

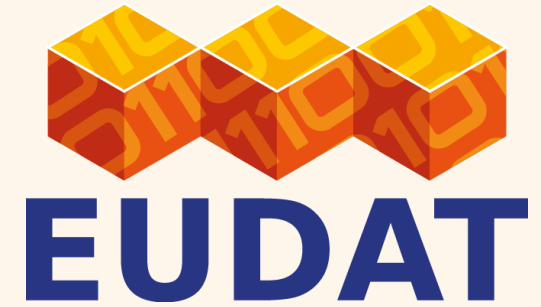
The EUDAT Services Suite

www.eudat.eu/services

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EUDAT & RDM Summer School

3-7 July 2017, FORTH, Heraklion, Crete, Greece

eudat.eu/eudat-summer-school

What is the Summer School about?

Focused on **Data Management** and using **EUDAT services**, the EUDAT Summer School aims to introduce early-career researchers to the principles and tools needed for careers in **data intensive science and data management**.

The course will provide attendees with a better understanding of the European e-Infrastructure landscape, the different tools and services offered by them, and how they can be used to improve the quality of your research outputs.

Who should apply?

Early-career researchers working with big data, as well as **researchers** from less data-intensive communities and **data managers**, interested in furthering their careers in the fields of data management, data science or digital preservation.

What is the goal?

Attendees will understand how the international e-infrastructures, which originate in different fields of research, are building blocks to allow a more integrated solution to meet their needs; they are expected to actively explore data services guided by our experts.

The topics covered by the Summer School are:

- The Research Data Lifecycle
- The FAIR Data Concept
- Writing a Data Management Plan
- The EUDAT Service Suite Overview
- High Performance Computing (HPC) Programming Models
- Using the EGI Federated Cloud for Data Analysis
- Linking HPC to Data Management
- Open Data and Cross-disciplinary Research
- Long Term Data Curation



How to apply?

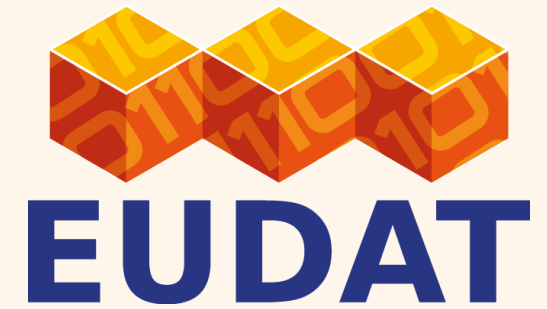
Visit

eudat.eu/eudat-summer-school

for criteria and financial support opportunities

When is the deadline for applying?

Monday 17 April 2017 @ 23:59 CET



Jörg Meyer
Jos van Wezel

EUDAT Services Suite

- EUDAT offers a **complete set of research data services, expertise and technology solutions** to all European scientists and researchers.
- These **shared services and storage resources** are **distributed across 15 European countries**.
- Data are safely stored alongside some of **Europe's most powerful supercomputers**.

