

NWU: Expanding Nextcloud to supply an ever-growing demand



Hans Erasmus
Junior Infrastructure Architect
North-West University
South Africa

A few stats

- 5906 FTE Staff
- 54725 Undergrads
- 13231 Post-grads
- 3 Campuses
- 28+ Million Files
- ~64TB of data

Arriving at Nextcloud: The use case

- Research data saved on external drives and personal computers
- Legislation (POPI, GDPR - even though we are not part of EU)
- Any file, anywhere, any time, any device
- Confusion, too many platforms, too many options



Arriving at Nextcloud cont.

- Small PoC with various open source solutions, one proprietary solution
- Limitations:
 - Non-compatible desktop clients (limited Linux support)
 - Lack of Openstack Swift support (and willingness to develop)
- Word-of-mouth about universities moving to Nextcloud.
Follow your peers, it reduces stress.

Why cloud at all?

- Accessibility: Restrictive measures creates angry users
- Growing size of data sets. "Hi mr IT guy, I have a 20TB data set, could you help me keep it safe? Or should I buy my own NAS?"
- *"A total amount of about 370 EB (Exabyte) data is stored in data centers presently and the global cloud storage capacity at the end of 2017 was up to 600 EB. These numbers are set to amplify the total capacity of 1.1 ZB (Zettabyte) in 2018 which nearly doubles the storage available in 2017 according to a survey by Cisco. Sharing of families and friend's storage is going to now become a common practice in 2018 and will be used in place of applications like Google Drive and Dropbox."*

<https://www.esds.co.in/blog/cloud-computing-trends-driving-growth-2018/>

Why not just public cloud?



- <https://www.itweb.co.za/content/G98YdqLxZZNqX2PD>
- Legislation: What happens to research funding if there is a GDPR breach?

Changing the way a user (grandma?) works



Changing from Collabora to OnlyOffice

- Collaboration became a requirement after a massive restructuring process
- Change happens gradually, you need to create a familiar 'feel', or users will hate you
- New workflows sprouted as a result of the restructuring
- Collaboration limitations due to legislation
- Nextcloud + OnlyOffice grants researchers in the NWU a wealth of options.
- Platform also grants promoters/supervisors and students a chance of working on studies legally, safely but most importantly, collaboratively

Possibilities in the future

- Few maybes
 - Talk?
 - Federating with other compliant universities globally if the need arises
- Tighter integration with possible move of other systems to Microsoft-based products like Outlook
- A future with Openstack, SWIFT and CEPH
- Elastic Search integration for full-text searches (On hold for now)