



DATA REPOSITORIES

2nd Data Analysis Methods (DAMe) Workshop

14.03.2019 | Sander Apweiler | JSC

1. Data repository

2. EUDAT

2.1 overview

2.2 service suite

3. Hands-on

Data repository

WHAT IS A DATA REPOSITORY?

A **data repository** is a software suite to **store** and aggregate **data sets** from multiple sources. The data can be stored unstructured **with additional metadata**, describing the data itself. The access to the data can be limited, if needed, before the data is reused by other researchers.

⇒ A data repository is a collection of (domain specific) data sets, and additional metadata, for secondary use.

WHAT IS A DATA REPOSITORY NOT?

- An extension for your hard drive.
- A storage for volatile data.
- A storage for sensitive/personal (raw) data.

POSSIBLE CONSTRAINTS

- The data repository is public/private.
- The access to the data must be restricted.
- The data has an embargo date.
- Data protection issues in data.
- The storage is subject to legal restrictions, like storage for medical data.
- The availability is not guaranteed to the retention period of the data.

REASONS FOR USING

- A lot of initiatives/projects/guidelines/... which promote „open data“ and shared data like:
 - (GO)FAIR
 - RDA
 - „Gute wissenschaftliche Praxis“
 - Funding agencies like BMBF, EU Commission
 - Publications
- You want to share your results and data with other researchers.
- They support you to hold the retention period.

FAIR PRINCIPLES

- Findable
- Accessible
- Interoperable
- Reuseable

FAIR PRINCIPLES

FAIR¹ principles:

- Findable

- F1. (meta)data are assigned a globally unique and persistent identifier
- F2. data are described with rich metadata
- F3. metadata clearly and explicitly include the identifier of the data it describes
- F4. (meta)data are registered or indexed in a searchable resource

¹<https://www.doi.org/10.1038/sdata.2016.18>

FAIR PRINCIPLES

FAIR¹ principles:

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■ Accessible

- A1. (meta)data are retrievable by their identifier using a standardized communications protocol
 - A1.1. the protocol is open, free, and universally implementable
 - A1.2. the protocol allows for an authentication and authorization procedure, where necessary
- A2. metadata are accessible, even when the data are no longer available

¹<https://www.doi.org/10.1038/sdata.2016.18>

FAIR PRINCIPLES

FAIR² principles:

- Interoperable

1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
2. (meta)data use vocabularies that follow FAIR principles
3. (meta)data include qualified references to other (meta)data

²<https://www.doi.org/10.1038/sdata.2016.18>

FAIR PRINCIPLES

FAIR² principles:

- Interoperable

- I1. (meta)data use a formal, accessible, shared, and broadly applicable language for knowledge representation.
- I2. (meta)data use vocabularies that follow FAIR principles
- I3. (meta)data include qualified references to other (meta)data

- Reuseable

- R1. meta(data) are richly described with a plurality of accurate and relevant attributes
 - R1.1. (meta)data are released with a clear and accessible data usage license
 - R1.2. (meta)data are associated with detailed provenance
 - R1.3. (meta)data meet domain-relevant community standards

²<https://www.doi.org/10.1038/sdata.2016.18>

DATA REPOSITORIES

- Arctic Data Center - For NSF³ Polar Programs
- NOMAD CoE - Materials science
- PANGAEA - Earth & environmental science
- Publisher
 - Springer Nature
 - dataplanet
- Community based solutions
 - LTER Network Data Portal
- Research center based solutions
 - Zenodo

³National Science Foundation

LOOKUP SERVICES

- CESSDA - Consortium of European Social Science Data Archives
- DataCite
- DataONE - Data Observation Network for Earth
- re3data - Registry of research data repositories

EUDAT: Overview

EUDAT is a pan-European e-infrastructure solution for pan-European research infrastructure data challenges.

- All research infrastructures are facing data challenges
 - Where to store the growing amount of data?
 - How to find the data?
 - How to make the most of the data?

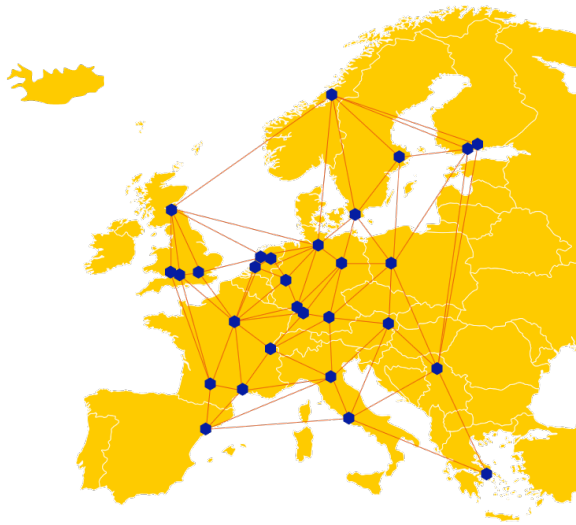
⇒ Solutions are needed at pan-European level.

- We need to promote synergies
 - Some services are common to many communities
 - Costs and investments can be optimised

⇒ Better integration of e-infrastructures and research infrastructures can be achieved.