EUDAT Service Suite



B2DROP
Sync and Exchange Research Data



B2SHARE
Store and Share Research Data



B2SAFE
Replicate Research Data Safely



B2STAGE
Get Data to Computation



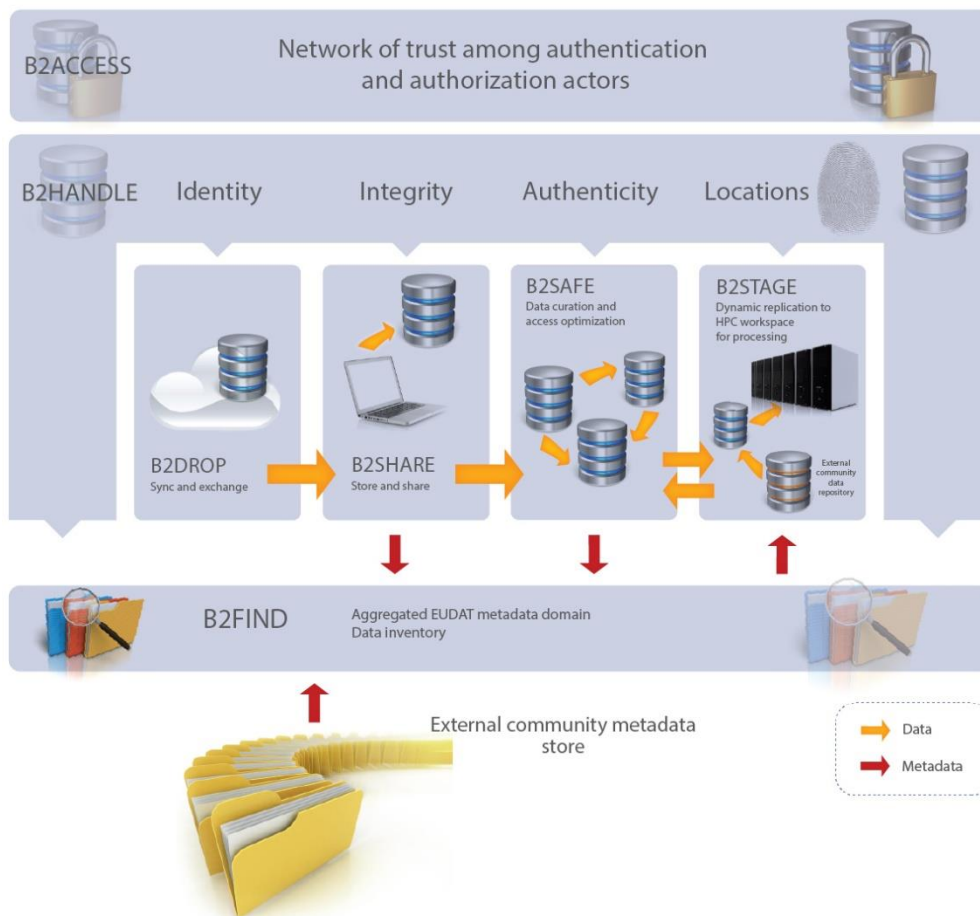
B2FIND
Find Research Data



B2HANDLE
Register your Research Data



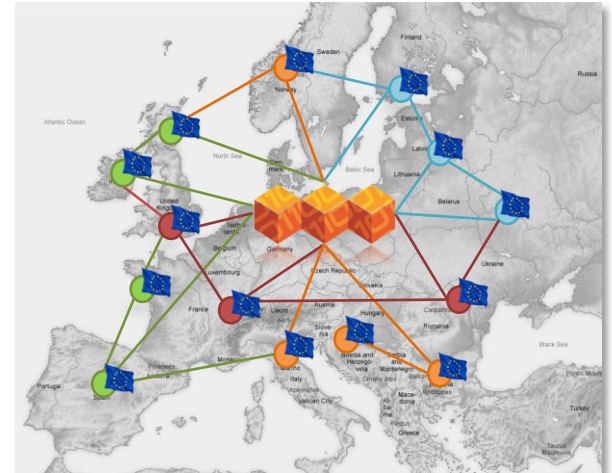
B2ACCESS
Identity & Authorisation



<http://www.eudat.eu/services>

EUDAT Services Suite is part of EUDAT...

