

Go Infinite Scale

**Developing a Superior Open-Source School Cloud for 5 Million Users:
Outperforming Hyperscalers**

Introduction

David Walter

- Project Lead
- CXO of ownCloud
- CISO of ownCloud
- DPO of ownCloud
- ownCloud OSS User & Admin since 2014

ownCloud

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

Project 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



Infrastructure (goals)



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



Infrastructure (today)



3 Environments

Kubernetes Version: 1.28.7

Worker Groups Image flatcar 3815.2.0



142 production clusters

30 schools per cluster + central services (IDM, Observability, ...)



3.268 production nodes

SCS-8V:16:100 - maximum: 100 - minimum: 1 - maxSurge: 5

Idle Usage: 0,42 vCPU (avg.) & 2,26 GB vRAM (avg.)



252.494 production pods

2.355 pods per cluster

80 – 110 pods per node



35.315 production PVCs

331 PVCs per cluster

Applications

- ownCloud Infinite Scale
- ONLYOFFICE Document Server



ONLYOFFICE

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



Monitoring

- Grafana
- Prometheus
- Mimir
- Tempo
- Loki



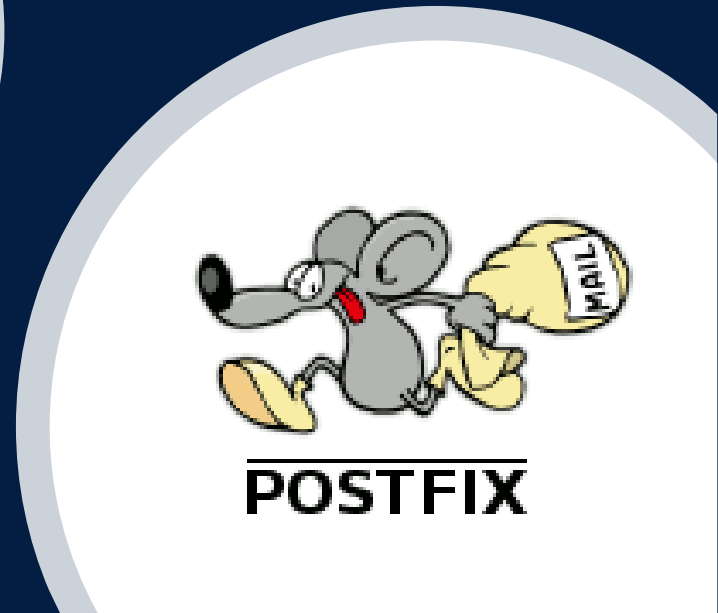
Operations

- NGINX
- Ansible with AWX
- sonatype OCI
- HELM



Software

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



The Universe

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



Integrators

- Univention UCS
- Rainbow Alcatel-Lucent
- Open-Xchange
- Microsoft Office Online Server / M365