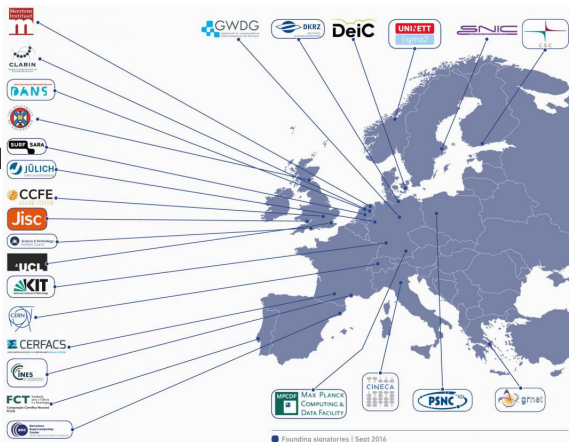
EUDAT(2020) PARTNERS

EUDAT PARTNERS



EUDAT CDI

- Started October 2016
- Agreement among 26 partners
- Major research organisations, data and computing centres
- Agreement: Sustain EUDAT for the next 10 years

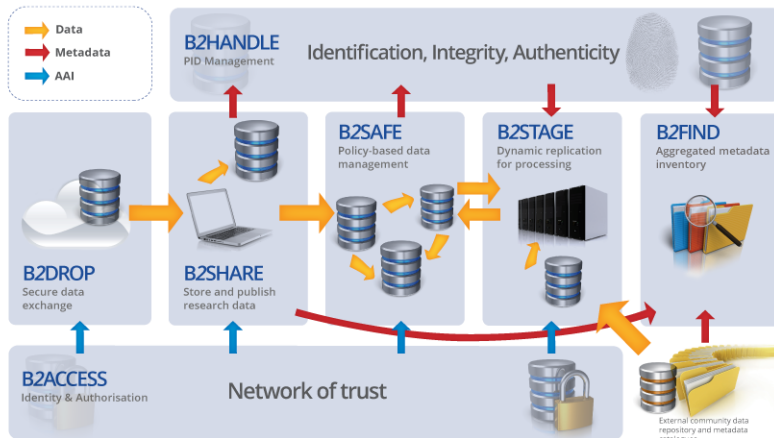


EUDAT IS COMMUNITY DRIVEN

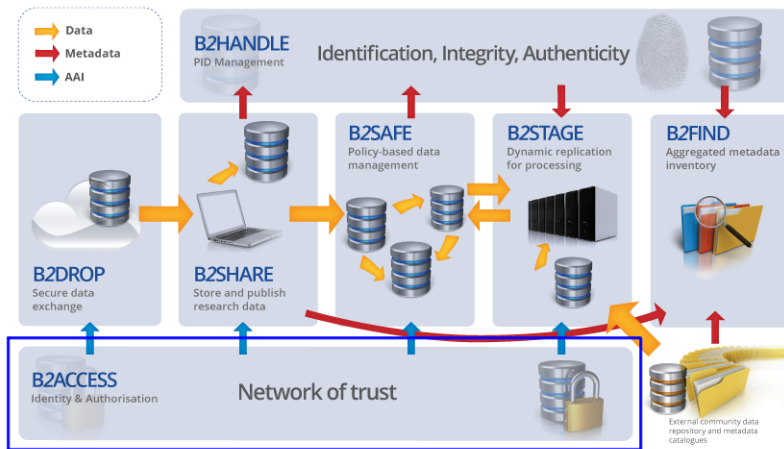


EUDAT: Service Suite

EUDAT SERVICE SUITE - OVERVIEW

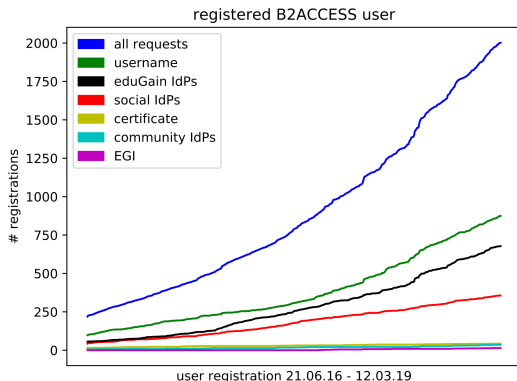


EUDAT SERVICE SUITE - B2ACCESS



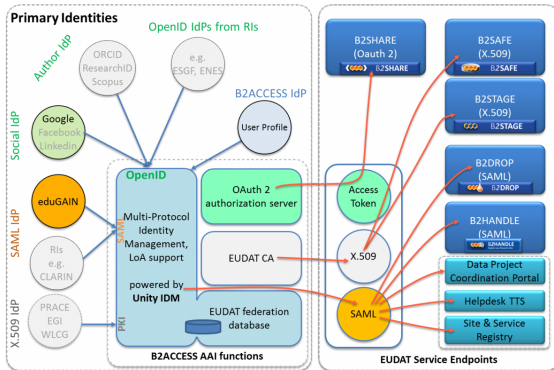
B2ACCESS

- EUDAT Authentication and Authorization Infrastructure
- Based on Unity 2.4.2
- CA for short lived X.509 (testing)
- Acts as a proxy IdP
- Users: 2002



