

CS3 Talk

ownCloud Infinite Scale: New Scenarios for Research and Higher Education

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Does the new Architecture of Infinite Scale pay off?

3 Subjects with Use Cases



The Foundation back in 2012

The Foundation from 2012



User Data Manifesto
Everyone should be in control of their data

**The „Dropbox use Case“
became the EFSS-Market**

What does this mean:

1. User accounts
 - Tied to a single user identity
 - Fully managed in every instance
2. Data is tied to a user account
 - Necessary if we want to enforce personal quotas

What's new in Infinite Scale?

Subject 1:

User Accounts, Identities and Roles

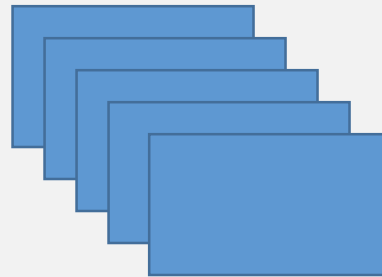
Customer Case

ByCS – the cloud service for Schools in Bavaria

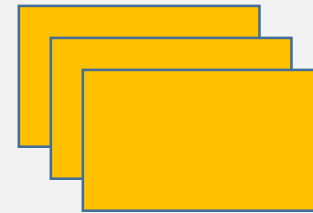


Designed for

- > 1 Million users
- > 3000 Schools with distinct instances



City
7 Schools



County
3 Schools



Other Operator
2 Schools

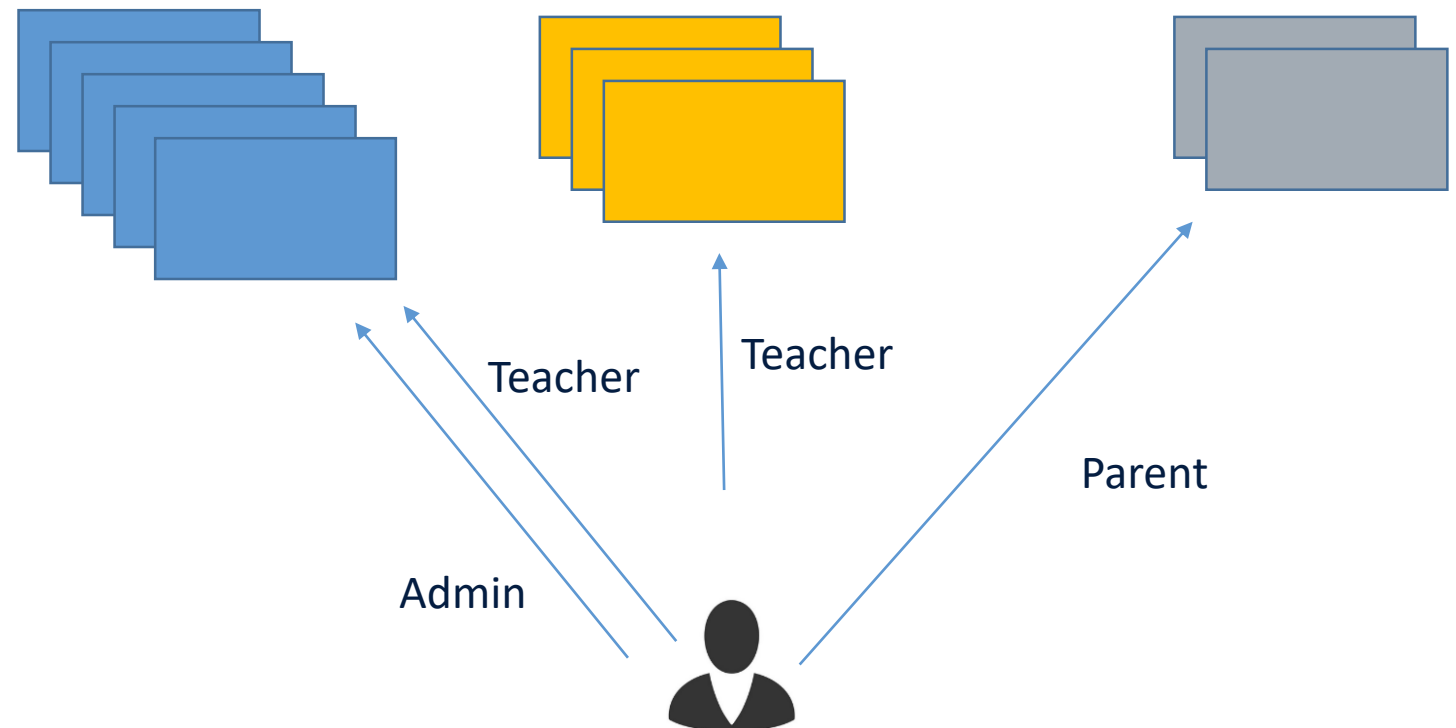
Central Deployment, Central IDM

What does this mean for User accounts, Identities and Roles?

Designed for

> 1 Million users
> 3000 Schools with
distinct instances

→ User defined Roles for
School Admins
School Directors
Teacher
Student
Parent



Subject 2:

Spaces – a new Data Entity

The personal Data



