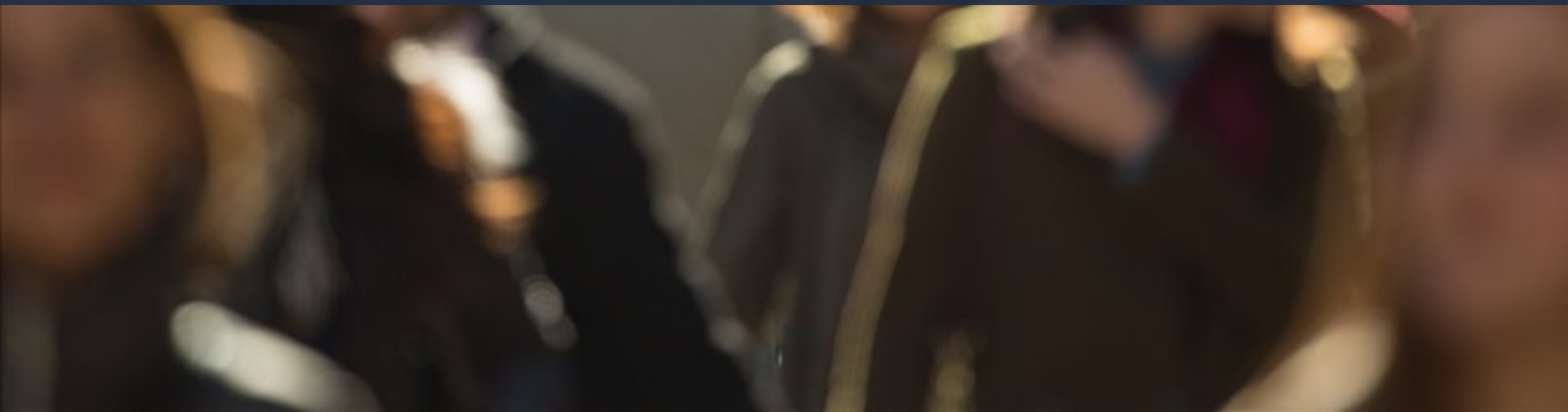
ownCloud @ SCALE14X

Jos Poortvliet

ownCloud community manager



About Me

Agenda

- Why
  - This privacy thing
- What
  - Introducing ownCloud
- How
  - ownCloud and Pie
    - Western Digital and ownCloud
  - Scaling ownCloud

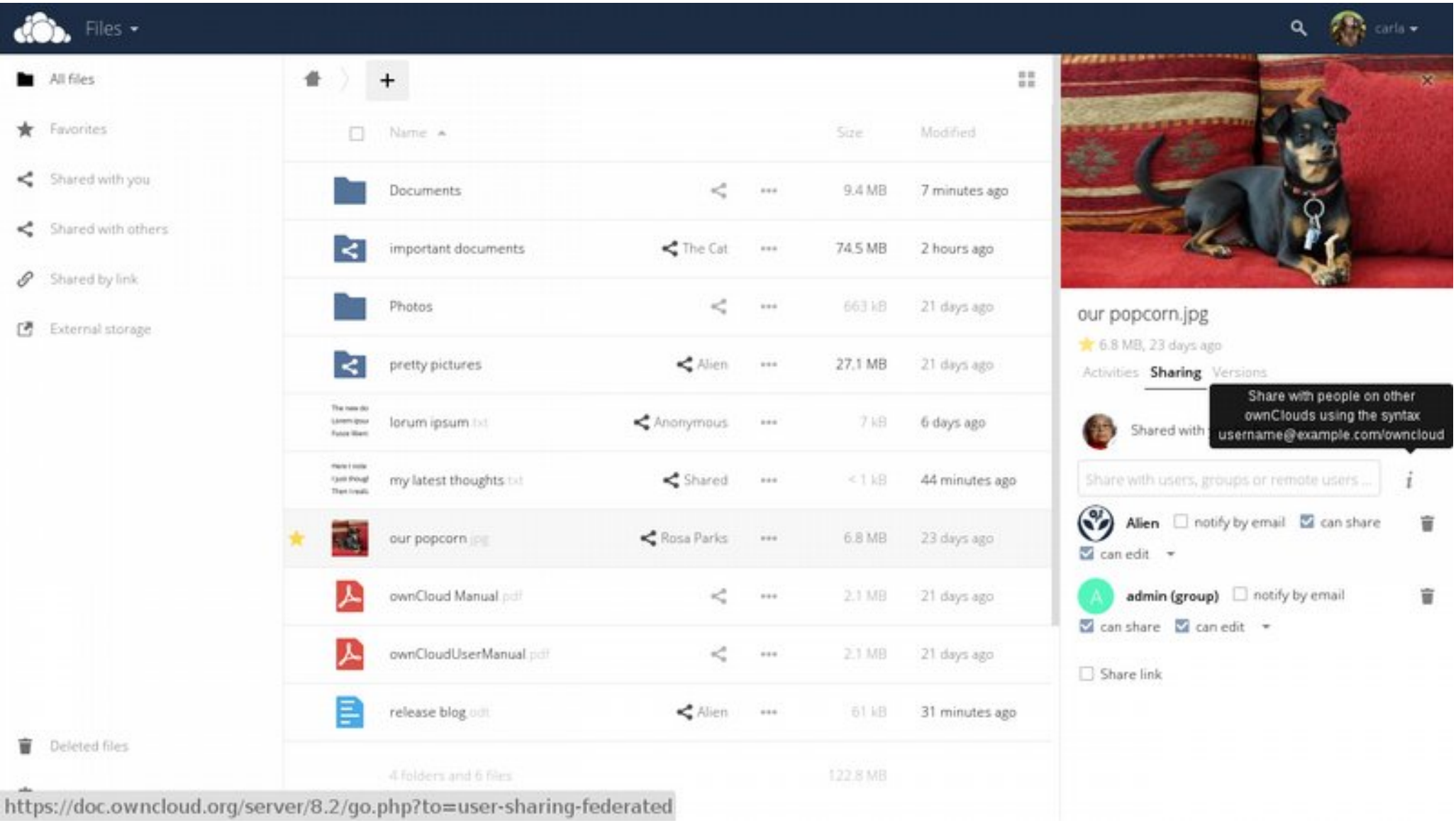
Why ownCloud?

Who is safe?

**"If privacy is outlawed,
only outlaws will have privacy."**

- from the PGP manual

Welcome to ownCloud!



About ownCloud

- File sync and share
- Open Source
- Easy to use
- Easy to install
- Easy to extend
- >8 million users!

