

# Go Infinite Scale

How to Build an Open-Source School Cloud for 5 Million Users

**and be better than every  
hyper scaler**

# Introduction

## Nicholas Wilson

- Sales Engineering
- Solution Architect

## ownCloud

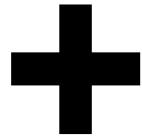
- Project launched 2010
- Infinite Scale GA 2022
- > 2.5 K Tenants
- > 1 M downloads
- backbone of Service Providers

## Kiteworks

- ownCloud + Kiteworks
- Security-First Company
- Empowers ownCloud
  - Security driven
  - Privacy driven
  - Compliance driven
  - 24/7 operations
  - 24/7 support

# Kiteworks Acquires ownCloud!

# Kiteworks



## **Expanded Product Range and Strengthened**

**Resources:** Experience a broader range of innovative products and enhanced support, providing a comprehensive solution for content sharing and collaboration.

**Secure and Compliant Data Management:** Unwavering commitment to data privacy and sovereignty, with consistent data privacy policies under Kiteworks and ownCloud's adherence to strict data protection standards.

**Continued Support and Innovation:** Ongoing support for ownCloud 10 and the development of Infinite Scale, leveraging financial stability and expanded capabilities post-merger to deliver robust, scalable, and future-proof solutions.

**Robust Growth and Strong Leadership:** The merger lays a foundation for significant growth and enhanced product development, backed by the continuity of ownCloud's senior management and the expanded resources of Kiteworks.

# Numbers

## Bavaria

- 6.2 K schools
- 1.6 M pupils
- 116 K teachers
- 2 M parents
- 13 M inhabitants
- 4.7 M named Users

## Germany

- 32 K schools
- 10.7 M pupils
- 820 K teachers
- 30 M parents
- 84.6 M inhabitants
- 40 M named users

## EU

- 200 K Schools
- 73.9 M pupils
- 5.2 M teachers
- 300 M parents
- 447 M inhabitants
- 350 M named users

# Goals

- Data sovereignty
- Most Secure (BSI, GDPR)
- Digital accessibility
- Available, Stable, Reliable, Invincible
- Maximum Integration
- Scale-out without limits
- Updates without downtime
- Productive after 32 weeks