The screenshot shows the ownCloud web interface. At the top, there is a search bar with the text 'Suchbegriff eingeben'. Below the search bar, the 'Persönlich' space is selected in the left sidebar. The main area displays a table of folders with the following columns: Name, Geteilt, Größe, Bearbeitet, and Aktionen. The table contains four rows of folders: 'Korrespondenz' (664 kB, vor 1 Minute), 'Protokolle' (213 kB, vor 33 Sekunden), 'Sitzungen' (3,3 MB, vor 5 Sekunden), and 'Vorlagen' (127,9 MB, vor 41 Sekunden). Below the table, a summary line reads '4 Elemente mit 132,1 MB gesamt (0 Dateien, 4 Ordner)'. The interface also includes a '+ Neu' button and a 'Hochladen' button at the top of the main area.

<input type="checkbox"/> Name ↓	Geteilt	Größe	Bearbeitet	Aktionen
<input type="checkbox"/> Korrespondenz		664 kB	vor 1 Minute	
<input type="checkbox"/> Protokolle		213 kB	vor 33 Sekunden	
<input type="checkbox"/> Sitzungen		3,3 MB	vor 5 Sekunden	
<input type="checkbox"/> Vorlagen		127,9 MB	vor 41 Sekunden	

4 Elemente mit 132,1 MB gesamt (0 Dateien, 4 Ordner)

Shared Content



The screenshot shows the 'Shared Content' page in ownCloud. The left sidebar contains navigation options: 'Persönlich', 'Geteilt' (selected), 'Spaces', and 'Gelöschte Dateien'. The main content area is titled 'Ausstehende Freigaben (2)' and contains a table of pending shares.

<input type="checkbox"/> Name ↓	Status	Geteilt von	Geteilt mit	Geteilt am	Aktionen
<input type="checkbox"/> Documents	<input checked="" type="checkbox"/> Annehmen <input type="checkbox"/> Ablehnen	A	DZ	vor 1 Tag	⋮
<input type="checkbox"/> Education	<input checked="" type="checkbox"/> Annehmen <input type="checkbox"/> Ablehnen	A	DZ	vor 1 Tag	⋮