Easy to use

- **Easy to deploy: LAMP**
- **Easy to improve on or inspect: PHP, JS, CSS**
- **All-platform access**
- **Scale from Raspberry Pi to CERN**

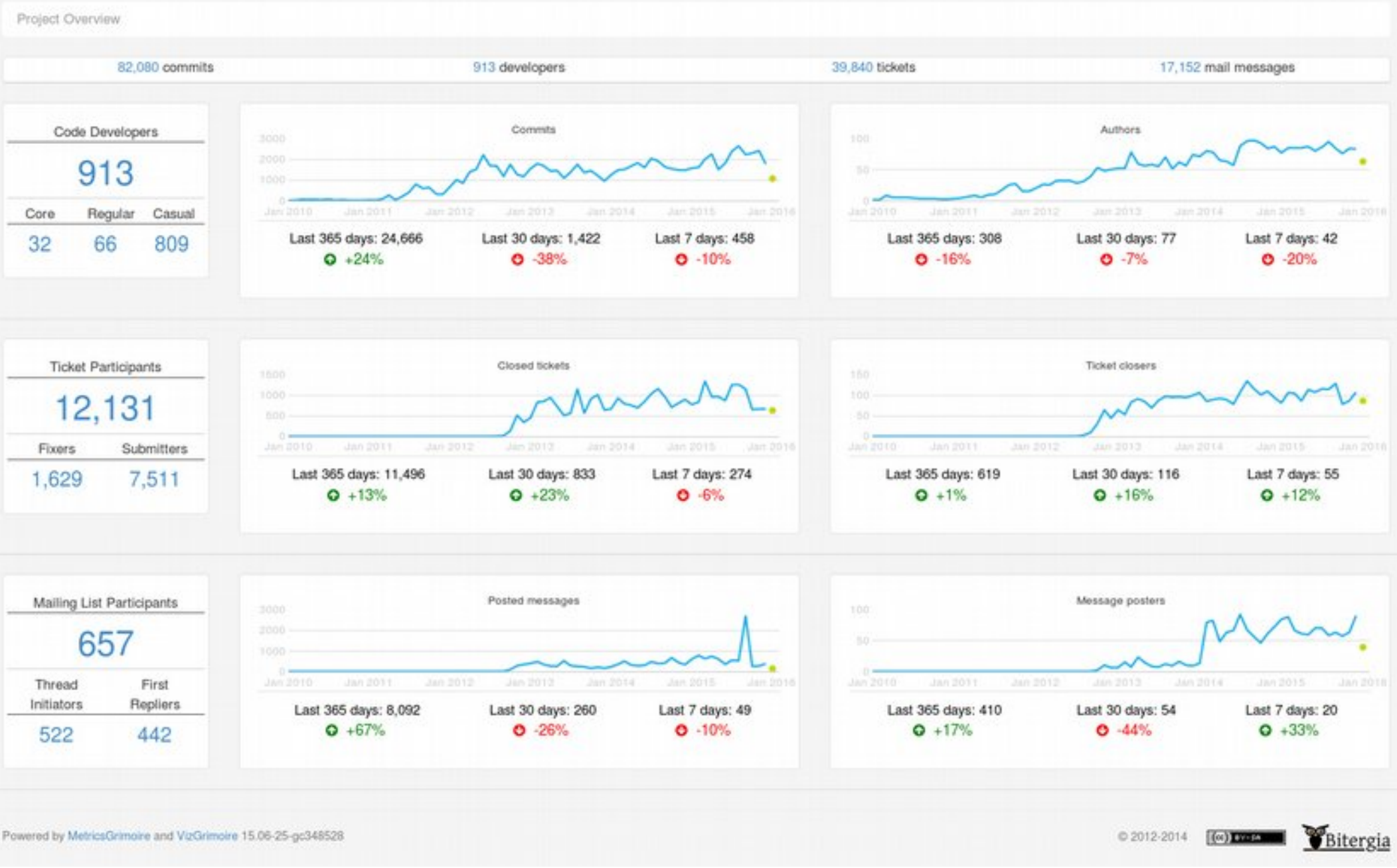
Extensible

ownCloud Apps

apps.owncloud.com

Yours

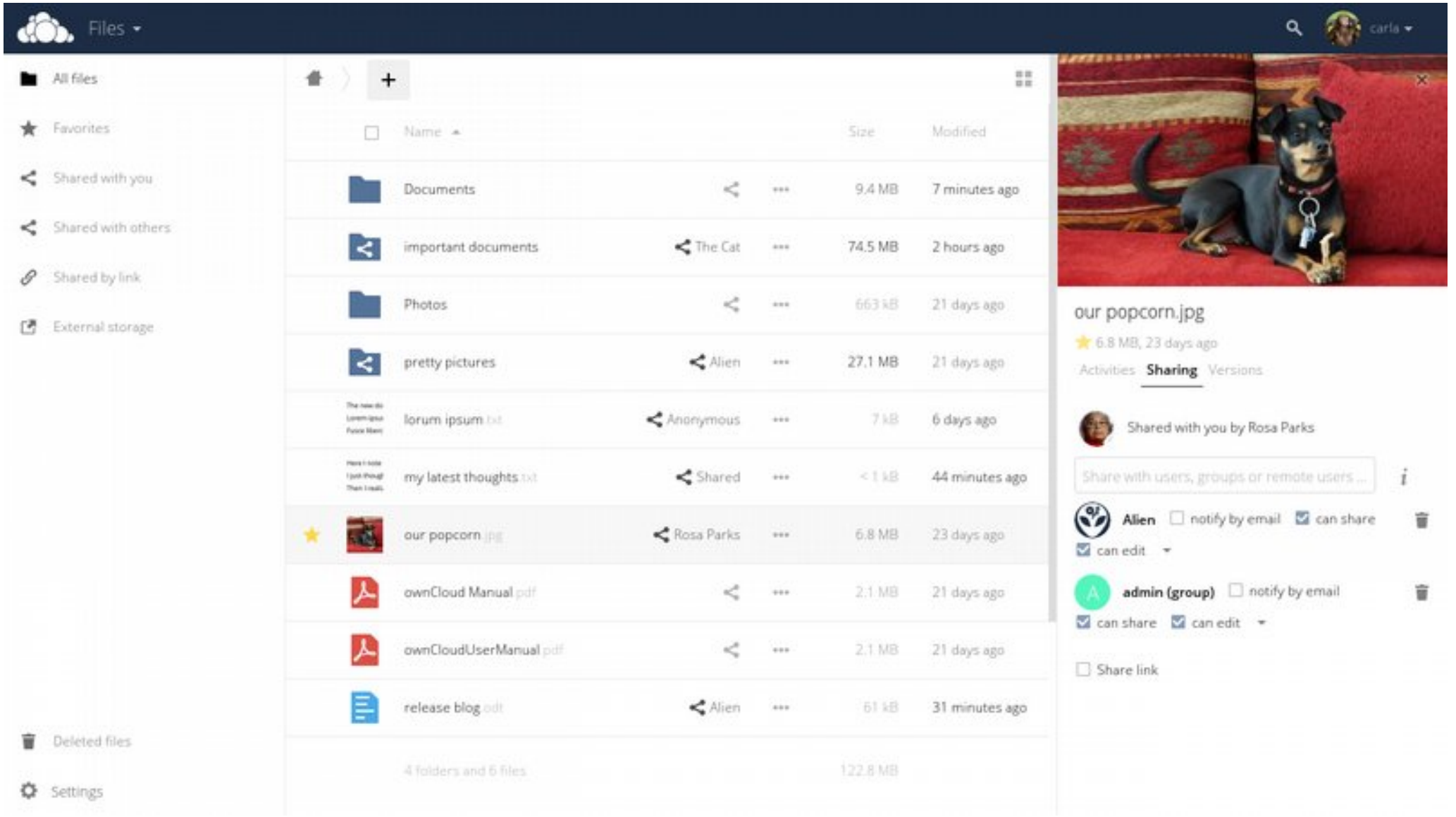
- **Open Source**
- **8 million users**
- **Since 2010**
  - 900+ contributors, >300 in last year
  - github.com/owncloud
  - ownCloud Inc. for enterprise