B2ACCESS - ACCOUNTS

- eduGain (SAML)
- Community IdPs (SAML)
 - ARIA
 - Clarin
 - EGI
 - ELIXIR
- Social IdPs (OAuth2)
 - Facebook
 - GitHub
 - Google
 - Microsoft Live
 - ORCID
- Local B2ACCESS accounts
 - Username
 - Certificate with optional username



B2ACCESS - LOGIN SCREEN

GO TO EUDAT WEBSITE



[What is B2ACCESS](#) [User Guide](#) [FAQs](#) [Contact](#)

[Register a new account](#)

Username:

Password:

[Forgotten password?](#)

Authenticate

Select your preferred authentication option

Log in with your B2ACCESS ID

[Password](#)

[Certificate authentication](#)

Log in with your social ID



Log in with your organisational ID

AAF Virtual Home

AAI@EduHr Single Sign-On Service

Aalborg University

Search:

B2ACCESS - ATTRIBUTE RELEASE SCREEN

B2ACCESS EUDAT

B2ACCESS SAML web authentication

A remote service has requested your authentication

https://fsd-cloud48.zam.kfa-juelich.de/index.php/apps/user_saml/saml/metadata

Address: https://fsd-cloud48.zam.kfa-juelich.de/index.php/apps/user_saml/saml/acs

The following information will be sent to the requesting service:

Your identity

Fully anonymous identifier



Details of exposed information



☐ Remember the settings for this service and do not show this dialog again

Confirm

Decline

Login as another user

B2ACCESS - ATTRIBUTE RELEASE SCREEN

Details of exposed information



Note that in any case your credential (password, private key, ...) will NOT be exposed.

urn:oid:2.5.4.49: /C=EU/O=EUDAT/OU=B2ACCESS/CN=[REDACTED]/CN=Sander[...]

unity:persistent: [REDACTED]

distinguishedName: /C=EU/O=EUDAT/OU=B2ACCESS/CN=[REDACTED]/CN=Sander[...]

firstname surname: Sander Apweiler

email: sa.apweiler@fz-juelich.de

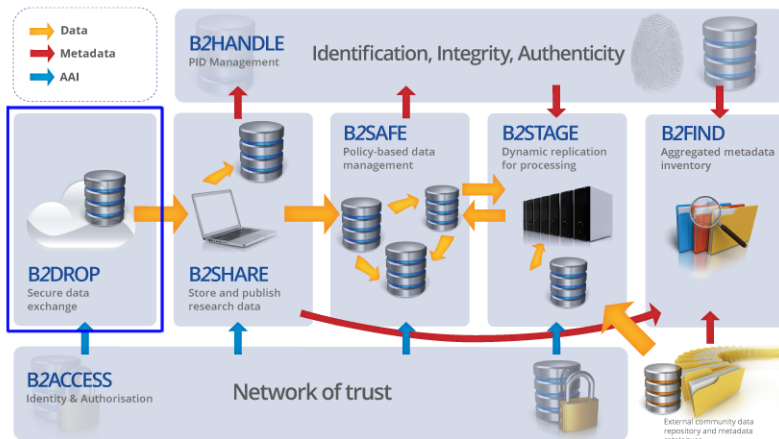
☐ Remember the settings for this service and do not show this dialog again

Confirm

Decline

Login as another user

EUDAT SERVICE SUITE - B2DROP



For whom?

Researchers (including citizen scientists) who want to share their research with a small set of collaborators prior to making it available to a wider audience.

What can you do with it?

- A service to store and exchange data
- Automated desktop synchronization on many platforms

For whom?

Researchers (including citizen scientists) who want to share their research with a small set of collaborators prior to making it available to a wider audience.

What can you do with it?

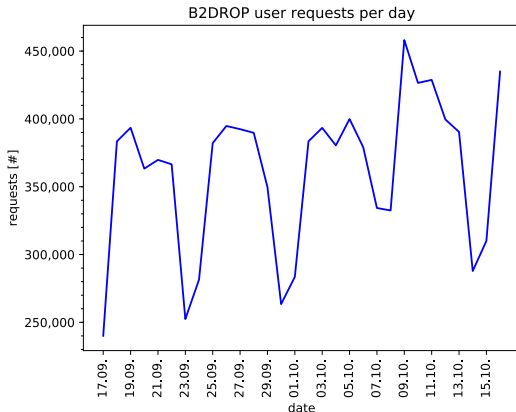
- A service to store and exchange data
- Automated desktop synchronization on many platforms
- Move data to other EUDAT services

B2DROP - SOFTWARE

- Based on Nextcloud
 - Currently 13.0.5
- New theme for EUDAT CI
- New app called B2SHAREBRIDGE
 - Integration with B2SHARE
- user_saml module
 - Integration with B2ACCESS
 - Some own modifications