2 Elemente gesamt (0 Dateien, 2 Ordner)

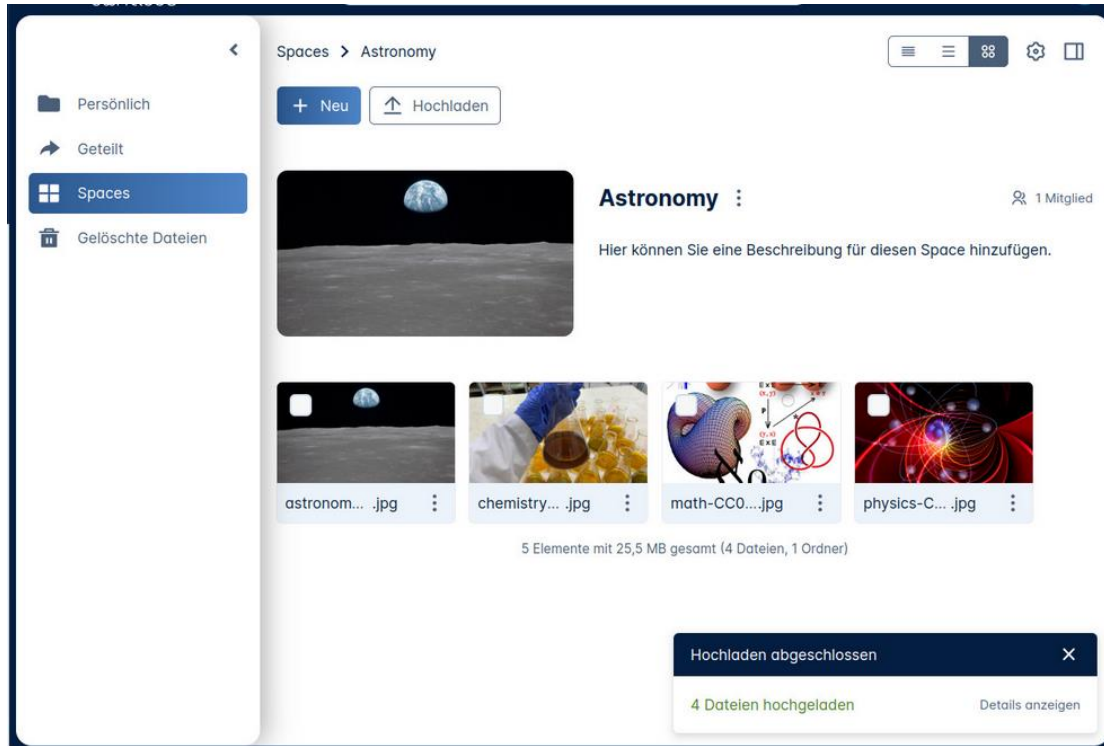
Angenommene Freigaben (0)

Sie arbeiten aktuell nicht an Elementen (Dateien oder Ordner) anderer Personen.

Abgelehnte Freigaben (0)

Sie haben bisher keine abgelehnten Freigaben.

Spaces

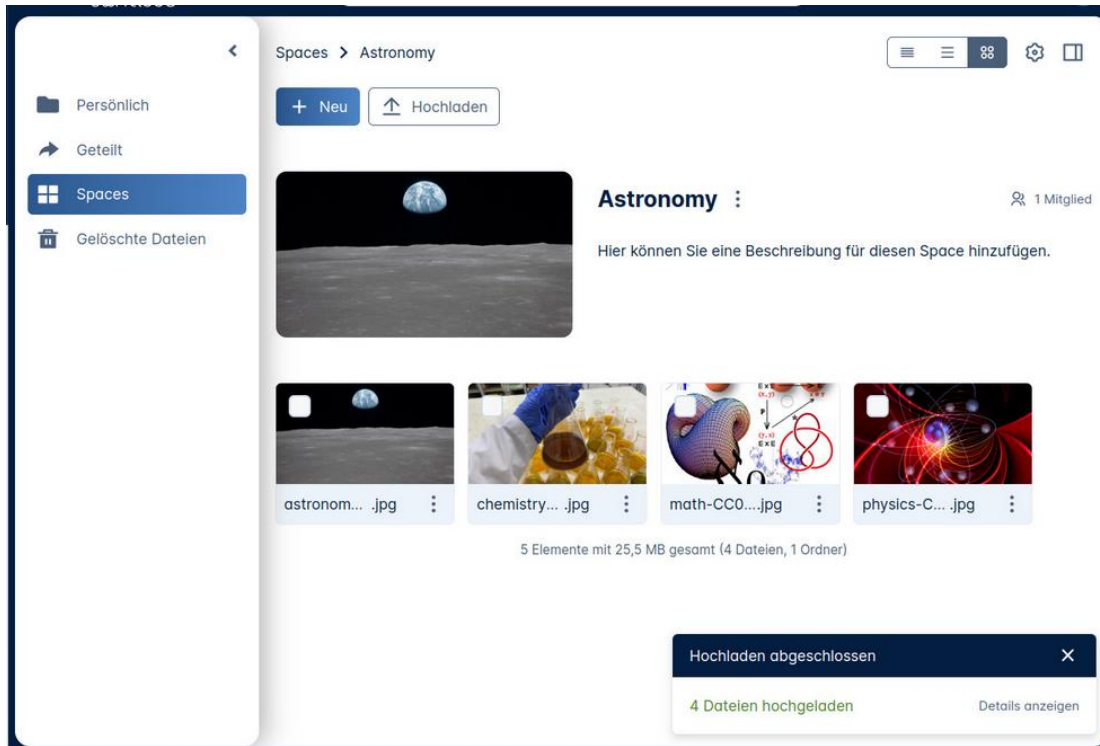


1. Data Structure as an entity
2. Not tied to a specific user account
3. Managed as an entity

Why? What is the thinking behind this?