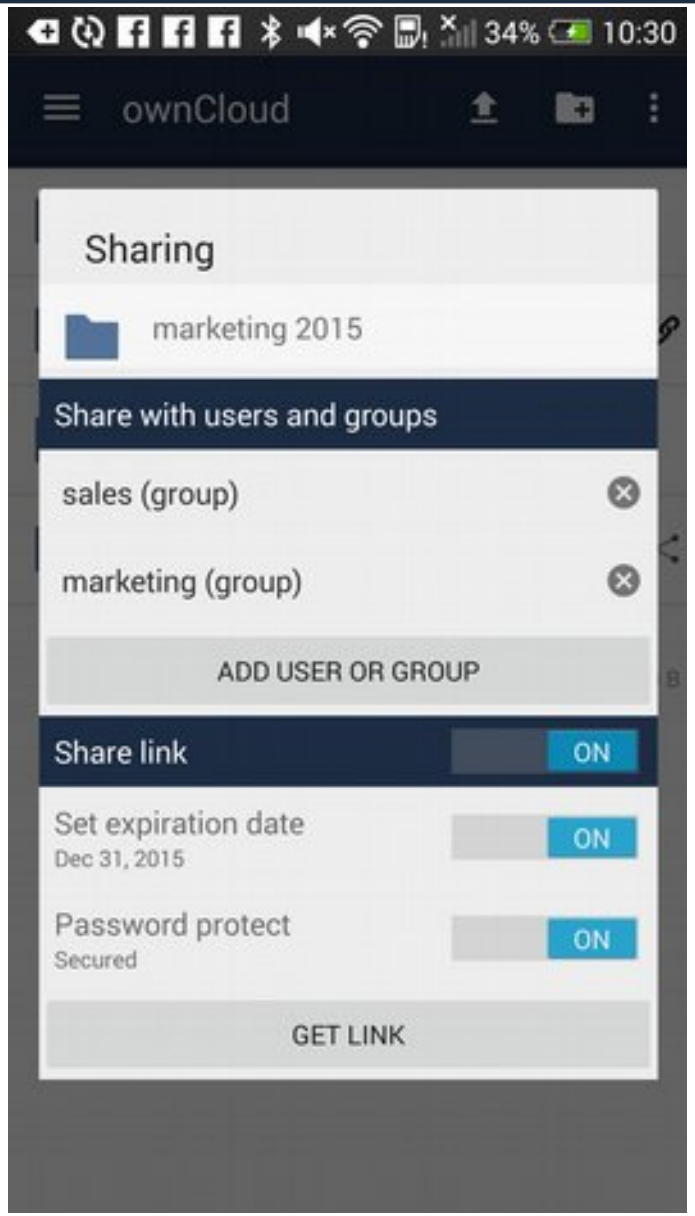
Stats from projects.bitergia.com/ownCloud

