tubCloud
Coffee Lectures on Research Management at UniSysCat

Dr. Thomas Hildmann | ZECM | September, 2023
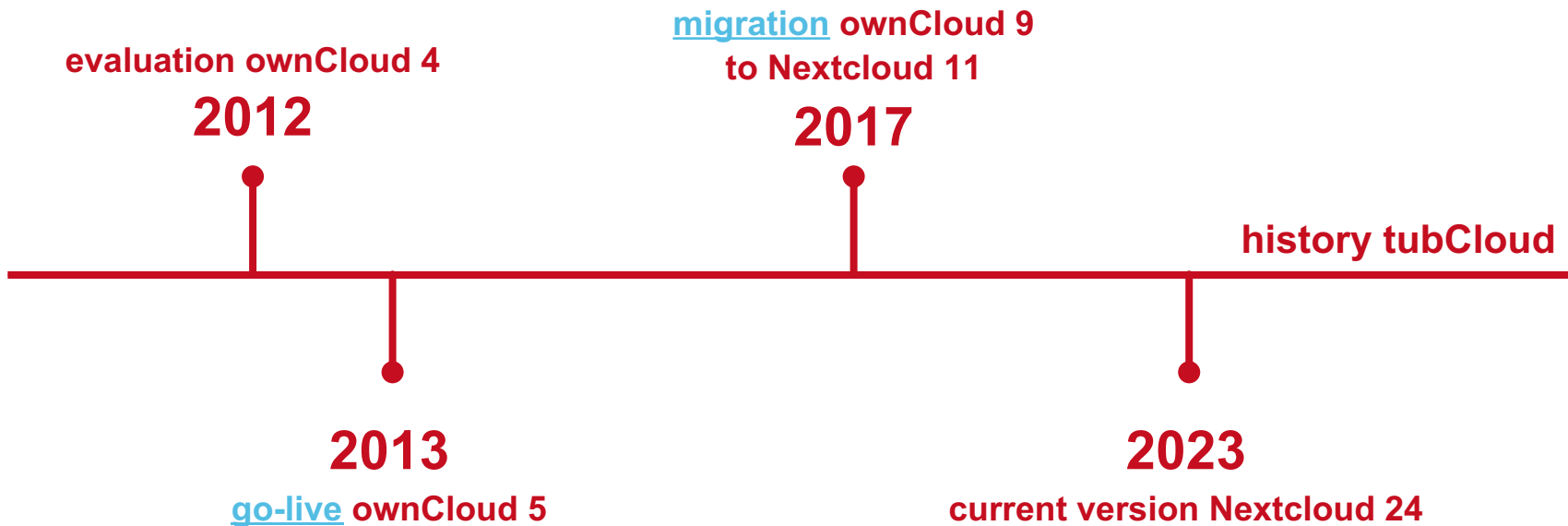
Agenda

1. The past of tubCloud

2. The presence of tubCloud

3. The future of tubCloud

Agenda

1. The past of tubCloud

2. The presence of tubCloud

   - Facts about tubCloud today

   - The Apps and use-cases

   - Technical Architecture

   - Best of FAQ

3. The future of tubCloud

   - FAIR Principals

   - Roadma

The history of tubCloud

evaluation ownCloud 4
2012

**migration ownCloud 9
to Nextcloud 11**
2017

history tubCloud

2013
go-live ownCloud 5

2023
current version Nextcloud 24

tubCloud today

Statistics tubCloud

32,549 users

   4,926 active (24h)

   2,701 (1h)

   2,076 (5 mins)