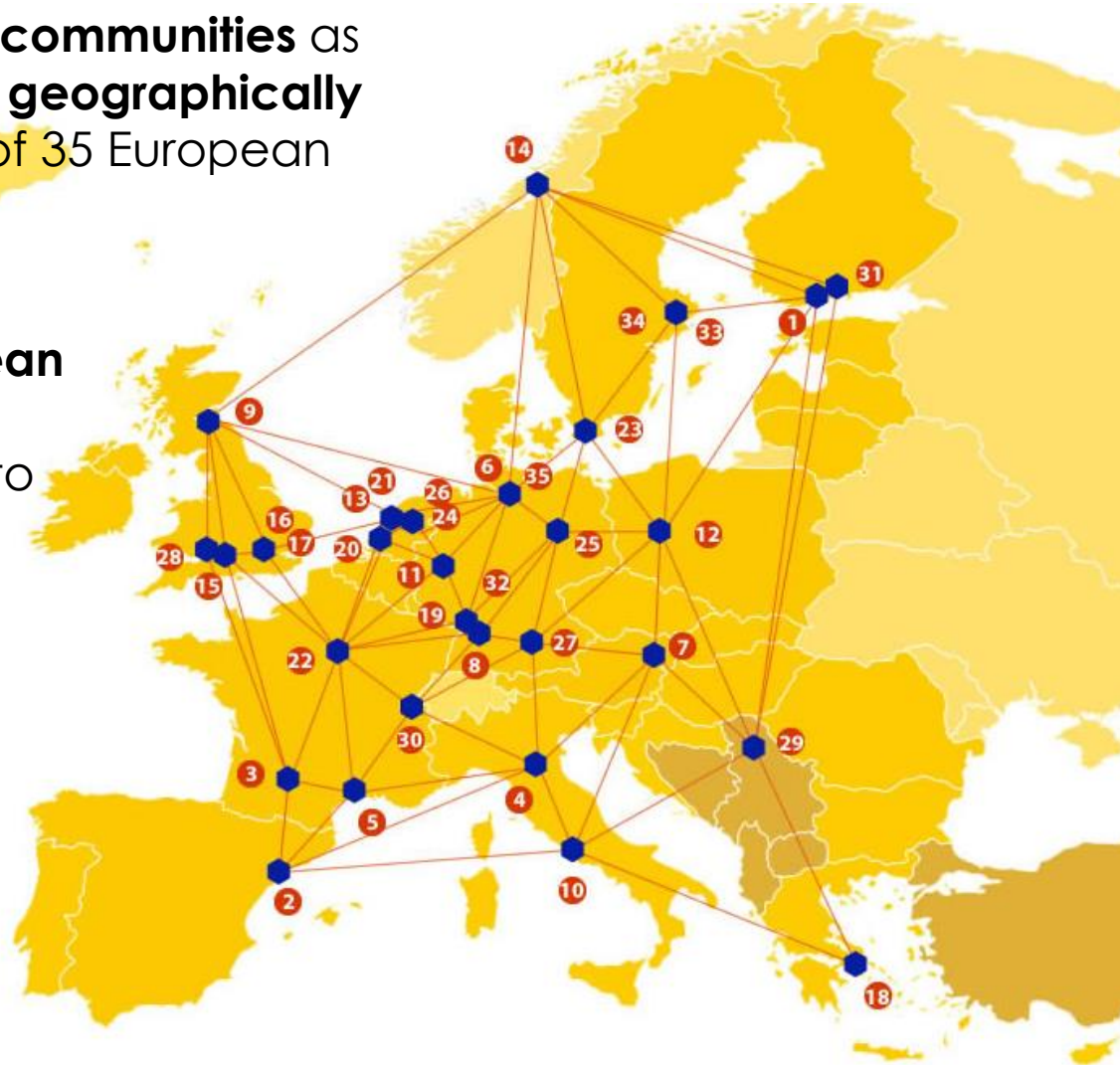
- A pan-European initiative building a sustainable cross-disciplinary and cross-national data infrastructure providing a set of shared services for accessing and preserving research data
- Supporting multiple research communities by working closely with them to deliver these technical services as part of the EUDAT Collaborative Data Infrastructure (CDI)
- Researchers use the CDI
- Data centers join the CDI



A truly pan-European Infrastructure

EUDAT offers **common data services**, supporting **multiple research communities** as well as **individuals**, through a **geographically distributed, resilient network** of 35 European organisations

Our vision is to **enable European researchers and practitioners** from any research discipline to **preserve, find, access, and process data** in a **trusted environment**, as part of a **Collaborative Data Infrastructure**



Community-Driven Solutions

EUDAT services are designed, built and implemented based on user community requirements.





EUDAT



Sync and Exchange Research Data

B2DROP

EUDAT's Personal Cloud Storage Service

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 others.



b2drop.eudat.eu
www.eudat.eu

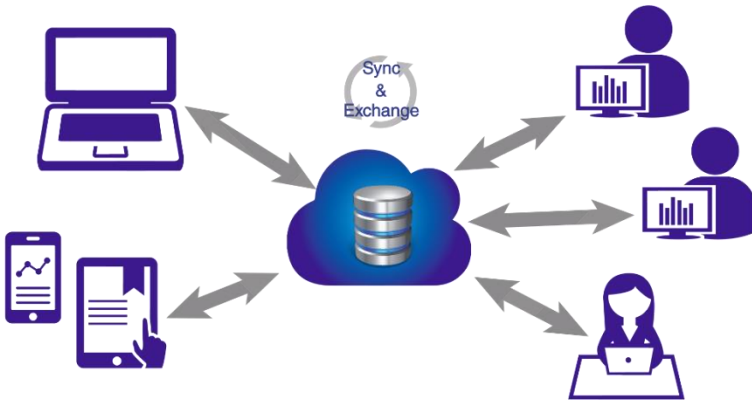
An ideal solution for **researchers** and **scientists** to:

- **Store and exchange** data with colleagues and team members, including research data not finalized for publishing
- **share data** with fine-grained access controls
- **synchronize multiple versions** of data across different devices



Features (17.03.2017):

- 20GB storage per user
- Living objects, so no PIDs
- Versioning and offline use
- Desktop synchronisation



The EUDAT logo features three stylized cubes in orange and yellow, each with a white outline and a small white 'E' on its face. Below the cubes, the word 'EUDAT' is written in a bold, blue, sans-serif font.

