



File serving challenges at Ghent University

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Goals of this presentation

- Share challenges we came across
- Share our solutions
- Learn about different solutions
- Align our plans with Samba's future

Ghent University

- About 45.000 users
 - ▶ 38.000 students
 - ▶ more than 7.000 employees

ICT Department

- User Support
 - ▶ runs Windows PCs and AD
- Infrastructure
 - ▶ runs file serving (mainly Samba)
- Applications
- Educational Technology

The *good* old days

- Samba 2 and early Samba 3
- Mostly Solaris
- Standalone servers
- Generated smbpasswd files
 - ▶ *Just works*

Challenges with old setup

- Scalability for growing amounts of data
- Generated pwd files cause delays

Migration to (proprietary) NAS

- CIFS with Samba 3.0 DC
 - ▶ replace share with DFS link
 - ▶ account info in LDAP (idmap hack)
- NFS + samba
 - ▶ replace share with symlink to nfs mount

Challenges with proprietary NAS

- Expensive
- Slow
- Unstable
- Inflexible

Back to *sanity*

- Debian Samba 3.2 + nfs * for homedrives
- Samba 3.4 on zfs
 - ▶ patch for shadow_copy (snapshots)
 - ▶ map untrusted to domain

Challenges with ZFS

- Solaris

Exploit

- Upgraded everything to Samba 3.6
- Samba 3.0 domain
 - ▶ Move Samba servers to standalone *
 - ▶ Upgrade domain controllers
 - ▶ idmap nss

Current plans

- Move away from Solaris
- Move away from NFS NAS
- GPFS + ctdb
- Keep looking for a *good* filesystem

The search for a good filesystem

- Snapshots
- (some) scalability
- User quota

Migrations

- Changing landscape: continuous migrations
- Samba as frontend provides maximum flexibility
 - DFS links
 - Migrations on unix server

User management

- user and password sync from central db to AD
- Samba and Windows run separate
- Used to be quite easy, now strange use case?

Discussion

- What filesystems do you use?
- How are users managed/synced?
- How do you migrate shares?

Thanks to the Samba Team!