B2DROP - USAGE STATISTICS

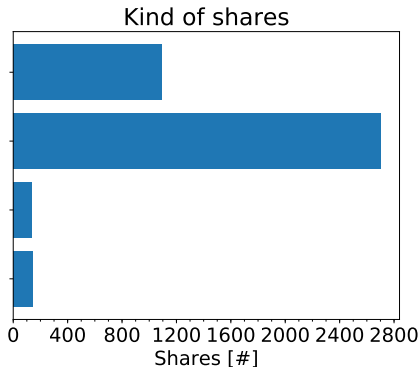
- EUDAT catch all instance
- Users: 1813
 - 1340 in 10/2017
 - 600 in 05/2016
 - 330 in 09/2015
- Volume: 3.5 TB
(15 TB available)
- Objects: 2.759.179 #
- Requests:
 - 358.000 #/day
 - 4,1 #/sec
- Daily backup to tape



B2DROP - USAGE STATISTICS

■ Shares

- With other B2DROP users
- By link
- Federated to other services
- Federated from other services



- 71 uploads with B2SHAREBRIDGE

B2DROP - LOGIN SCREEN

GO TO EUDAT WEBSITE



WHAT IS B2DROP

USER GUIDE

FAQs

CONTACT

Login



EUDAT receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 654065. [Lengal Notice](#).

[EUDAT Service ToU](#)

[Terms of Use](#)

[Data Privacy Statement](#)

[About EUDAT](#)

B2DROP - FILE LIST

[GO TO EUDAT WEBSITE](#)    

[WHAT IS B2DROP](#) [USER GUIDE](#) [FAQs](#) [CONTACT](#)

 **Alle Dateien**

 Aktuelle

 Favoriten

 Mit Ihnen geteilt

 Von Ihnen geteilt

 Geteilt über einen Link

 Tags

 Gelöschte Dateien

5 B verwendet

 Einstellungen

☐ Name 

 test **test.txt**  ... < 1 KB **vor 3 Stunden**

1 Datei

5 B

Member of the Helmholtz Association

14.03.2019

Slide 30

 **JÜLICH**
Forschungszentrum

B2DROP - PERSONAL SETTINGS

GO TO EUDAT WEBSITE



WHAT IS B2DROP USER GUIDE FAQs CONTACT

Personliche Informationen

Sync-Clients

Sicherheit

Aktivität

EUDAT B2SHARE Bridge

Federated Cloud

Sie verwenden **5 B** der verfügbaren **Unbegrenzt**

Profilbild



png oder jpg, max. 20 MB

Vollständiger Name

20495dd7-1bcf-4661-a421-79298c09

Telefonnummer

Ihre Telefonnummer

Webseite

Link https://...

E-Mail

sa.apweiler@fz-juelich.de

Adresse

Ihre Postadresse

Twitter

Twitter-Handle @...

Gruppen

Sie sind Mitglied folgender Gruppen:

Sprache

B2DROP - FILE SHARING

[GO TO EUDAT WEBSITE](#)

WHAT IS B2DROP USER GUIDE FAQs CONTACT

- Alle Dateien
 - Aktuelle
 - Favoriten
 - Mit Ihnen geteilt
 - Von Ihnen geteilt
 - Geteilt über einen Link
 - Tags
- Gelöschte Dateien

5 B verwendet

Einstellungen

Name ▲	Größe	Geändert
test.txt	< 1 KB	vor 3 Stunden
1 Datei 5 B		

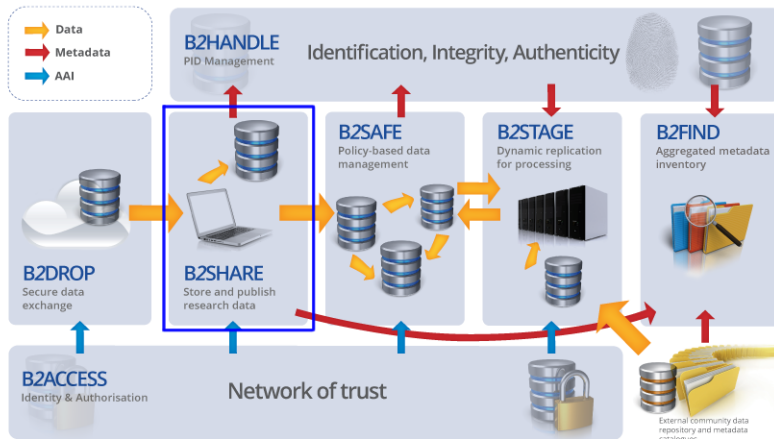
test.txt
 ★ < 1 KB, vor 3 Stunden Tags

 Aktivitäten B2SHARE Kommentare **Tellen**
 Versionen

S sander
S Sander

7ecbd132-ba9c-92-bfbc-1a4fc932eac0

EUDAT SERVICE SUITE - B2SHARE



For whom?

Researchers (including citizen scientists) who want to publish their research data to a wider audience and get a unique identifier as a reference to the data.

What can you do with it?

- A service to publish and exchange data
- Store additional (community specific) metadata
- Reference the data with a PID and/or DOI

For whom?