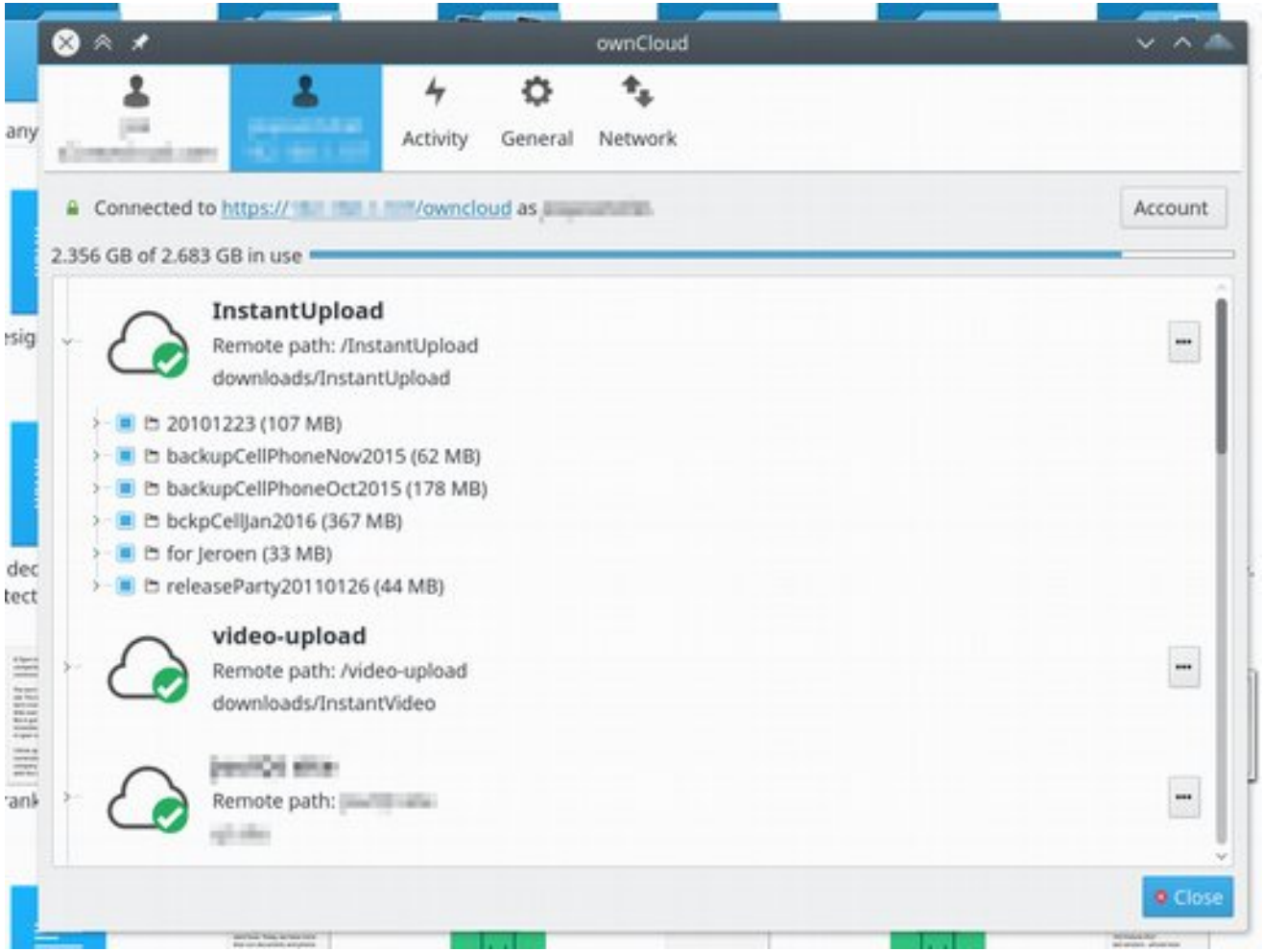
ownCloud -- For end users

Sharing

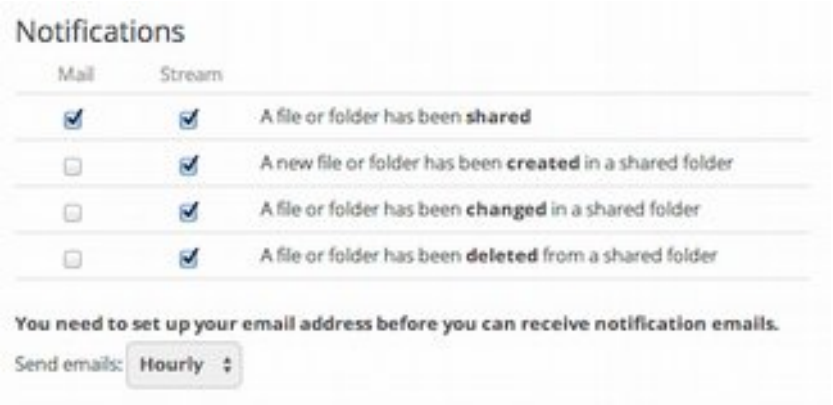

Files
carla
All files
Favorites
Shared with you
Shared with others
Shared by link
External storage
Deleted files
Settings
Name
Size
Modified
Documents
9.4 MB
7 minutes ago
important documents
The Cat
74.5 MB
2 hours ago
Photos
663 kB
21 days ago
pretty pictures
Alien
27.1 MB
21 days ago
lorum ipsum
Anonymous
7 kB
6 days ago
my latest thoughts
Shared
< 1 kB
44 minutes ago
our popcorn
Rosa Parks
6.8 MB
23 days ago
ownCloud Manual
2.1 MB
21 days ago
ownCloudUserManual
2.1 MB
21 days ago
release blog
Alien
61 kB
31 minutes ago
4 folders and 6 files
122.8 MB
our popcorn.jpg
6.8 MB, 23 days ago
Activities
Sharing
Versions
Shared with you by Rosa Parks
Share with users, groups or remote users ...
Alien
notify by email
can share
can edit
admin (group)
notify by email
can share
can edit
Share link

