SWITCHdrive
Experience with running Owncloud on top of Openstack/Ceph

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• Openstack (Mitaka)
• Ceph (Hammer)

• 118 servers
• 4760 logical cores
• 24.5 TiB RAM
• 2.3 PB storage

Paid service since 1.1.2016
• ownCloud 8.1  
  (upgrade 9.0 in March)  
• Users: 24’000  
• Quota: 50 GiB / user  
• Number of files: 62M  

• Storage: 61 TiB  
  – 50 TiB live data  
  –7.2 TiB trash  
  –2.2 TiB versions  
  –1.5 TiB …  

Paid service since 1.1.2016
Plan for 2016/7

From this architecture

To that
What we were lacking Jan 2016?
Current Status
DB Scale out

- Standard procedure: (weeks)
  - `occ db:convert-type`: is ok but very slow
- Custom migration: (4 hours)
  - Edit „converttype.php“: comment out „oc_filecache“
  - Run `occ db:convert-type` -> copies schema and all other tables
  - Manually dump filecache table from postgres & load into mariadb
Performance (measured on load balancer)

- PostgreSQL master/slave
- Mariadb/Galera 3 nodes maxscale read/write split
DB-Scalability with Galera

theory

Number of db servers in cluster
3 (min with galera)
4
5

Max number of Users it could handle
Up to 22.3 K
Up to 23.2 K
? K
Sharding (March 2017)

In development together with Owncloud

https://drive.switch.ch/
Object Gateway

• oC 9.1 has multibucket support
• There are still some obstacles:
  – plan to upgrade to 9.0 in March. (not 9.1)
  – migration of existing users -> no out of box solution from oC
  – backup (maybe take etag from radosgw)
  – performance:
    • SWITCHdrive needs: 15 reads/s & 15 writes/s
    • We need to scale out radosgw first.