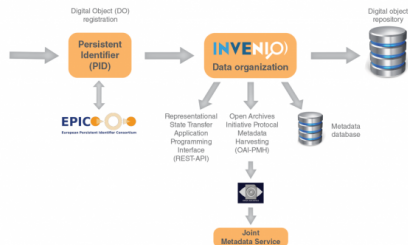
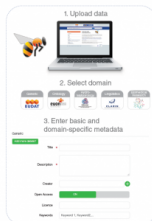
Researchers (including citizen scientists) who want to publish their research data to a wider audience and get a unique identifier as a reference to the data.

What can you do with it?

- A service to publish and exchange data
- Store additional (community specific) metadata
- Reference the data with a PID and/or DOI
- (Move data to other EUDAT services)

B2SHARE - SOFTWARE

- Based on INVENIO 3
- Own Web UI
- Additional PID/DOI handling
- Deployed with Docker
- Uses OAuth for B2ACCESS integration
- Interacts with B2DROP and B2FIND



B2SHARE

- Build checksum on files and validates it periodically
 - in case of mismatches the administrator is informed
- File changes by the user create a new version
 - with own PID
 - user can switch between versions
- Records can be deleted by administrators only

B2SHARE - LOGIN SCREEN

GO TO EUDAT WEBSITE



Search records for...

Q SEARCH

HELP

COMMUNITIES

UPLOAD

CONTACT

Login

Store and publish your research data

Search in public datasets or register as a user to upload and publish your data!

[Login](#) or [Register](#)

Create Record

Create a new record

Latest Records

Wind throw monitoring valleys

1 Aug 2017 by . ;

Vegetation relieves from the the monitoring of wind throws.

Wind throw monitoring uplands

1 Aug 2017 by . ;

Vegetation relieves from the the monitoring of wind throws.

Wind throw monitoring slopes

1 Aug 2017 by . ;

Vegetation relieves from the the monitoring of wind throws.

B2SHARE - PERSONAL SETTINGS

[HELP](#)[COMMUNITIES](#)[UPLOAD](#)[CONTACT](#)[sa.apweiler@fz-juelich.de](#) [USER](#)

User Profile

Name: sa.apweiler@fz-juelich.de

Email: sa.apweiler@fz-juelich.de

Roles

You have no assigned roles

Own records

[List of your published records](#)

Own drafts

[List of your draft records](#)

API Tokens

You have no active tokens

Create new token:

New Token
14.03.2019

B2SHARE - LIST DRAFTS/SEARCH

Records



 Search

Show records from:

All communities

Sort by:

Most Recent

Page size:

10

1 - 10 of 14 results

« 1 2 »

test3

21 Jun 2017

test

23 Jun 2017

license_test

22 Jun 2017

test

3 Aug 2017

test

27 Sep 2017

draft

B2SHARE - CREATE A NEW RECORD

[HELP](#)[COMMUNITIES](#)[UPLOAD](#)[CONTACT](#)[sa.apweiler@fz-juelich.de](#)[RECORDS](#) » [NEW](#)

Title

Community

Aalto



BBMRI



CLARIN



DRIHM



EISCAT



EUDAT



EUON



GBIF



LTER



NRM



RDA

[Create Draft Record](#)

B2SHARE - CREATE A NEW RECORD

Editing draft

Add files

Drop files here, or click to select files



Add B2DROP files

Basic fields

Community *

EUDAT

EUDAT

Titles *

title_test

+ Add

B2SHARE - CREATE A NEW RECORD

Open Access * ☒ True

Embargo Date



License

Select License

URL

Disciplines

Add

Keywords

Add

Contact Email

email@example.com

Publication Date

[Show more details >](#)

☐ Submit draft for publication

When the draft is published it will be assigned a PID, making it publicly citable. But a published record's files can no longer be modified by its owner.

The draft is up to date

B2SHARE - CREATE A NEW RECORD

Open Access * ☒ True

Embargo Date

License

 [Select License](#)

URL

Disciplines

[Add](#)

Keywords

[Add](#)

Contact Email

Publication Date

[Show more details](#)

☒ Submit draft for publication

When the draft is published it will be assigned a PID, making it publicly citable. But a published record's files can no longer be modified by its owner.

Save and Publish

B2SHARE - API

Upload with web frontend has some cons:

- Limitation in file size
- Inefficient if you create multiple uploads
- Can not be automated

REST-API solve this issue:

- Use favoured tool, e.g. curl
- Can be automated in scripts
- Is not limited to browser timeouts

B2SHARE - API COMMANDS

Commands for

- Listing all
 - communities
 - records
 - records of a community
 - files from a record
- Fetching
 - a community schema
 - the metadata of a specific record
- Searching for
 - records
 - your drafts