EUDAT



Store and Share Research Data

B2SHARE

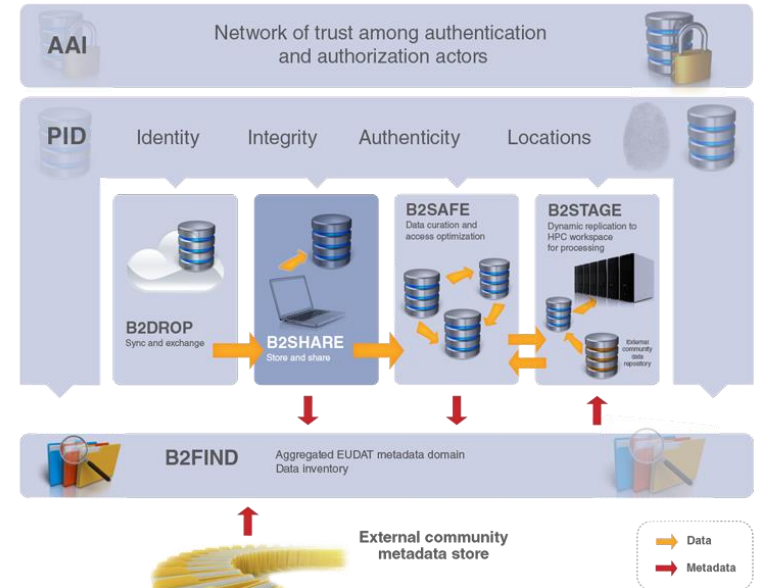
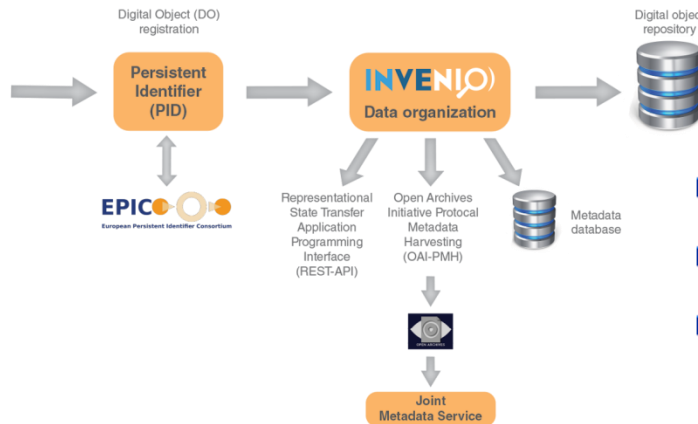
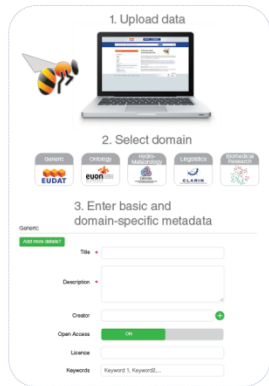
B2SHARE is a **user-friendly, reliable** and **trustworthy** way for researchers, scientific communities and scientists to **store** and **share** small-scale research data from diverse contexts.

b2share.eudat.eu
www.eudat.eu

A winning solution for **researchers, scientists** and **communities** to:

b2share.eudat.eu

- store data safely at a trusted and certified data centre
- preserve data to guarantee long-term persistence
- control access and share data with colleagues and the world



Features:

- metadata management
- permanent PIDs
- Open Access support

The EUDAT logo features three stylized cubes in orange and yellow, each with a white outline and a pattern of orange and yellow hexagons. Below the cubes, the word "EUDAT" is written in a bold, blue, sans-serif font.