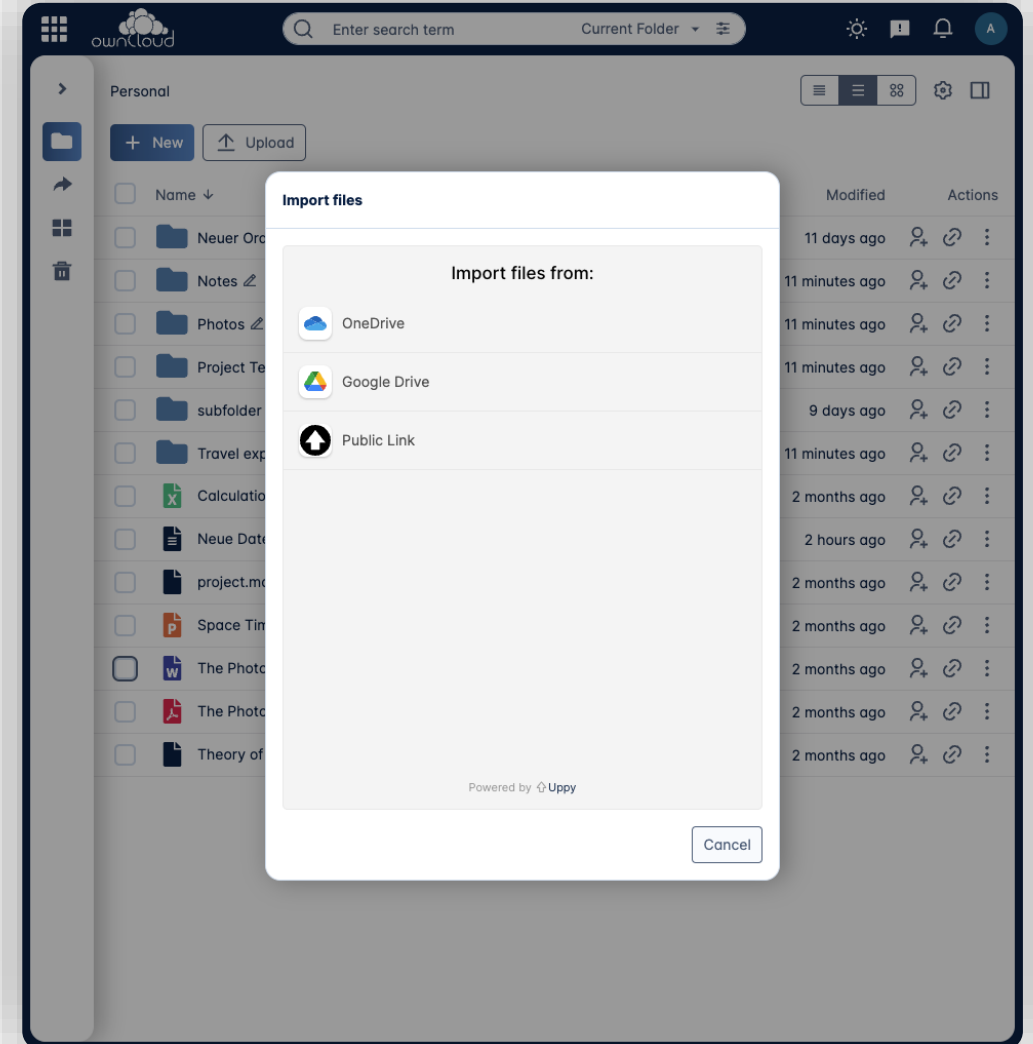


# Why ownCloud Infinite Scale?

# Reason # 1: Liberate User Data

## Sources:

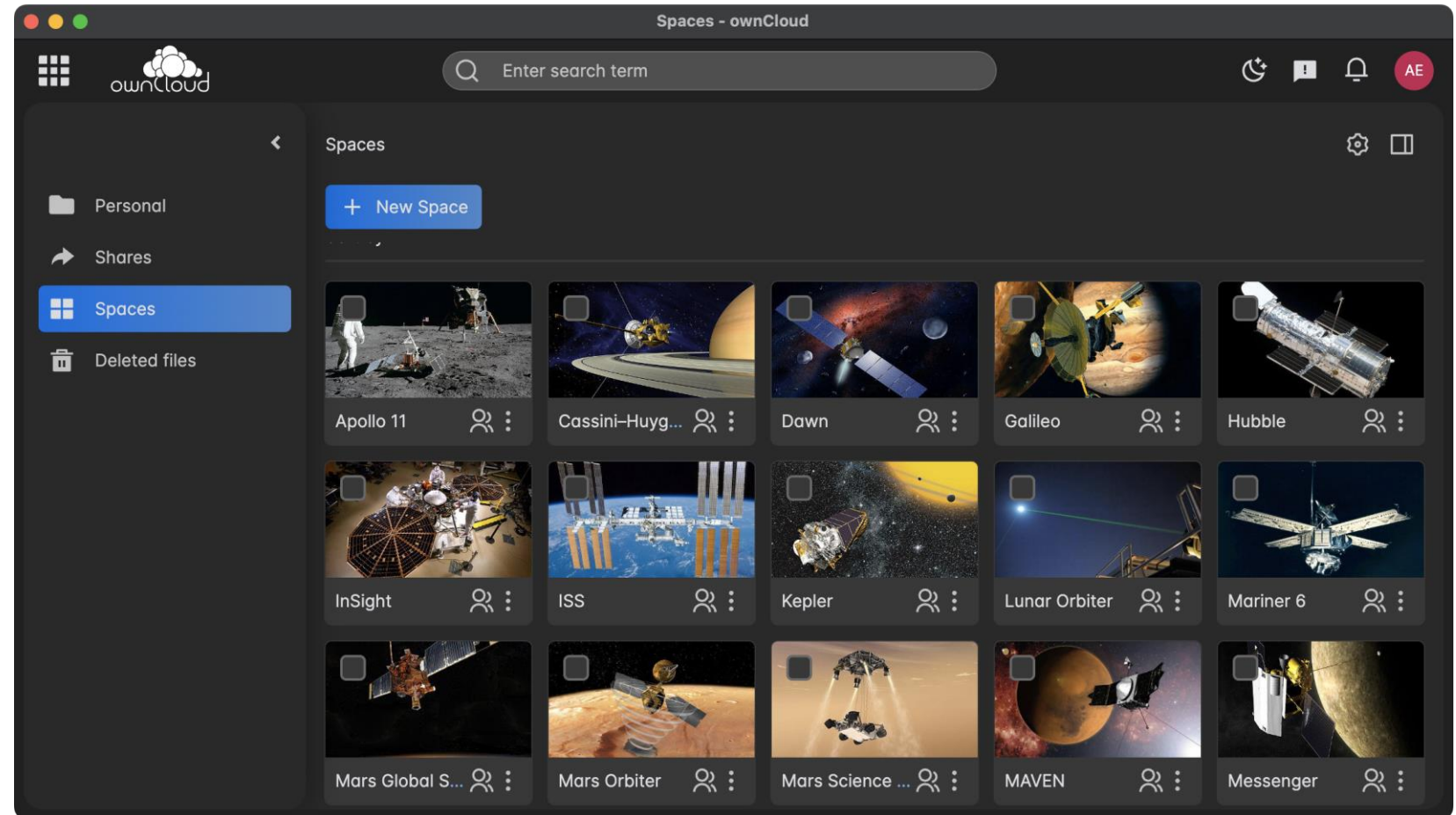
- OneDrive
- Google Drive
- ownCloud 10 & Nextcloud
- many more