B2SHARE - API COMMANDS

Commands for

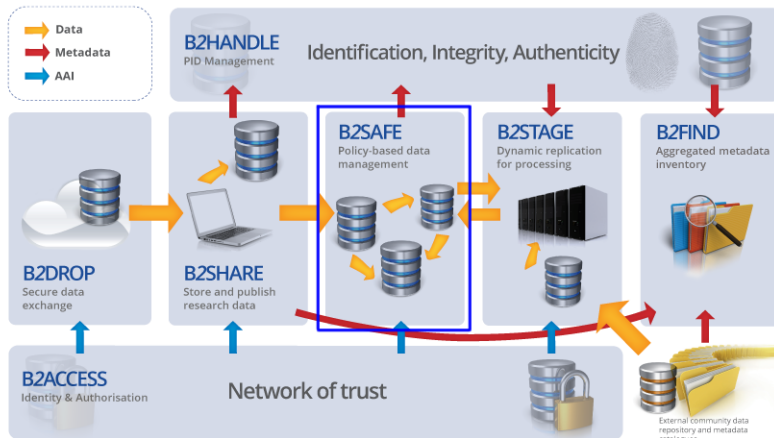
- Uploading
 - a file into your draft
 - metadata into your draft
- Creating a new record
- Deleting a file from your draft
- Submitting a draft for publication
- Reporting abuse
- Sending a request for access to restricted data

B2SHARE - API WORKFLOW

Common API workflow

- Identify a targeted community by listing the available ones
- Use the community identifier to fetch the community metadata schema
- Create a draft
- Upload files to your draft; one command per file
- Set the metadata to your record
- Publish your draft

EUDAT SERVICE SUITE - B2SAFE



For whom?

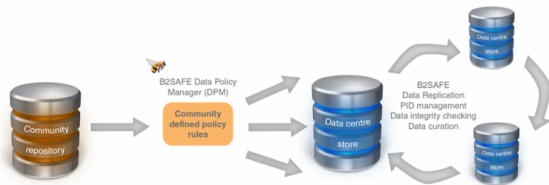
Researchers or communities whose repositories lack the capacity and / or funding to offer reliable storage and access services over longer periods of time or without adequate compute capacity.

What can you do with it?

- 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

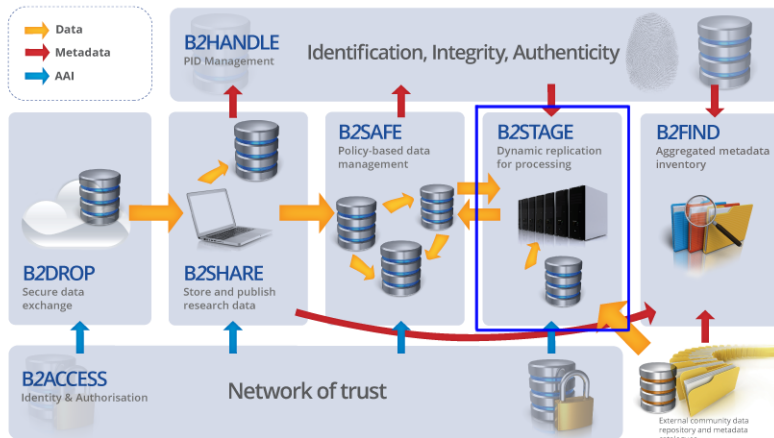
B2SAFE

- Based iRODS
- Own rules for safe replication and PID management
- Use EPIC Handle service
- Each EPIC record knows "parents" and "children"



- Starts with replication from community to first EUDAT partner
- Additional replications between EUDAT partners are possible

EUDAT SERVICE SUITE - B2STAGE



B2STAGE

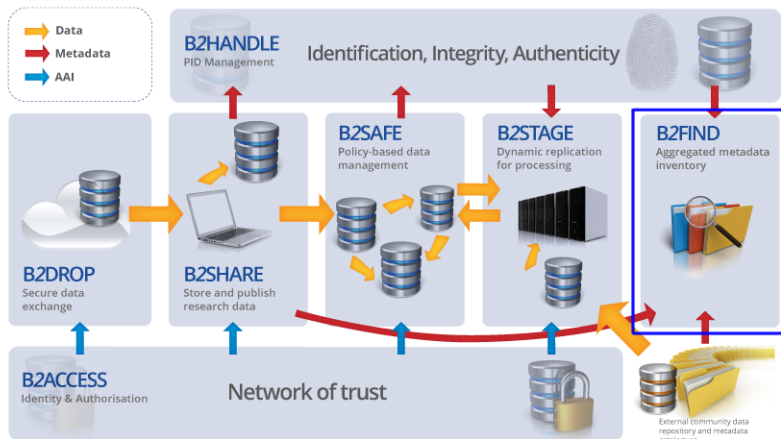
For whom?

Researchers or communities who need to access both large-scale data storage and high-performance computing systems and transfer their data easily between the EUDAT storage resources and remote HPC facilities.

What can you do with it?

- 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

EUDAT SERVICE SUITE - B2FIND



For whom?

Researchers (including citizen scientists) who are searching for specific research data and publications.

For whom?