EUDAT



Replicate Research Data Safely

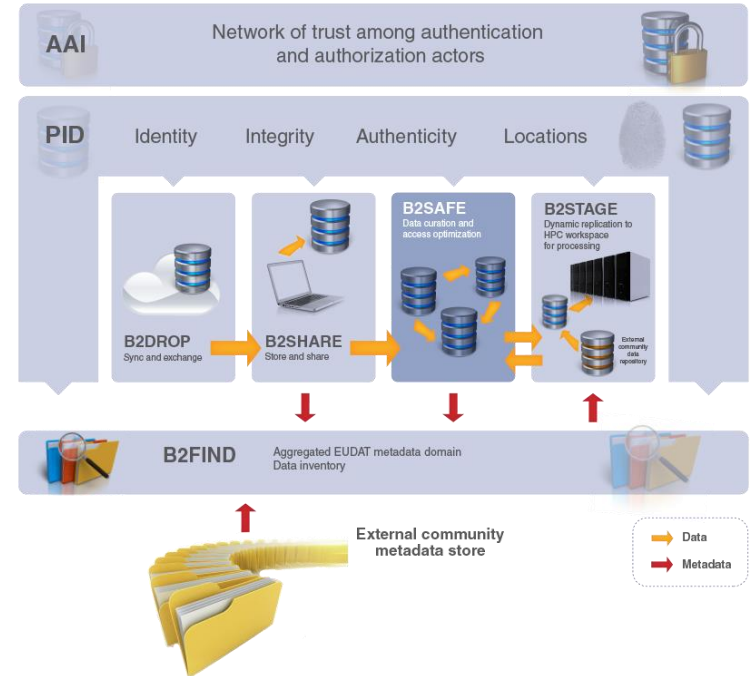
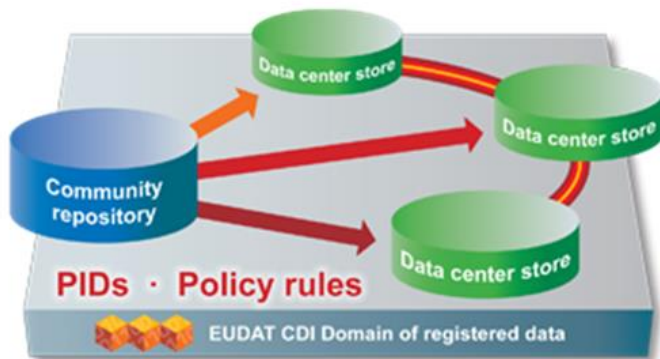
B2SAFE

B2SAFE is a **robust, safe and highly available service** which allows community and departmental repositories to **implement data management policies on research data** across multiple administrative domains in a trustworthy manner.

eudat.eu/b2safe
www.eudat.eu

The ideal solution for communities with **no facility for archival** to:

- **replicate research data** into secure data stores
- **archive and preserve** research data in the long-term
- bring data close to **powerful compute resources**
- **co-locate** data with different communities
- benefit from **economies of scale**



Features:

- large-scale storage
- robust and highly available
- permanent PIDs

The EUDAT logo features a cluster of orange and yellow hexagons in the top left corner. Below them, the word "EUDAT" is written in a bold, blue, sans-serif font.

