- consumers who wish to **apply interdisciplinary data-intensive methods** using data collected from **various communities**

EUDAT

B2STAGE is a **reliable, efficient, light-weight and easy-to-use** service to **transfer research data sets** between EUDAT storage resources and high-performance computing (HPC) workspaces.

The service allows users to:

- **Transfer** large data collections from EUDAT storage facilities to **external HPC facilities for processing**
- In conjunction with B2SAFE, **replicate community data sets, ingesting them** onto EUDAT storage resources for long-term preservation
- **Ingest computation results** into the EUDAT infrastructure
- Access data through a **RESTful HTTP interface** (in progress)

B2STAGE features
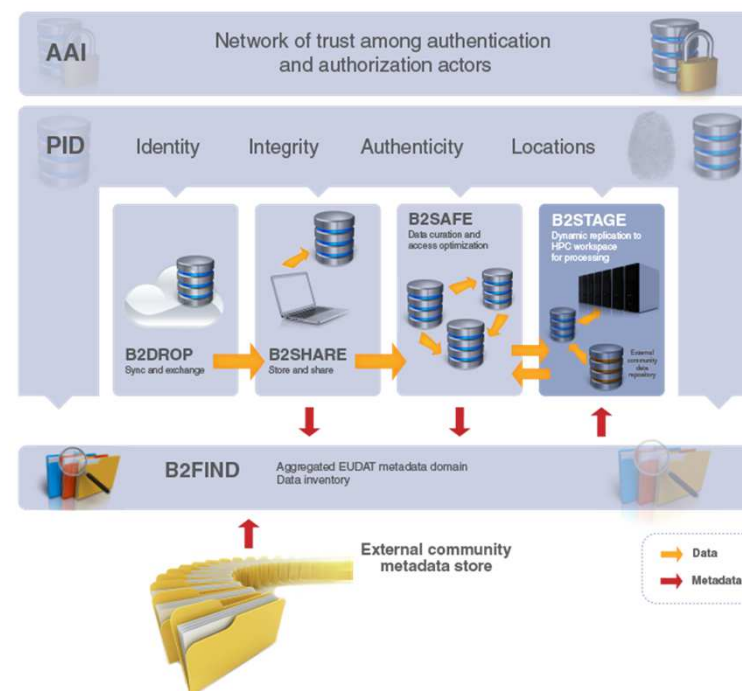
- **an extension of the B2SAFE and B2FIND services**, which allow users to store, preserve and find data
- **data-staging script** facilitates staging, ingestion and retrieval of persistent identifier (PID) information of transferred data
- service available **to all registered researchers and interested communities**

- **users negotiate access to remote HPC services in parallel**
- **collaboration with other infrastructures**, such as the European Grid Infrastructure (EGI) and Partnership for Advanced Computing in Europe (PRACE)
- **documentation, educational material and service helpdesk** available to support users

B2FIND is a simple, user-friendly **metadata catalogue of research data collections** stored in EUDAT data centres and other repositories.

b2find.eudat.eu

A service which allows users to:

- **Find** collections of scientific data quickly and easily, irrespective of their origin, discipline or community
- Get quick **overviews** of available data
- Browse through collections using **standardized facets**
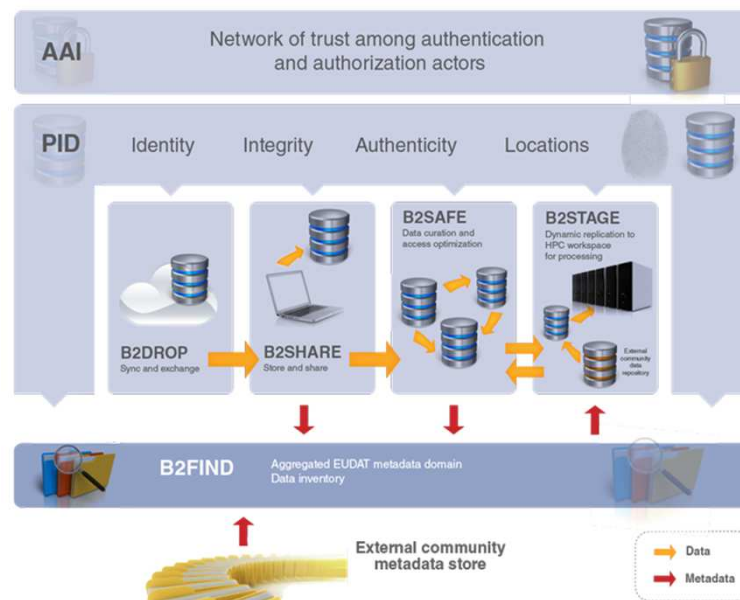
B2FIND features

- based on a **comprehensive joint catalogue of EUDAT services and external metadata**

- **metadata is mapped onto standardized facets**

- **supports faceted, geospatial and temporal metadata searches**

- allows users **to search and browse datasets via keyword searches**

- results displayed in **user-friendly format** and **listed in order of relevance**

- access to **the scientific data objects** is given through **references provided in the metadata**

- initially available for **communities in the EUDAT registered domain of data**

- EUDAT will then extend the service **to other interested and reliable data and metadata providers**

About EUDAT

Research communities from different disciplines have different ambitions and approaches – particularly with respect to data organization and content but they share one common point: **they all have basic data service requirements.**

EUDAT offers common data services, supporting multiple research communities as well as individuals, through a geographically distributed, resilient network connecting general purpose data centres and community-specific data repositories. These shared services and storage resources are distributed across 15 European nations and data is stored alongside some of Europe's most powerful supercomputers. EUDAT, a user-driven, service-oriented, trusted, secure and sustainable data infrastructure offers solutions for finding, sharing, storing, replicating, staging and performing computations with primary and secondary research data. Community-specific data repository managers can join the data infrastructure to archive, replicate, process and catalogue data on behalf of their community. While researchers (from academia and industry), citizen scientists, policy makers, and members of the public can share, discover and re-use data via EUDAT **www.eudat.eu**