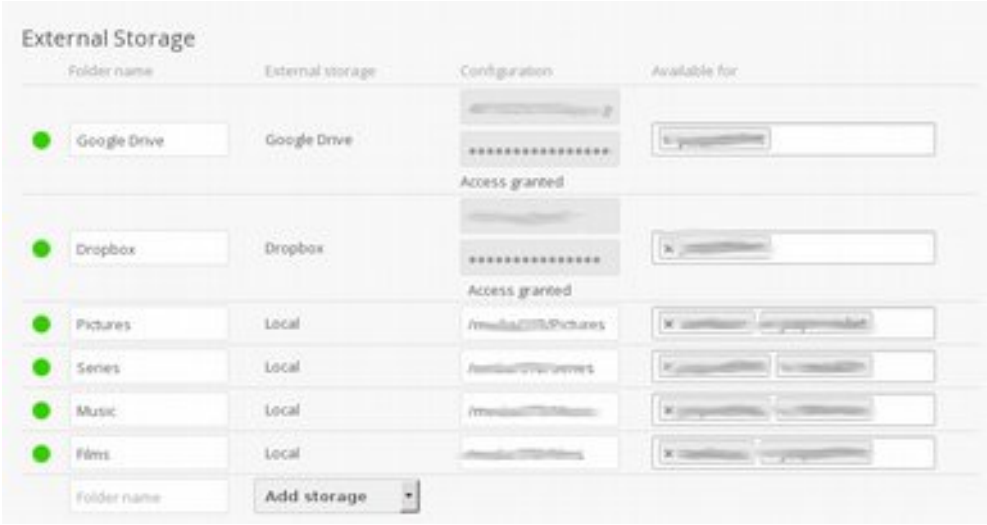
Syncing apps

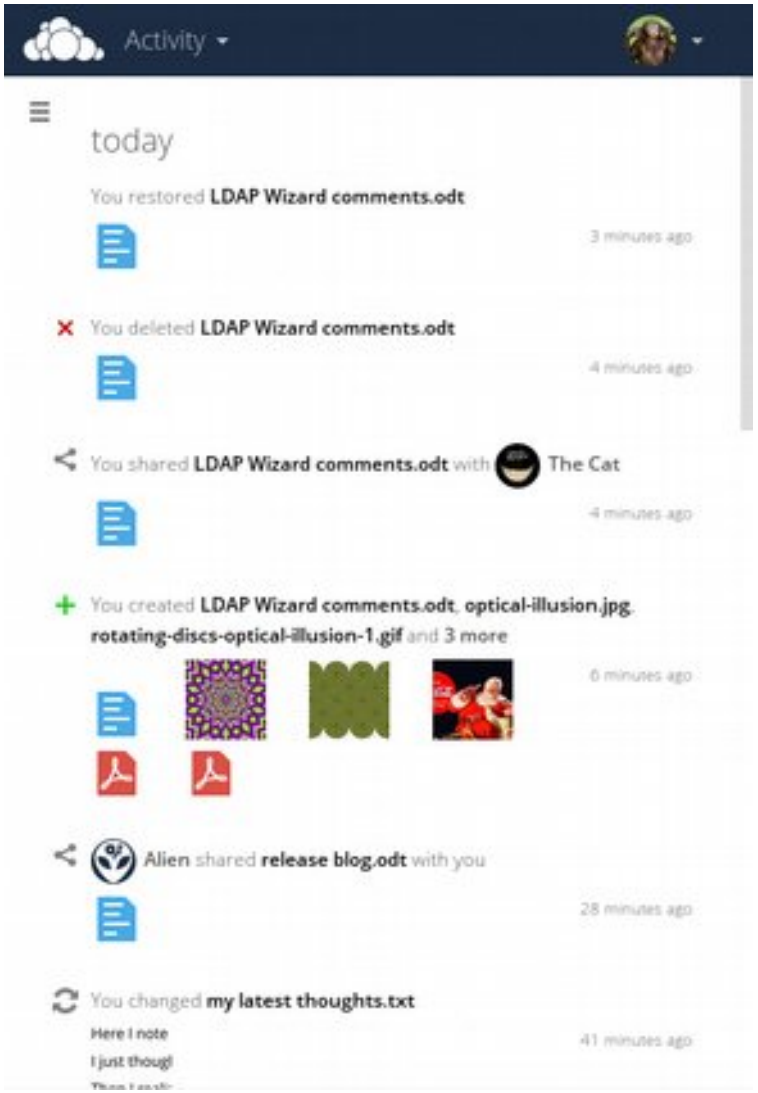




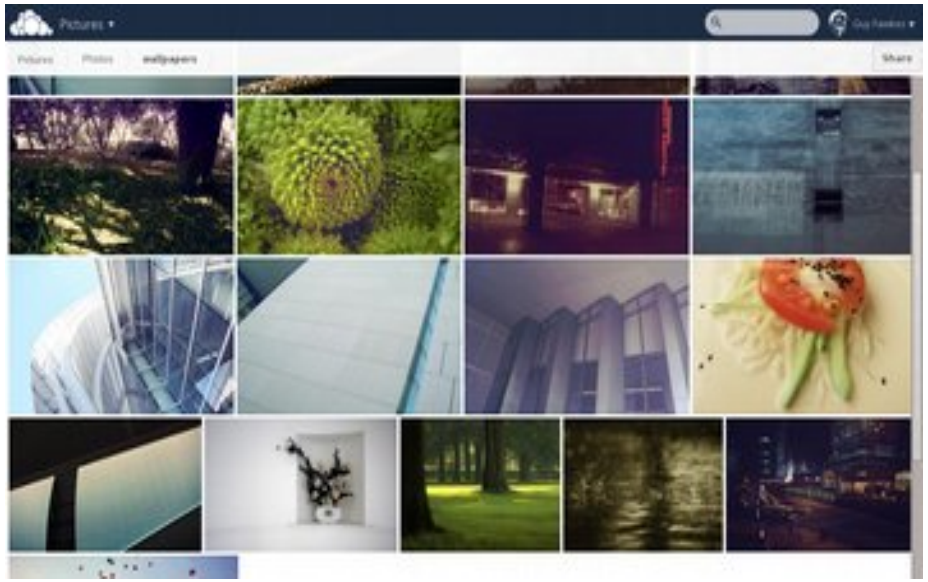
Features

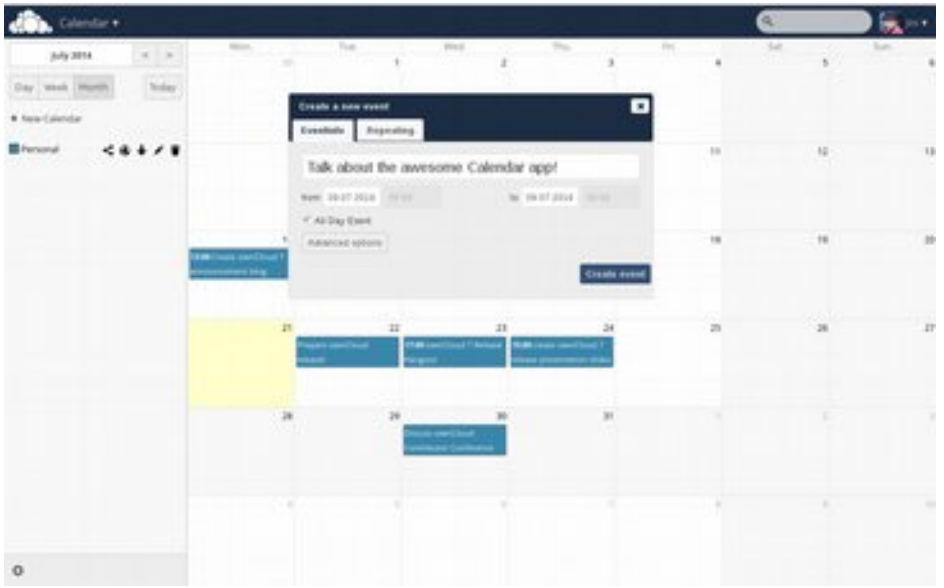

Notifications
Mail
Stream
A file or folder has been shared
A new file or folder has been created in a shared folder
A file or folder has been changed in a shared folder
A file or folder has been deleted from a shared folder
You need to set up your email address before you can receive notification emails.
Send emails:
Hourly

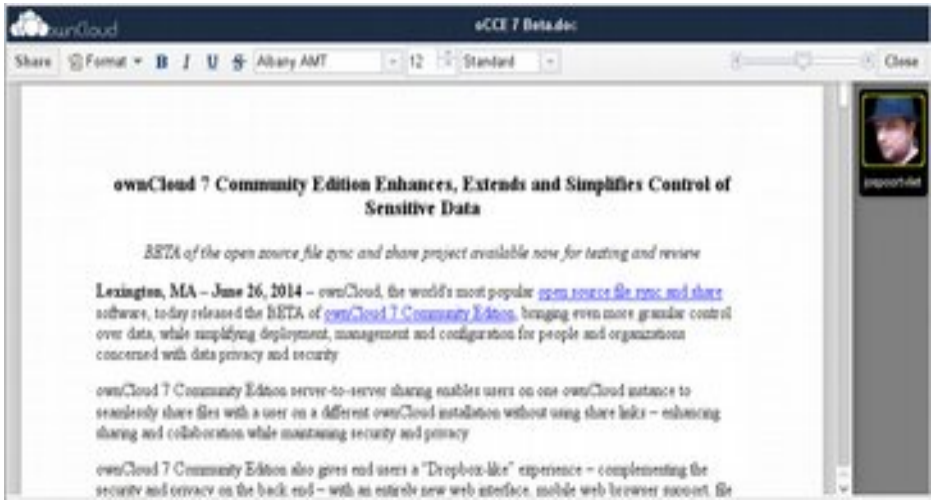

External Storage
Folder name
External storage
Configuration
Available for
Google Drive
Google Drive
Access granted
Dropbox
Dropbox
Access granted
Pictures
Local
Series
Local
Music
Local
Films
Local
Folder name
Add storage


Activity
today
You restored LDAP Wizard comments.odt
3 minutes ago
You deleted LDAP Wizard comments.odt
4 minutes ago
You shared LDAP Wizard comments.odt with The Cat
4 minutes ago
You created LDAP Wizard comments.odt, optical-illusion.jpg, rotating-discs-optical-illusion-1.gif and 3 more
6 minutes ago
Alien shared release blog.odt with you
28 minutes ago
You changed my latest thoughts.txt
Here I note
I just thougl
41 minutes ago