EUDAT



Get Data to Computation

B2STAGE

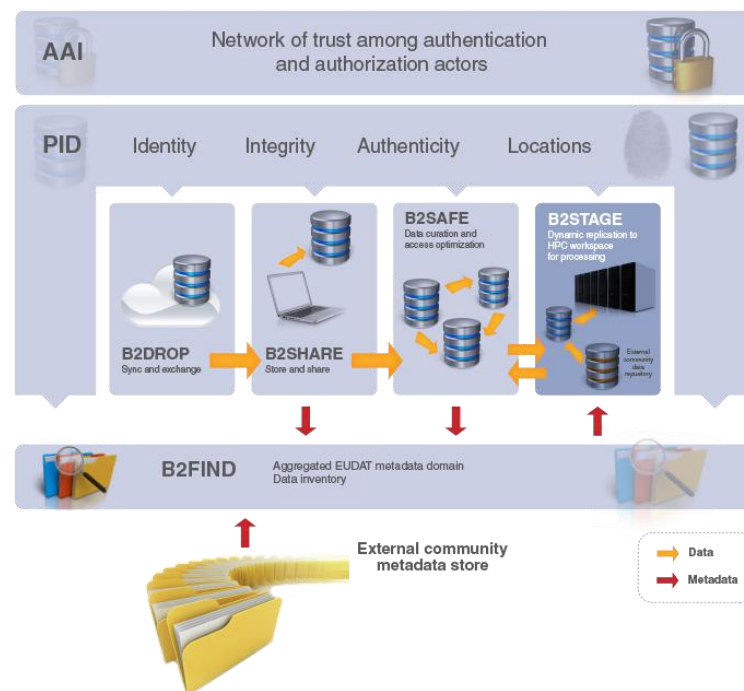
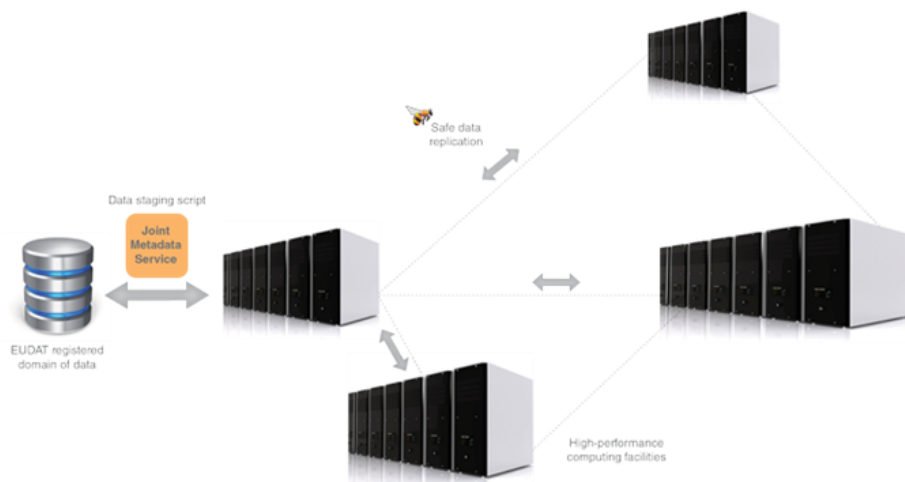
B2STAGE is a **reliable, efficient, light-weight and easy-to-use** service to **transfer research data sets** between EUDAT storage resources and high-performance computing (HPC) workspaces

A decorative graphic in the bottom right corner consisting of several overlapping orange and yellow hexagons.

eudat.eu/b2stage
www.eudat.eu

Facilitating communities to:

- **move large amounts of data** between data stores and high-performance compute resources
- **re-ingest computational results** back into EUDAT
- **deposit large data sets** onto EUDAT resources for long-term preservation



Features:

- high-speed transfer
- reliable and light-weight
- manages permanent PIDs

The EUDAT logo features three stylized cubes in orange and yellow, each with a white outline and a small white 'E' on its face. Below the cubes, the word 'EUDAT' is written in a bold, blue, sans-serif font.

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Find Research Data

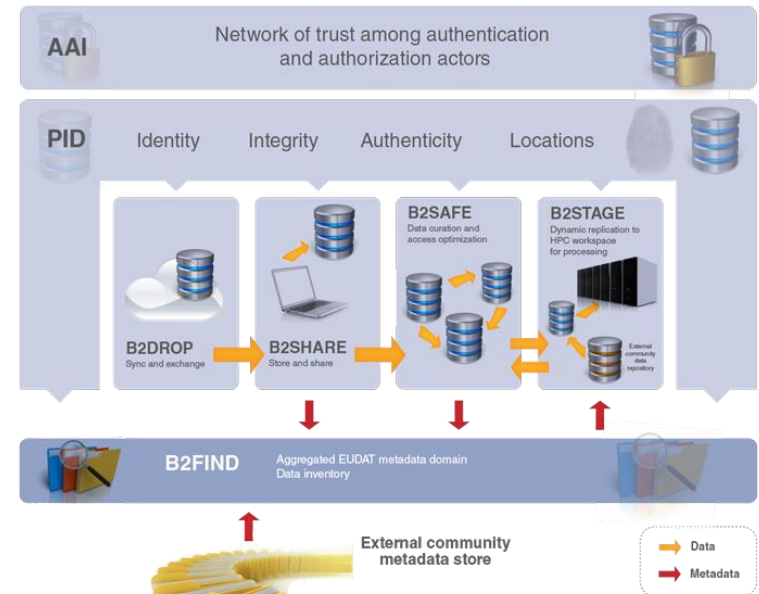
B2FIND

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

b2find.eudat.eu
www.eudat.eu

A metadata catalogue service to:

- **seek data objects and collections** using powerful metadata searches
- **catalogue community data** by means of selected **metadata**
- **browse through multi-disciplinary data** collections **filtered** by content, provenance and temporal keywords