365,211,984 Files
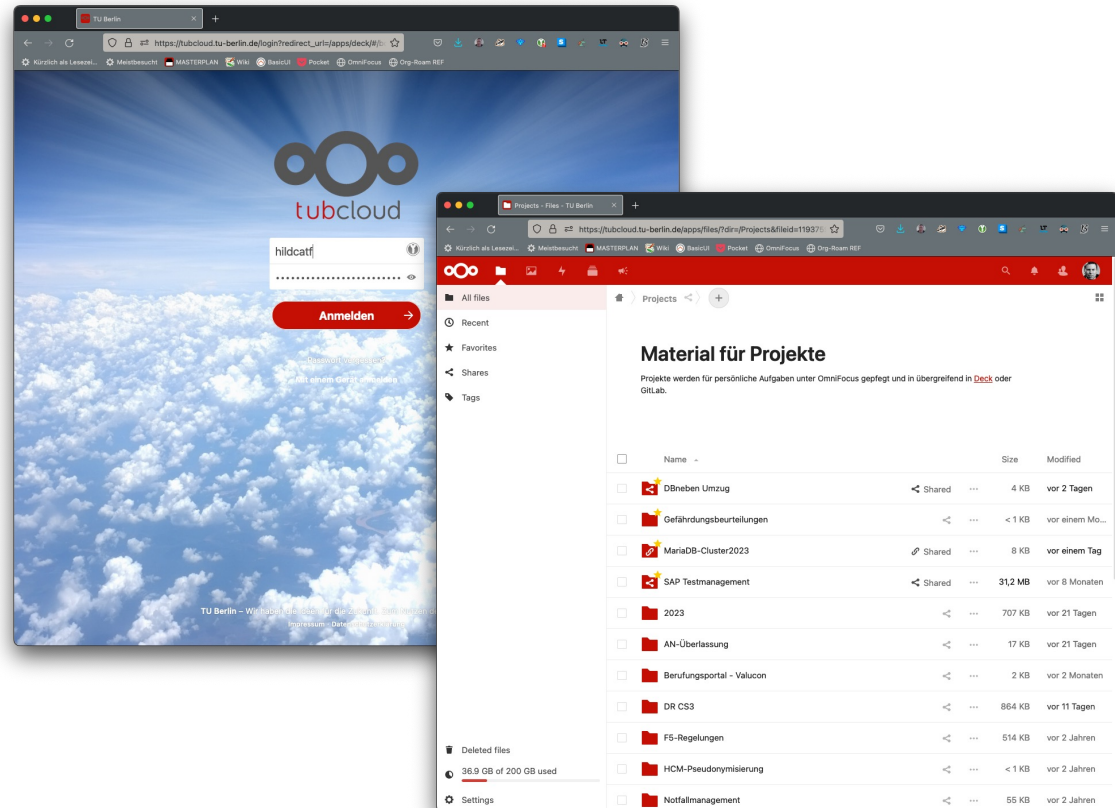
   using **279 TB**

   average ~0,8 MB per file

Quota tubCloud

   students: 50 GB
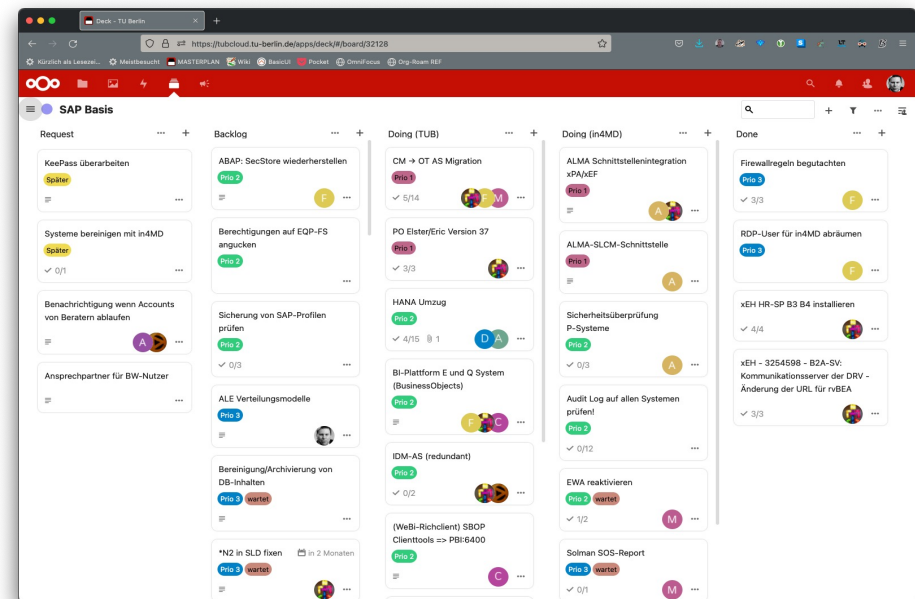   staff: 200 GB
   units: 500 GB