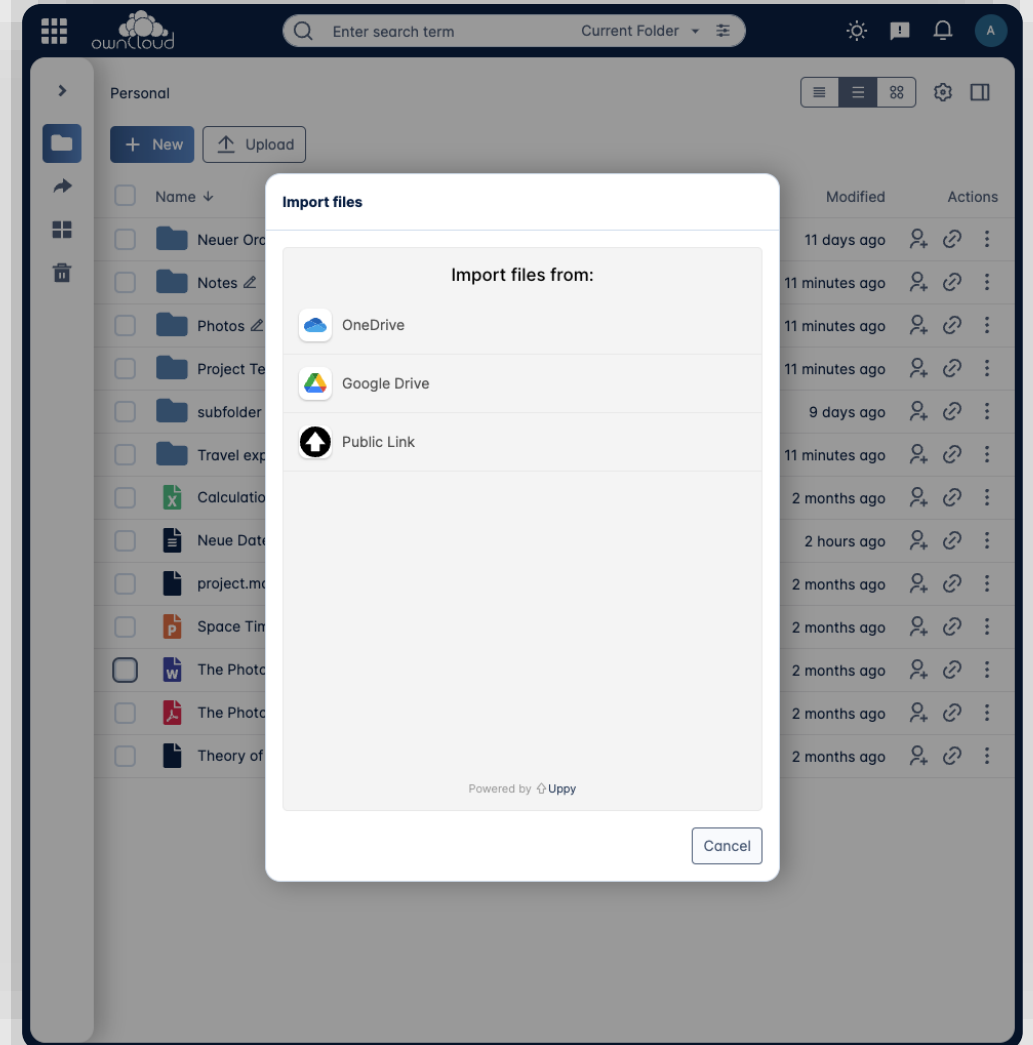


Why ownCloud Infinite Scale?

Reason # 1: Liberate User Data

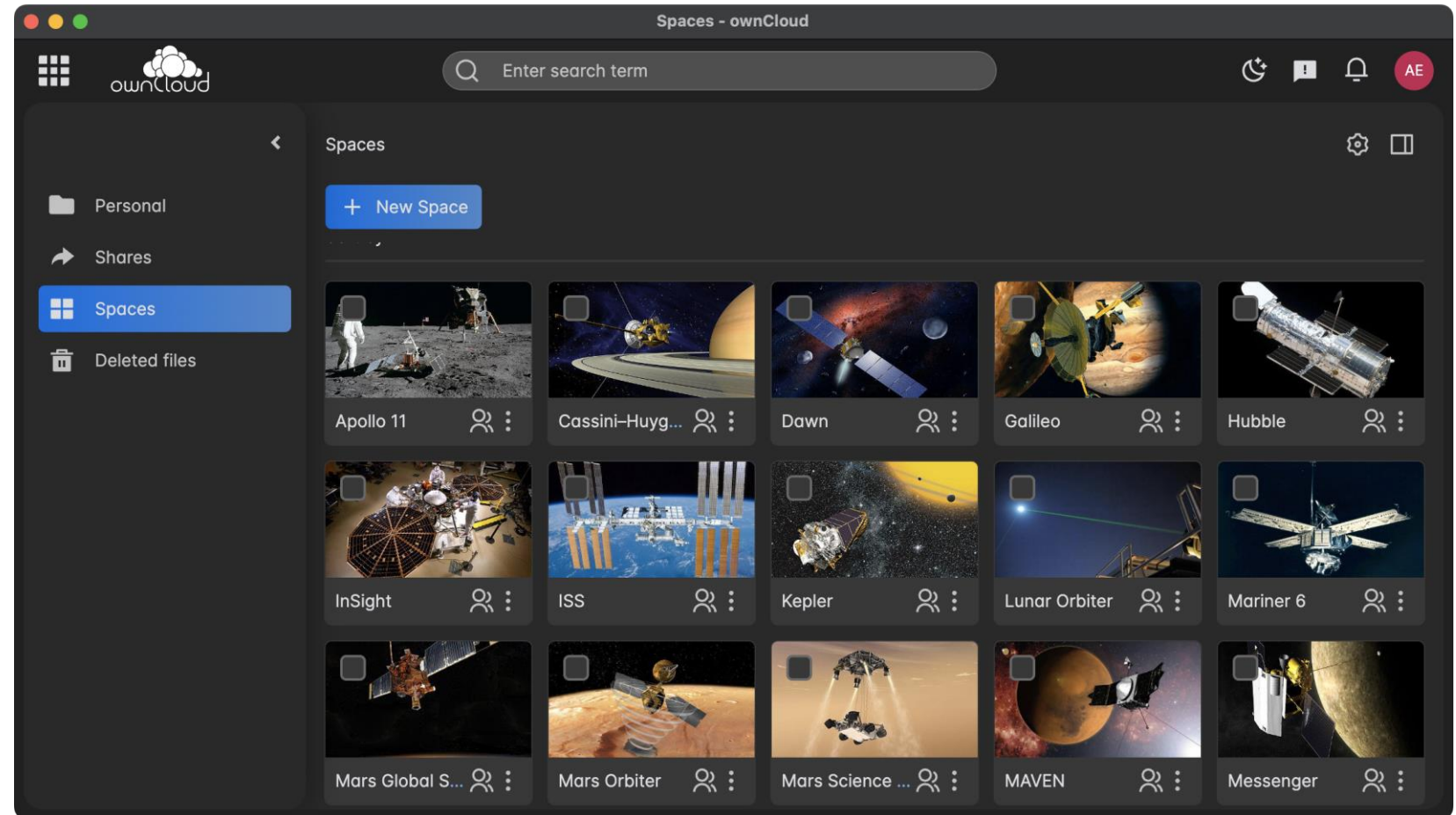
Sources:

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



Reason # 2: Spaces

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





Reason # 3: No Split Brain

Single source-of-truth vs. segregated file storage and database

Reason # 4: iPad App

Just try it out yourself

One last word:
I hear rumors...

... fact is:
ownCloud is **the**
Open-Source-Brand of
Kiteworks. Full Stop!



Kiteworks' Commitment to Open-Source



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

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

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

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

 <https://owncloud.dev/>