Features:

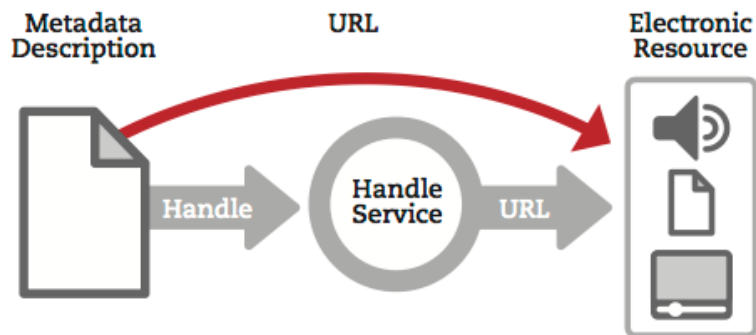
- simple to use
- standards-based
- comprehensive catalogue



B2HANDLE

B2HANDLE provides an abstraction layer between a **globally unique persistent identifier** and a physical **location of a data object** allowing researchers to **reliably cite and refer** in the long term.

-
- The diagram illustrates the EUDAT network architecture, organized into three main horizontal layers:
- Top Layer (Actors):** Labeled "Network of trust among authentication and authorization actors". It includes components like B2ACCESS, Identity, Integrity, Authenticity, and Locations, represented by icons of databases, a fingerprint, and a padlock.
 - Middle Layer (Data Flow):** A sequence of processing stages:
 - B2HANDLE:** Represented by a database icon.
 - B2DROP:** "Sync and exchange", shown with a database on a cloud.
 - B2SHARE:** "Store and share", shown with a database and a laptop.
 - B2SAFE:** "Data curation and access optimization", shown with multiple databases and arrows.
 - B2STAGE:** "Dynamic replication to HPC workspace for processing", shown with a database and a server rack.
 Arrows indicate the flow of data from B2HANDLE through B2DROP, B2SHARE, B2SAFE, and B2STAGE.
 - Bottom Layer (Metadata and External Interaction):**
 - B2FIND:** "Aggregated EUDAT metadata domain Data Inventory", represented by a folder icon with a magnifying glass.
 - External community metadata store:** Represented by a stack of yellow folders.
 Red arrows point from the B2SHARE and B2SAFE stages down to the B2FIND component. A red arrow points from the External community metadata store up to the B2FIND component.
- Legend:**
- Orange arrow: Data
 - Red arrow: Metadata

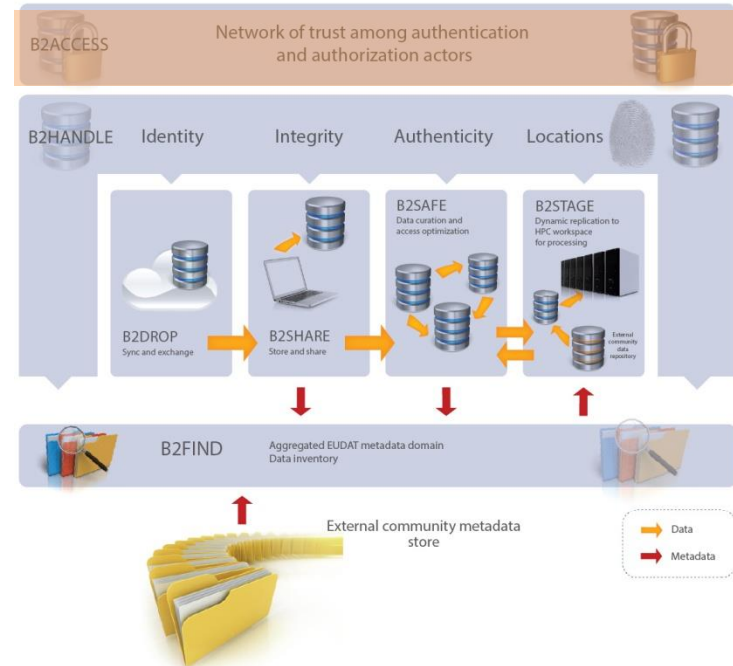


- Reliability through mutual PID mirroring
- Machine readable via HTTP RESTful API
- Simple integration with any service
- Technology agnostic

B2ACCESS

B2ACCESS is an easy-to-use and secure **authentication and authorization platform** which can be integrated with any service and supports **different methods of authentication**.