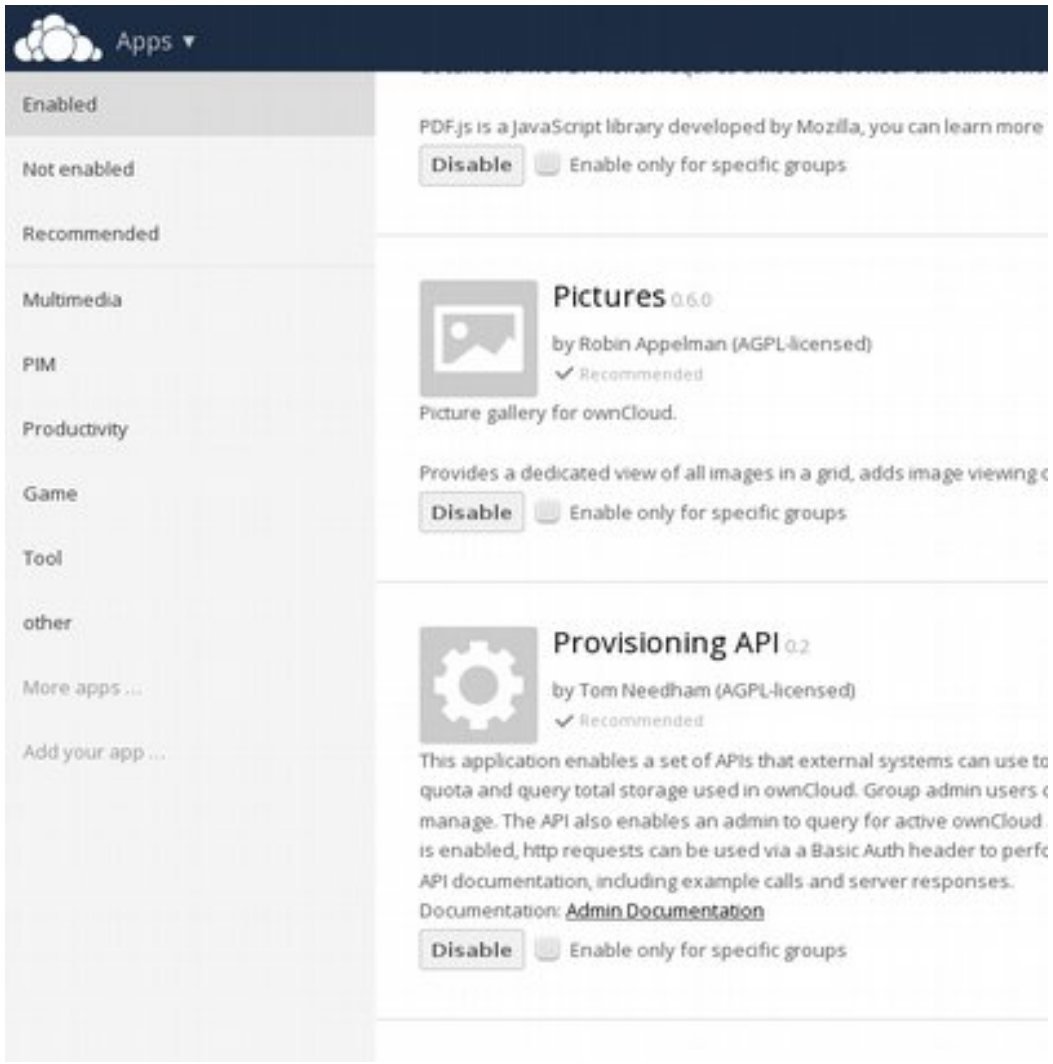
More apps

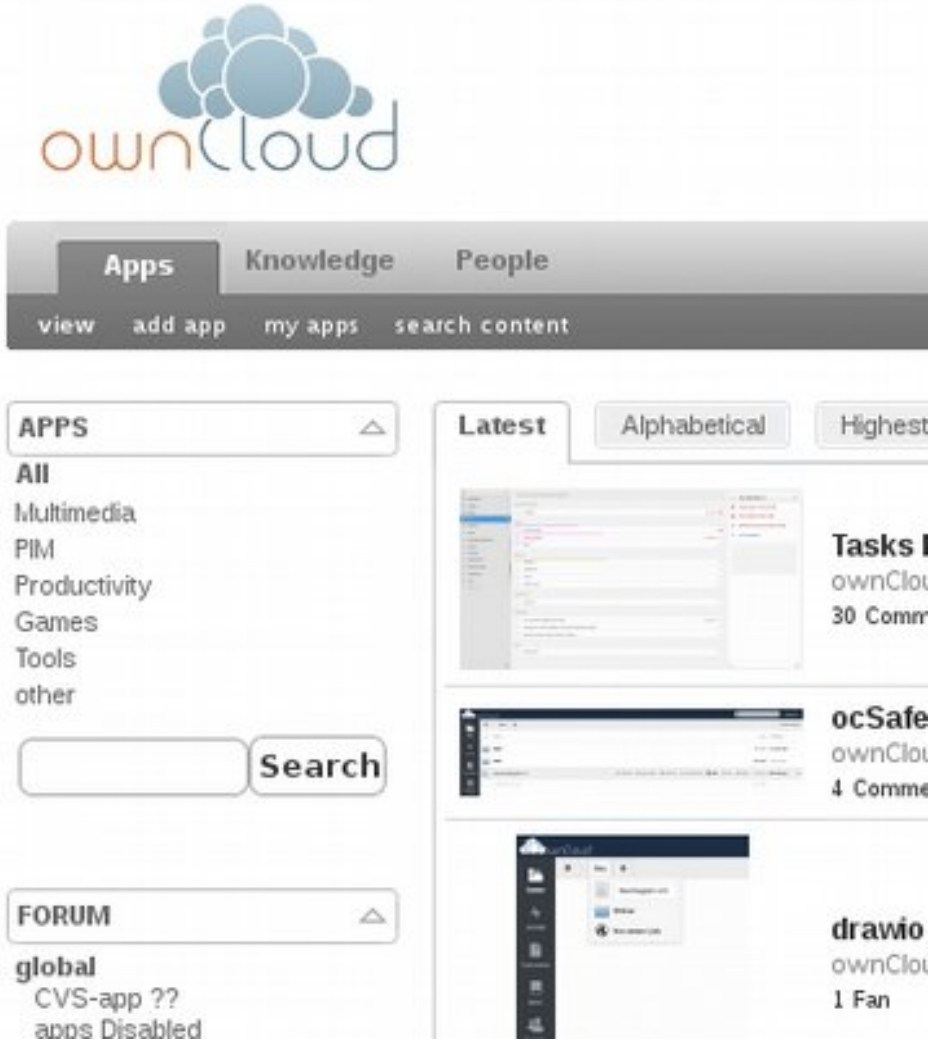



Talk about the awesome Calendar app!


ownCloud 7 Community Edition Enhances, Extends and Simplifies Control of Sensitive Data
BETA of the open source file sync and share project available now for testing and review