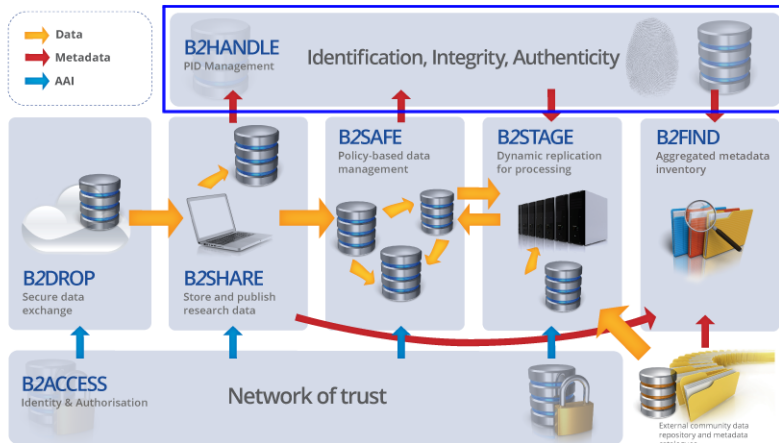
Researchers (including citizen scientists) who are searching for specific research data and publications.

Research communities who want to provide their metadata to a wider audience.

What can you do with it?

- 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

EUDAT SERVICE SUITE - B2HANDLE



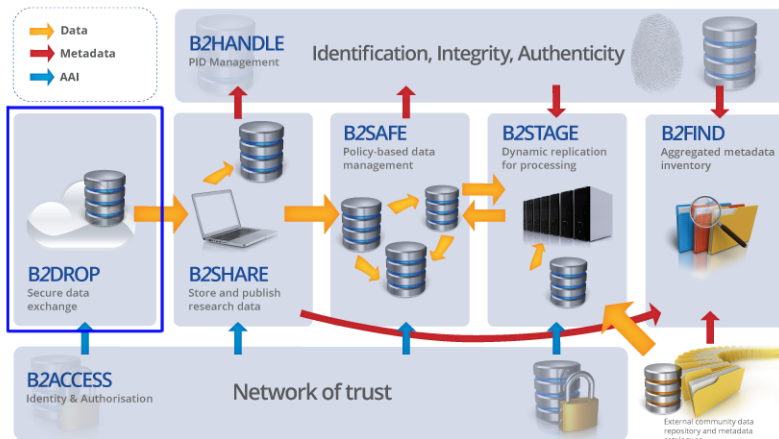
For whom?

Research communities with own data services or data models that are not compliant with the data models in EUDAT services and wish to add PIDs to (data) objects.

What can you do with it?

- Assign PIDs to various kinds of managed objects
- Shielding end-users from the complexity of infrastructure details
- Retrieve and refer to PIDs to objects

EUDAT SERVICE SUITE - B2DROP



B2DROP - B2SHAREBRIDGE PLUGIN

Use Case:

A researcher worked on a publication. The volatile digital objects were stored, synchronized and shared using B2DROP. Now, after finalizing it, he wants to publish the final document using B2SHARE.

B2DROP - B2SHAREBRIDGE PLUGIN

Use Case:

A researcher worked on a publication. The volatile digital objects were stored, synchronized and shared using B2DROP. Now, after finalizing it, he wants to publish the final document using B2SHARE.

- Extend B2DROP WebUI
 - Create deposit on a per-file base
 - Make community (metadata) selectable
- Implement third-party transfers

B2SHAREBRIDGE - FILE LIST

GO TO EUDAT WEBSITE

WHAT IS B2DROP USER GUIDE FAQs CONTACT

Alle Dateien

Aktuelle

Favoriten

Mit Ihnen geteilt

Von Ihnen geteilt

Geteilt über einen Link

Tags

Gelöschte Dateien

373.9 MB von 20 GB verwendet

Einstellungen

transferred from eb1c6262-c26d-1035-86ef-1b94b7231934 on 2018-08-22 13:32:15

Nextcloud.mp4

Nextcloud Manual.pdf

2 Ordner und 2 Dateien

Zu den Favoriten hinzufügen

Details

Umbenennen

Verschieben oder kopieren

Herunterladen

B2SHARE

Switchboard

Löschen

B2SHAREBRIDGE - COMMUNITY SELECTION

[GO TO EUDAT WEBSITE](#)



WHAT IS B2DROP USER GUIDE FAQs CONTACT

Alle Dateien

Aktuelle

Favoriten

Mit Ihnen geteilt

Von Ihnen geteilt

Geteilt über einen Link

Tags

Gelöschte Dateien

373.9 MB von 20 GB verwendet

Einstellungen

Nextcloud.mp4

452 KB

vor einem Jahr

Nextcloud Manual.pdf

4.4 MB

vor einem Jahr

2 Ordner und 2 Dateien

7.2 MB

Nextcloud.mp4

452 KB, vor einem Jahr

Aktivitäten

B2SHARE

Kommentare

Teilen

Versionen

Title: Nextcloud.mp4

Community: EUDAT

Open access: ☐

deposit

B2SHAREBRIDGE - DEPOSIT LIST

GO TO EUDAT WEBSITE



S



WHAT IS B2DROP USER GUIDE FAQs CONTACT

All Deposits

Pending Deposits

Published Deposits

Failed Deposits

Transfer ID	#Files	Title	Status	Deposit URL	Triggered At	Last Update
63	1	b2sharebridgetest	deposited	Deposit URL	Thu, 17 Jan 2019 07:09:38	Thu, 17 Jan 2019 07:10:03
58	1	Test Upload	deposited	Deposit URL	Wed, 19 Sep 2018 14:53:08	Wed, 19 Sep 2018 15:00:04