The Apps (Plugins and Extensions)

Apps and Usecases tubCloud

- **Announcement Center**

    for maintenance windows, news, known issues

- **Deck**

    simple project planning, team meetings

- **Collabora**

    collaborative office suite

- **Markdown Editor**

    for nearly everything

And many useful apps like video/audio player,

    versions, deleted files, monitoring, …

tubCloud use-cases (how can tubCloud help you?)

Files (sync and shore core)

- – Store and Access from anywhere
  - • Webbrowser
  - • Smartphone/Tablet
  - • No more USB sticks
- – Synchronize two ore more devices
- – Work together / Share files
  - • Teamwork
  - • Send big files to research partners
  - • Single source of truth
- – „Living" E-Mail attachments
  - • Send a link, not a file
  - • Save mail quota
  - • Edit files after you sent it

Deck (Kanban style project management)

- – Track tasks together
- – Visualize workload

Office (aka Collabora)

- – Complete office suite
  - • Text
  - • Presentation
  - • Spreadsheet
- – Work together
  - • Synchronous
  - • Online
  - • No more merging parts etc.
  - • No installation

WebDAV Apps

- – Sync Apps like
  - • Joplin (Notetaking, Zettelkasten)
  - • OmniFocus (GTD, Taskmanager)
  - • KeePass (password manager)
- – Access files without syncing
  - • Mount as filesystem