- Data lives longer than user accounts

Spaces



Data ownership decoupled from User Identities
Easy Administration based on Roles
Roles can be „shared“, moved, handed over

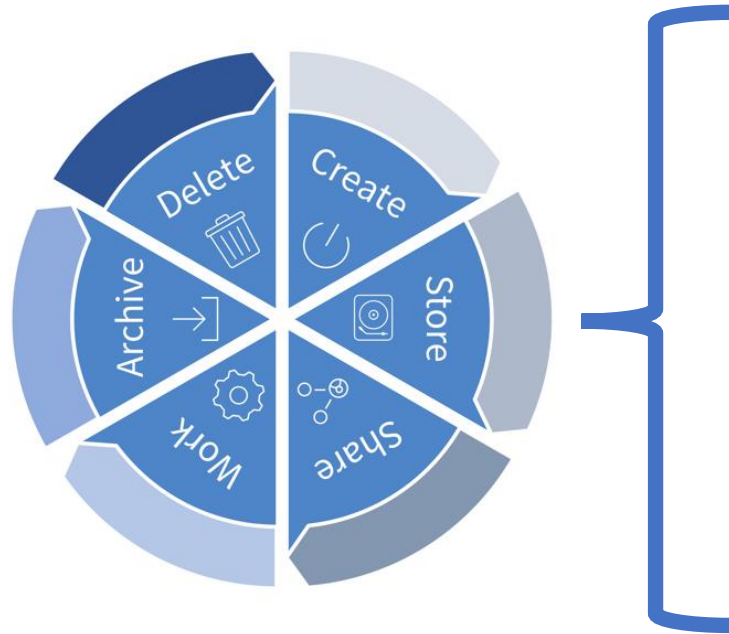
Typical use cases in higher Education:

- Structuring by subject, classes, tutorials, etc.
- Data is not „owned“ by an user
- Roles for Data Management and - Stewards

Subject 3:

Post-Processing on Data Upload

Loading Data into ownCloud

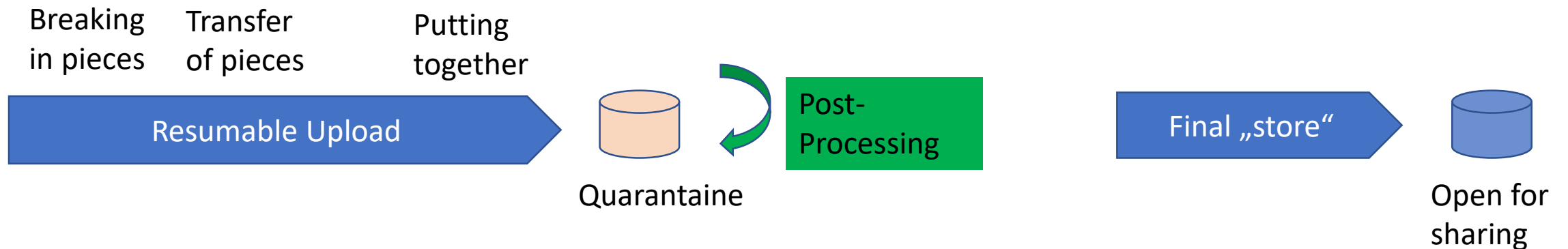


Q4 2022: Infinite Scale Beta and GA: Resumable uploads

- Making uploads stable and reliable for big files

Q2 2023: infinite Scale 3.0: Asynchronous Uploads

- Decoupling uploads from processing
- Introducing Post-Processing



Why Post Processing?

1. Usability and Collaboration

2. Cyber Security

3. Compliance

4. Search

Benefit - Classes

- Virus Scan is decoupled from upload
- Detect MIME types to avoid Scam
- Persistent Versioning
- Approval processes
- Metadata: Tags + Indexing
- Enrichment with custom meta data
- RBAC + ABAC procedures

Use Cases + Actions

Thank You!

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