

Fakultät für Physik - Ludwig Maximilians Universität
Klaus Steinberger • Ralph Simmler

LMU Faculty of Physics Site Report





- Original Goal was: Backup for Laptops
 - Too much License Cost
 - Missing Support for Platforms
 - Risk of uncontrollable Storage Size grow
 - Cost Risks with Mobile Networks
- Owncloud appeared: Changed Goal to Sync&Share
 - A chance to get users away from Dropbox
 - Commercial Solution we looked into
 - Most didn't support all platforms (e.g. Linux)
 - High License Costs (4k Users planned)
 - Unacceptable outsourcing in many cases
 - Open Source → owncloud only viable solution at that time



● OwnCloud 4/5

- Test in closed group → not mature enough

● OwnCloud 6

- Test with friendly users
- Some update Quirks → LDAP wizard was a pain
- Moving data folder out of webserver space was a pain
 - Solved with SQL handwork

● OwnCloud 7

- 7.0.5 in production
- Runs stable → Desktop clients seems now stable

● Owncloud 8.2

- Running in test environment



● Hardwarebase

- Participating on our old DMZ HA Cluster
- 3 x Fujitsu RX300S3, 2 x Xeon L5420
- Storage Backend (new): Dual Head Nexenta NAS 80 TByte raw (ZFS)

● Production Environment

- Currently 360 User aktiv (330 from LDAP)
- SL6 VM, 4 virtual CPU, 8 GByte
- Database: Mysql ca. 1 GByte
- Storage: NFS (Nexenta) currently 370 GByte used

● Backup

- Snapshots on Filer / weekly Backup to LRZ Tivoli Server
- Daily mysldump to Tivoli via „adsmpipe“



● Software

- Operating System: Scientific Linux 6.7
- Standard SL 6.7 Apache / Php 5.3.3 (SL Version)
- Authentication/Authorization: LDAP with Novell Edirectory
 - LDAP Attribute for Quota
 - LDAP Attribute allows owncloud access

● Networking

- IPV4 / IPV6 Dual Stack

● Security Measures

- Firewall: Pfsense CARP Cluster in front of DMZ Zone
- Selinux activ on VM (audit2allow is your friend)
- Fail2ban



● Filesystem:

- Used 376 Gbytes
- ZFS Compression Factor 1,36 → 512 GBytes

● Database:

- Currently Mysql 5.1
- Overall Table Size: 440 MBytes
- Largest Table: oc_filecache 279 Mbytes
- Till yesterday
 - oc_activity was largest table with 1 GByte
 - Changed activity_expire_days down to 31 from default



● What are the „non LDAP“ users?

- Our meteorologists came with an owncloud instance they used in an measurement campaign in South America
- We integrated the instance by copying the files into our instance
- The Accounts (those not from LMU) were created locally



- Move to a new Hardware base
 - SL7 HA Cluster based on Fujitsu RX2540
- Move Database to separate VM (SL 7.1, mariadb)
- Move frontend to SL7.x VM
- Upgrade to 8.2 (requires SL7 because of PHP)
- If we need to scale → duplicate frontend



- LRZ has now deployed Powerfolder for Munich Universities
- We stay with ownCloud
 - LRZ Solution has no Groups → we need them for group based sharing
 - Calendar application is highly wanted by Users (mostly the Apple users)
 - Some other applications are liked by Users (e.g. Notes)
 - Possible Federation (HEP Users)



- Small deployment possible without too much effort
- Our Users are happy
- Very few helpdesk calls
- Questions ?