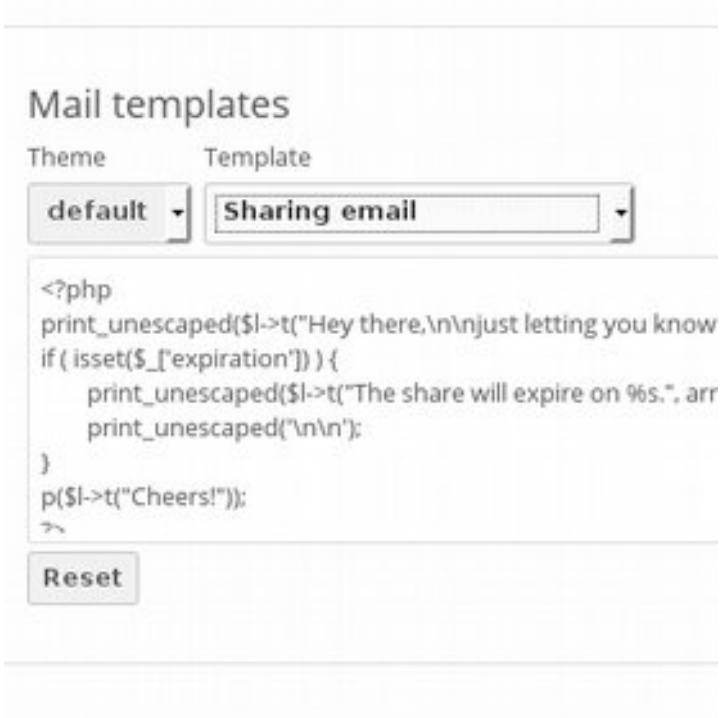
App management

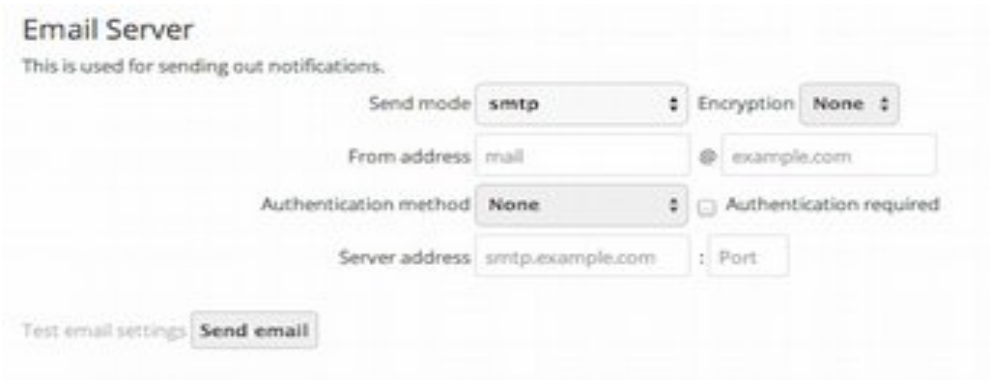


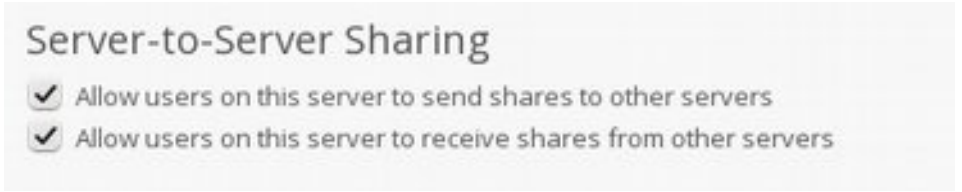


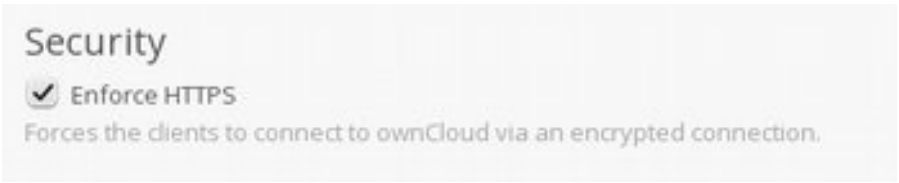
ownCloud--For administrators

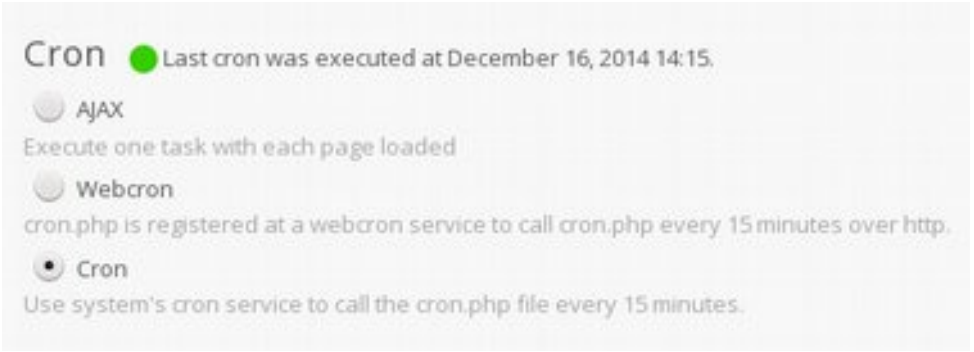
Management


Mail templates
Theme
Template
default
Sharing email
<?php
print_unescaped($l->t("Hey there,\n\njust letting you know
if (isset($_['expiration'])) {
print_unescaped($l->t("The share will expire on %s.", arr
print_unescaped('\n\n');
}
p($l->t("Cheers!"));
?>
Reset

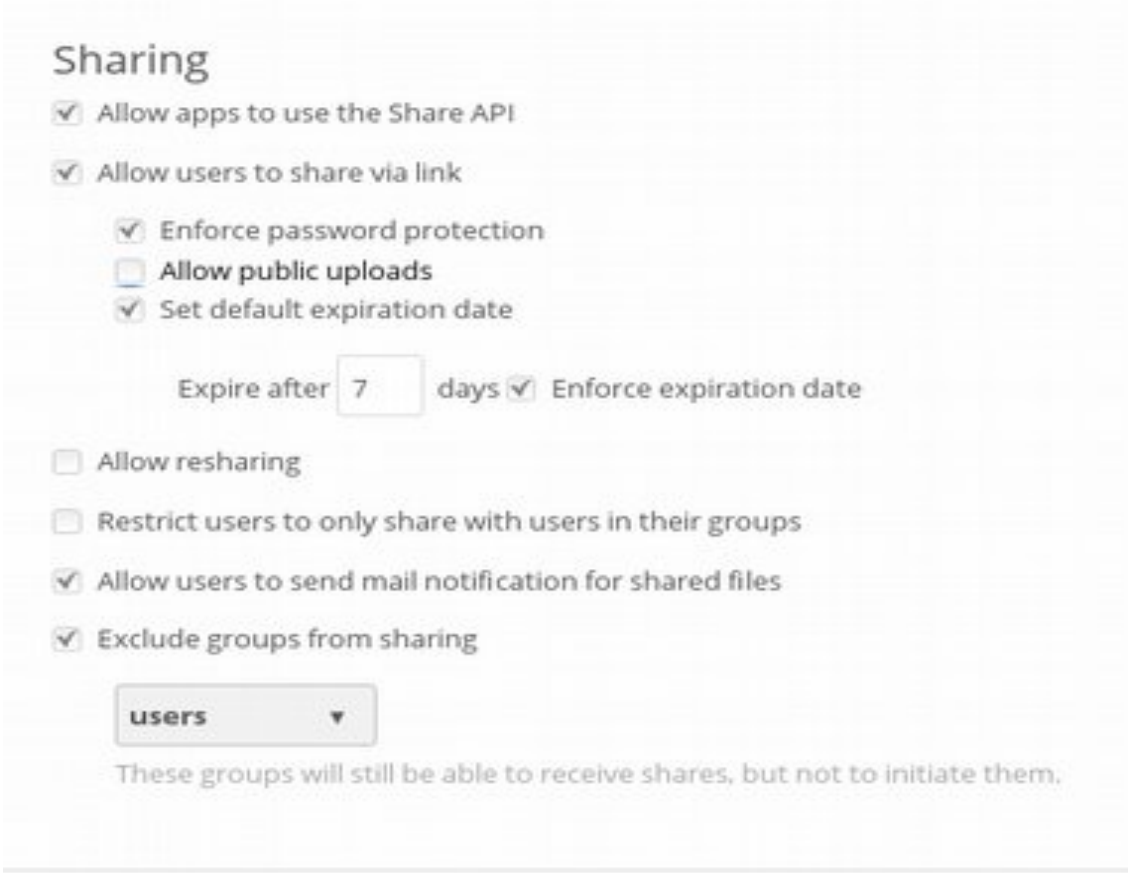

Email Server
This is used for sending out notifications.
Send mode
smtp
Encryption
None
From address
mail
example.com
Authentication method
None
Authentication required
Server address
smtp.example.com
Port
Test email settings
Send email