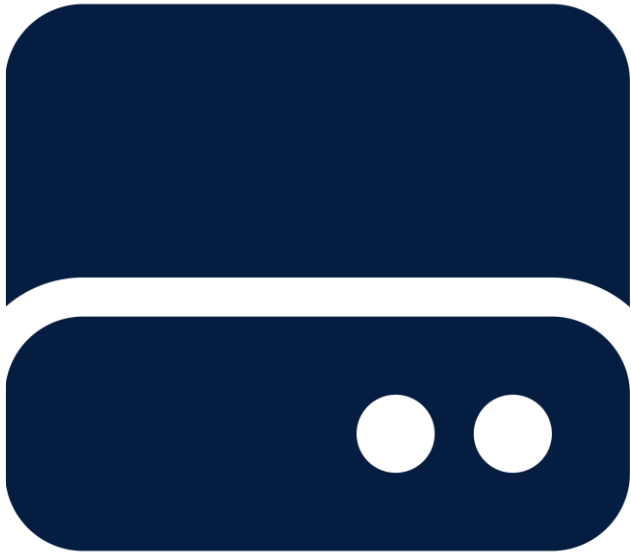




# Reason # 2: Spaces

- Avoids data-silos
- Self-service
- Quota Management





## Reason # 3: No Split Brain

The advantage of one source of truth vs.  
the disadvantage of file storage and database with  
meta data

# Applications

- ownCloud Infinite Scale
- ONLYOFFICE Document Server



**ONLYOFFICE**

# Infrastructure



4 Data Centers  
in Germany

Two S3  
Locations

4 Meta-Data  
Locations

240 k8s  
Clusters

52 \* 2 PB S3  
Storage

60.000 vCPUs  
& 120.000 GB  
vRAM

# plusserver

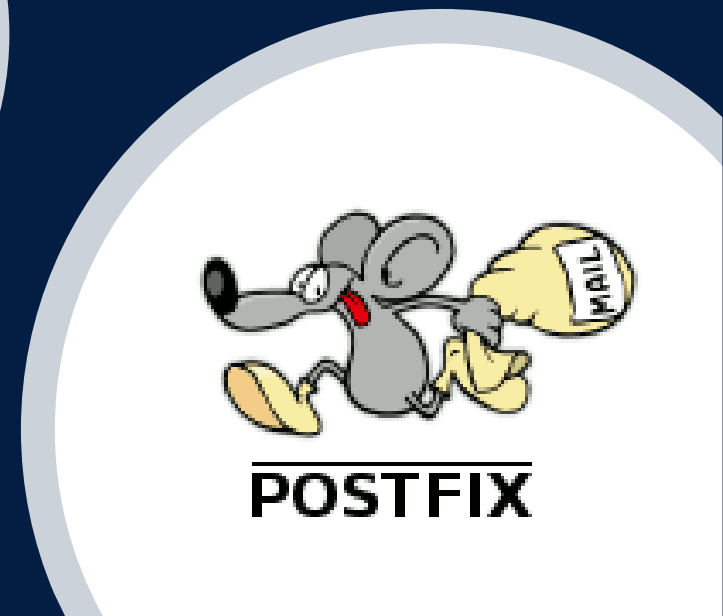


# Reason # 4: iPad App

Just try it out yourself

# Software

- Full text Search and OCR
- Anti Virus Scanning
- SMTP Relay
- IDP/IDM



# Monitoring

- Grafana
- Prometheus
- Mimir
- Tempo
- Loki



# Operations

- NGINX
- Ansible with AWX
- sonatype OCI
- HELM





# The Universe

- Keycloak SSO
- Matrix Messenger by Sdui
- Geogebra Notes
- moodle
- visavid



# Load & Performance Testing

- How to survive a lockdown?
- test-2-fail vs. test-2-pass
- 95% requests within 2 seconds
- Simultaneous UX-Testing
- Initial project and ongoing testing



**Surprises:**

**Agile software in GERMAN Government**

**Primary contractor realities**

**Kubernetes can saturate datacentres**

**Technological issues at scale**

**Errors are exponential**

**One last word:  
I hear rumors...**

# Kiteworks Commitment to Opensource



**Open-Source Foundation:** Core of ownCloud's success lies in its open-source offering.

**Collaboration with Kiteworks:** Commitment to continued investment in open-source software and communities.

**Five-Year Plan:** Pledge to sustain open-source innovation for at least five years.

**Bolstering Security:** Kiteworks to strengthen the security framework in open-source initiatives.

 [hello@ownCloud.com](mailto:hello@ownCloud.com)

 [#ocis:matrix.org](https://matrix.org/#ocis:matrix.org)

 <https://github.com/owncloud/ocis>

 <https://doc.owncloud.com/ocis/next/>

 <https://owncloud.dev/>

