B2DROP
The EUDAT Personal Cloud Storage

31.01.2017 | Benedikt von St. Vieth, Thijs Cobben, Sander Apweiler, Mikael Karlsson
The EUDAT project(s)

- data services
- EUDAT
  - 2011 - 2015
  - EU FP7
- EUDAT2020
  - 2015 - 2018
  - EU Horizon 2020
- EUDAT CDI
  - beyond
- community driven
The EUDAT Collaborative Data Infrastructure

B2HANDLE PID Management

B2SAFE Policy-based data management

B2STAGE Dynamic replication for processing

B2FIND Aggregated metadata inventory

B2DROP Secure data exchange

B2SHARE Store and publish research data

Network of trust

Data
Metadata
AAI

Identification, Integrity, Authenticity

External Community data repository and metadata catalogue
The EUDAT Collaborative Data Infrastructure
# 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?**

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**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)
Usage Statistics - b2drop.eudat.eu

- users: 1000
  - 330 in 9/2015
  - 125 in 3/2015
- volume: 950 GB
- objects: 990,000 #
- requests:
  - 313,000 #/day
  - 3,6 #/sec
Operations

- deployment using puppet
- transparent migration to new server in 04/2016
  - new LAMP stack
  - ownCloud version 7 → 8.0 → 8.1 → 8.2 → 9.0
- ownCloud version 9.0 → 9.1 in 07/2016
- continuous theme adoptions
- B2SHAREBRIDGE (ownCloud App) implementation
- Nextcloud tests (theme, B2SHAREBRIDGE, B2ACCESS)
B2SHAREBRIDGE
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.
B2SHAREBRIDGE Plugin

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- extend B2DROP WebUI
  - create deposit on a per-file base
  - make community (metadata) selectable
- implement third-party transfers
User Interface - File List

GO TO EUDAT WEBSITE

WHAT IS B2DROP  USER GUIDE  FAQs  CONTACT

Files

- All files
- Favorites
- Shared with you
- Shared with others
- Shared by link
- Tags
- Deleted files

- 20160205_B2DROP-UserTraining_UserForum.pptx  4.8 MB  2 days ago
- 20160512_B2DROP-Community-Meeting_Utrecht.pptx  2.8 MB  2 days ago
- 20160620_B2DROP-Technical-Meeting_Barcelona.pptx  2.8 MB  2 days ago
- 20160714_B2SAFE-Swict_Duesseldorf.pptx  814 KB  2 days ago
- IMG_1268.JPG  2.2 MB  a month ago

B2SHARE

5 files  13.3 MB
User Interface - Community Selection

GO TO EUDAT WEBSITE

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  - Tags

- Deleted files
  - Settings

Files:

- 20160205_B2DROP-UserTraining_UserForum.pptx
  - Size: 4.8 MB
  - Modified: 8 days ago

- 20160312_B2DROP-Community-Meeting_Utrecht.pptx
  - Size: 2.8 MB
  - Modified: 8 days ago

- 20160620_B2DROP-Technical-Meeting_Barcelona.pptx
  - Size: 2.8 MB
  - Modified: 8 days ago

- 20160714_B2SAFE-Swift_Duesseldorf.pptx
  - Size: 814 KB
  - Modified: 8 days ago

- IMG_1256.jpg
  - Size: 2.2 MB
  - Modified: a month ago

5 files

13.3 MB
# User Interface - Deposit List

### All Deposits

<table>
<thead>
<tr>
<th>Transfer ID</th>
<th>Filename</th>
<th>Status</th>
<th>Publish URL</th>
<th>Triggered At</th>
<th>Last Update</th>
</tr>
</thead>
</table>

### Pending Deposits

<table>
<thead>
<tr>
<th>Transfer ID</th>
<th>Filename</th>
<th>Status</th>
<th>Publish URL</th>
<th>Triggered At</th>
<th>Last Update</th>
</tr>
</thead>
</table>

### Published Deposits

<table>
<thead>
<tr>
<th>Transfer ID</th>
<th>Filename</th>
<th>Status</th>
<th>Publish URL</th>
<th>Triggered At</th>
<th>Last Update</th>
</tr>
</thead>
</table>

### Failed Deposits

<table>
<thead>
<tr>
<th>Transfer ID</th>
<th>Filename</th>
<th>Status</th>
<th>Publish URL</th>
<th>Triggered At</th>
<th>Last Update</th>
</tr>
</thead>
</table>
Deposit in B2SHARE

Editing 20160620_B2DROP-Technical-Meeting_Barcelona.pptx

Add files

Drop files here, or click to select files

Uploaded files

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>20160620_B2DROP-Technical-Meeting_Barcelona.pptx</td>
<td>Nov 23, 2016</td>
<td>2.30MB</td>
</tr>
</tbody>
</table>

Basic fields

- **Community**: EUDAT
- **Title**: 20160620_B2DROP-Technical-Meeting_Barcelona.pptx
- **Description**
User Interface - Personal Settings

EUDAT B2SHARE Bridge

7OuXl5PglmmzKvy1VOVsWr0KqmjRymS3UQrO6xXzGONltudprgJqt

Save B2SHARE API Token  Delete B2SHARE API Token

Federated Cloud
Your Federated Cloud ID: bvonstvieth@fsd-cloud48.zam.kfa-juelich.de
User Interface - Admin Settings

**EUDAT B2SHARE Bridge**

- **External B2SHARE API endpoint**: https://fsd-b2share.fzj.de:443
- **# of uploads per user at the same time**: 5
- **MB maximum filesize per upload**: 512
- **Check valid secure (https) connections to B2SHARE**

**Mail Templates**

<table>
<thead>
<tr>
<th>Theme</th>
<th>Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>b2drop</td>
<td>Please choose a template</td>
</tr>
</tbody>
</table>
ownCloud / Nextcloud App

We followed the owncloud 3rd party App pattern
ownCloud / Nextcloud App

We followed the owncloud 3rd party App pattern

EUDAT B2SHARE bridge 0.1.1
by EUDAT (AGPL-licensed)
Experimental
Show description ...

Disable Enable only for specific groups
ownCloud / Nextcloud **App Framework**

- database tables (*b2sharebridge/appinfo/database.xml*)
  - store deposit states
  - store B2SHARE communities
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  - fetch B2SHARE for communities as regular *Job*
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- *OCA.Files.FileList / OCA.Files.DetailTabView*

- *OCP.Template* (settings-personal, settings-admin)

- PublishController (php) that connects to B2SHARE.v2 API
B2ACCESS Integration
B2ACCESS

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⇒ lack of client support
B2ACCESS

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- Nextcloud provides a `user_saml` module (on GitHub)
  - WebDAV/mobile clients through user-managed application passwords
  - client applications allow to use federated logins
B2ACCESS

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but:

- currently not enough attribute mapping possible
- after enabling user_saml, only federated accounts work
  ⇒ no local admin (and LDAP?) anymore
B2DROP - Current Status

- service usage as expected
- **B2SHAREBRIDGE** ongoing development
  ⇒ after initial release, further extend WebUI
- **B2ACCESS** integration quite challenging
  ⇒ (automated) migration of all users close to impossible