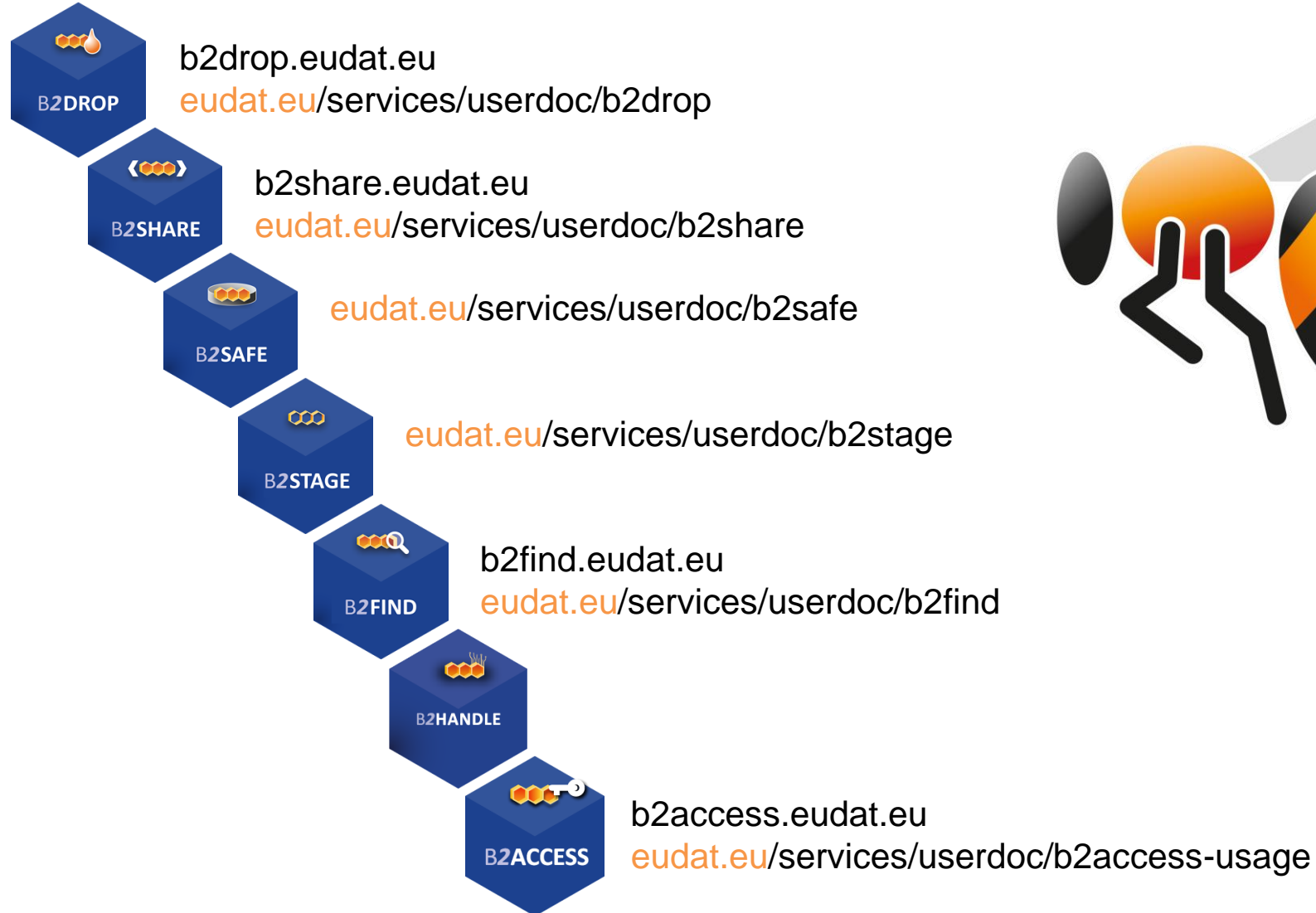
- An **easy-to-use** and **secure** authentication and authorization platform integrated with any services
- The user may log in by using **different methods of authentication**:
 - Home organisation identity provider
 - Social ID
 - EUDAT ID
- Allows group-, community- and service managers to specify **authorisation decisions**



Features:

- easy integration in any service
- reliable and light-weight
- powerful management interface

For more info:



Thank you!

Questions?

Answers?

LIVE DEMONSTRATION



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