Technical architecture
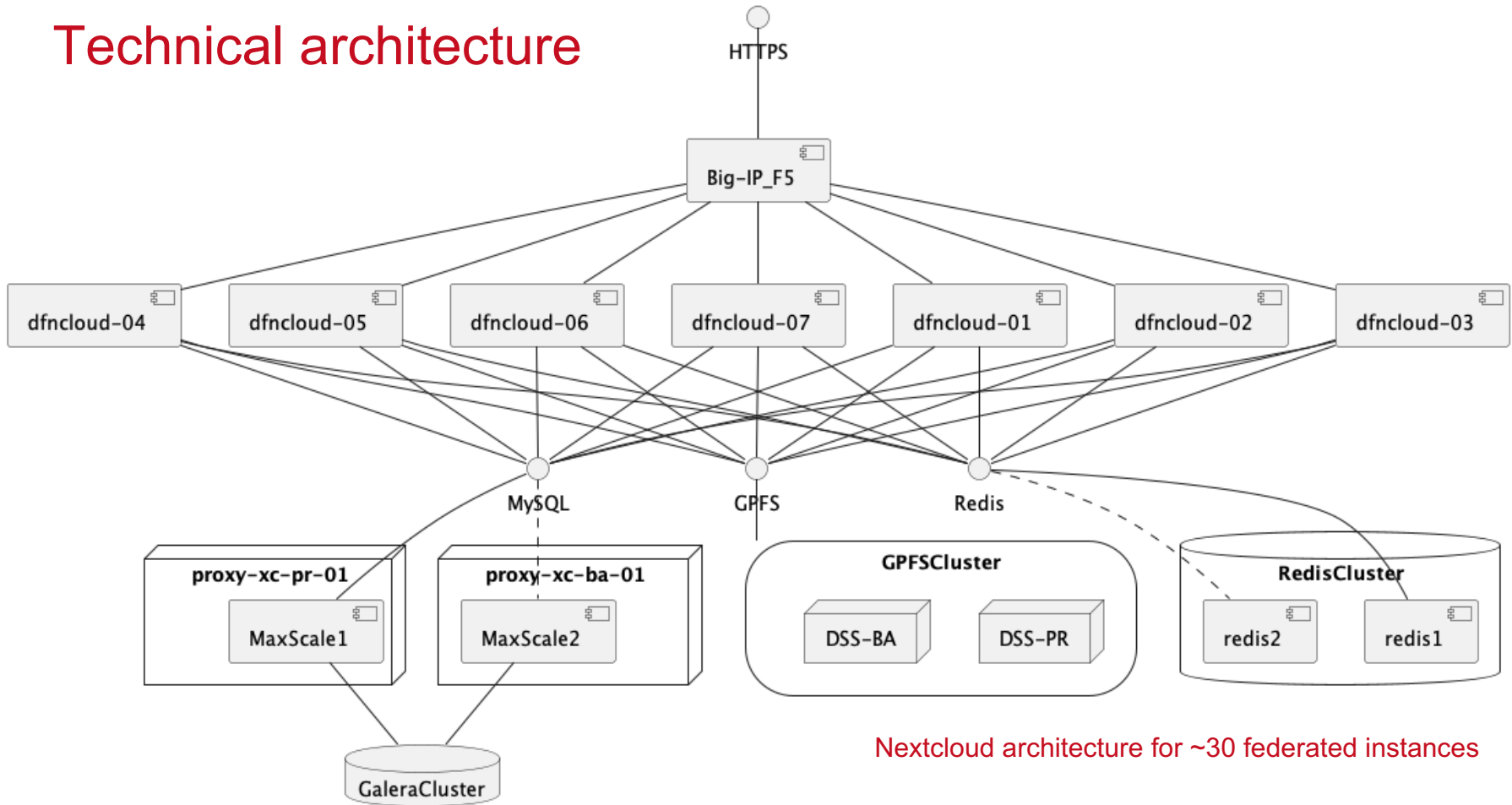
Nextcloud architecture for ~30 federated instances

Best of FAQ

- **Q: Do you make backups?**
  A: Yes. Files are saved in a cluster-filesystem (today: GPFS, migrating to CEPH) mirrored in two data-centers. We make filesystem-based snapshots and we are writing all files to tape (tape library). **BUT**... This is **for desaster recovery, only**.

- **Q: What about encryption?**
  A: Network-Traffic is encrypted on transite (https, TLS). **End-to-End-Encryption is planed** for next release. **BUT**... **Support isn't possible** on encrypted folders.

- **Q: How do I share files?**
  A: Click on „share". BUT... For your security and comport use this **priority list** if possible:

  1. directly share internally by using the e-mail adress or group-name.
  2. use a federated id to share from nextcloud to xcloud
  3. use a shared link with password an expire date

  Do not re-share, re-shared re-shares!

see more: https://www.tu.berlin/campusmanagement/angebot/tubcloud

Who is running this service?

- One full time administrator for tubCloud and 30 other Nextcloud instances

- Me as a part time administrator

- A second admin is planned

- A full time database admin for all MySQL and PostgreSQL like DBMS

- A second admin is planned

- Our first an second level support

- Support from Nextcloud

- The unix team

- The network team

Nextcloud and FAIR Principles

Cloud Storage Services for Synchronization and Sharing (CS3)

https://www.cs3community.org/

ScienceMesh is the Federated Science Cloud Mesh

https://sciencemesh.io/

Roadmap: tubCloud (Coming soon...)

- Upgrade to Nextcloud 25 / 26

- GPFS to CEPHFS

- new OpenStack Cluster

- Shibboleth integration with 2FA

Questions?

Time for less frequently asked questions