B2SHAREBRIDGE - DEPOSIT IN B2SHARE

[GO TO EUDAT WEBSITE](#)

[SEARCH](#)

[HELP](#) [COMMUNITIES](#) [UPLOAD](#) [CONTACT](#)

 [b.von.styethg@fz-juelich.de](#)

[RECORDS](#) - [1EDC627FFD154C3644580F36184799F3](#) - [EDIT](#)

Editing 20160620_B2DROP-Technical-Meeting_Barcelona.pptx

Add files

Drop files here, or click to select files

 Add B2DROP files

Uploaded files

Name	Date	Size
20160620_B2DROP-Technical-Meeting_Barcelona.pptx	Nov 23, 2016	2.90MB

Basic fields

Community ^{*}



Title ^{*}

Description

B2SHAREBRIDGE - PERSONAL SETTINGS

GO TO EUDAT WEBSITE



S



WHAT IS B2DROP USER GUIDE FAQs CONTACT

Persönlich

i Persönliche Informationen

🔒 Sicherheit

🔄 Sync-Clients

👤 Teilen

⚙️ Zusätzliche Einstellungen

- ☒ Ihre eigenen Aktivitäten im Stream auflisten
☐ Über Ihre eigenen Aktivitäten via E-Mail benachrichtigen

E-Mails senden: stündlich

EUDAT B2SHARE Bridge

https://b2share.eudat.eu/443

External publishing endpoint

9wTZVOqKjcvbNC56qRF1rtNF7qw9MfWryjDcLavZBZfw1cur1GpQ

B2Share API token

Save B2SHARE API Token

Delete B2SHARE API Token

CLARIN LR SWITCHBOARD Bridge

B2SHAREBRIDGE - ADMIN SETTINGS

GO TO EUDAT WEBSITE



WHAT IS B2DROP USER GUIDE FAQs CONTACT

Verschlüsselung

Aktivität

Workflow

EUDAT

SSO & SAML-Autorisierung

Umfrage zur Benutzung

Gruppen-Ordner

Protokollierung

Zusätzliche Einstellungen

Tipps & Tricks

EUDAT B2SHARE Bridge

External B2SHARE API endpoint

of uploads per user at the same time

MB maximum filesize per upload

☐ Check valid secure (https) connections to B2SHARE

Hands-on session

PREPARATION

- Go to `b2drop-devel.zam.kfa-juelich.de/index.php`
- Select B2ACCESS
- Login with your existing account or create a new one
- Create a file with your user name from paper, e.g. `haf13.txt`
- Copy your cloud id from `/settings/user/sharing` in the created file
- Share the file with user `sapweiler`
- Create an app password at `/settings/user/security` and store it some where, you won't see it again

MOUNT YOUR B2DROP STORAGE

In some cases you want to mount your B2DROP storage locally:

- Use ssh to connect to `zam10141.zam.kfa-juelich.de`
- Create `.davfs2` folder in your home directory
- Create `~/.davfs2/secrets` file
- Write mountpoint, username and app password in the first line
e.g.: `/home/haf13/b2drop sapweiler MYPASSWORD`
- Change permissions of secrets file to 600
- Run `mount b2drop` within your home directory

Prerequisite:

- Installation of `davfs2`
- User is member of `davfs2` group
- Valid entry in `/etc/fstab`

USE YOUR B2DROP STORAGE

- Create a file with some content
- Move the file in the B2DROP folder
- Review if it is uploaded
- Share it with your neighbour
- Create a new txt file online
- Review if it is downloaded

PREPARE B2SHARE

- Go to `trng-b2share.eudat.eu`
- Login with your B2ACCESS account
- Create a new API token in your settings
- Store the API token in your personal B2DROP settings
- Store it in some file, it is needed later again

USE B2SHAREBRIDGE

Upload a file from B2DROP to B2SHARE using the B2SHAREBRIDGE

- Select the context menu of a file (···)
- Select B2SHARE
- Enter a deposit name and select the metadata schema
- Press publish

The upload is done in background, during the next cronjob.

- Review you deposit status in the B2SHAREBRIDGE app
- If the status is deposited, click on the URL
- Finish your deposit
- Make another upload with two files

USE THE B2SHARE API

Using the B2SHARE depositer

- Fetch the Depositer from B2DROP
- View options and syntax `python3 run.py -h`
- Upload a file with the depositer, do not finalize it
- Review the draft online

USE THE B2SHARE API

Using the B2SHARE depositer

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Using curl

- Identify a targeted community by listing the available ones
- Use the community identifier to fetch the community metadata schema
- Create a draft
- Upload files to your draft; one command per file
- Set the metadata to your record
- Publish your draft