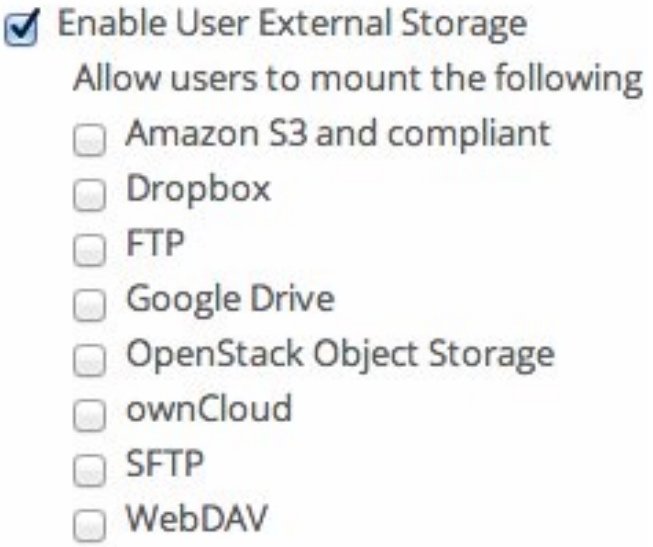

Server-to-Server Sharing
Allow users on this server to send shares to other servers
Allow users on this server to receive shares from other servers


Security
Enforce HTTPS
Forces the clients to connect to ownCloud via an encrypted connection.

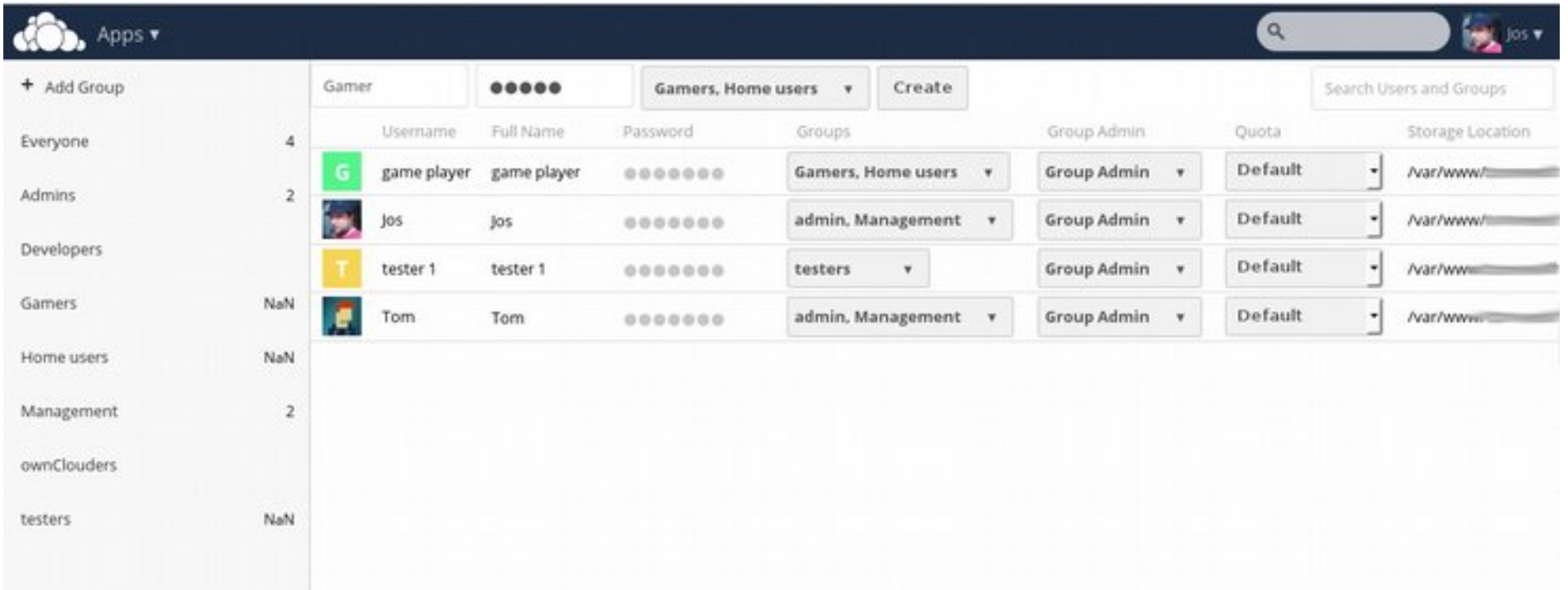

Cron
Last cron was executed at December 16, 2014 14:15.
AJAX
Execute one task with each page loaded
Webcron
cron.php is registered at a webcron service to call cron.php every 15 minutes over http.
Cron
Use system's cron service to call the cron.php file every 15 minutes.

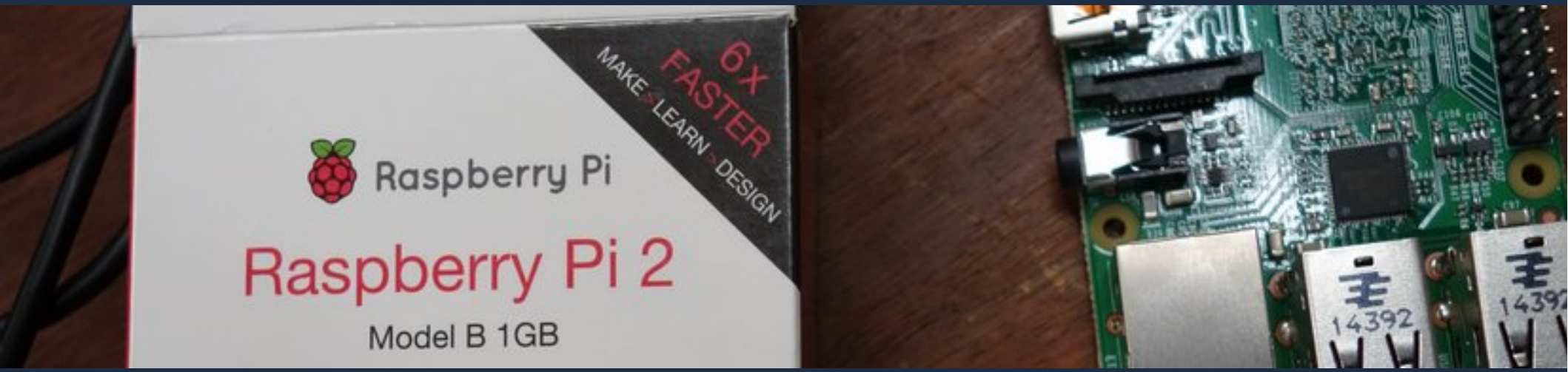
Control Sharing





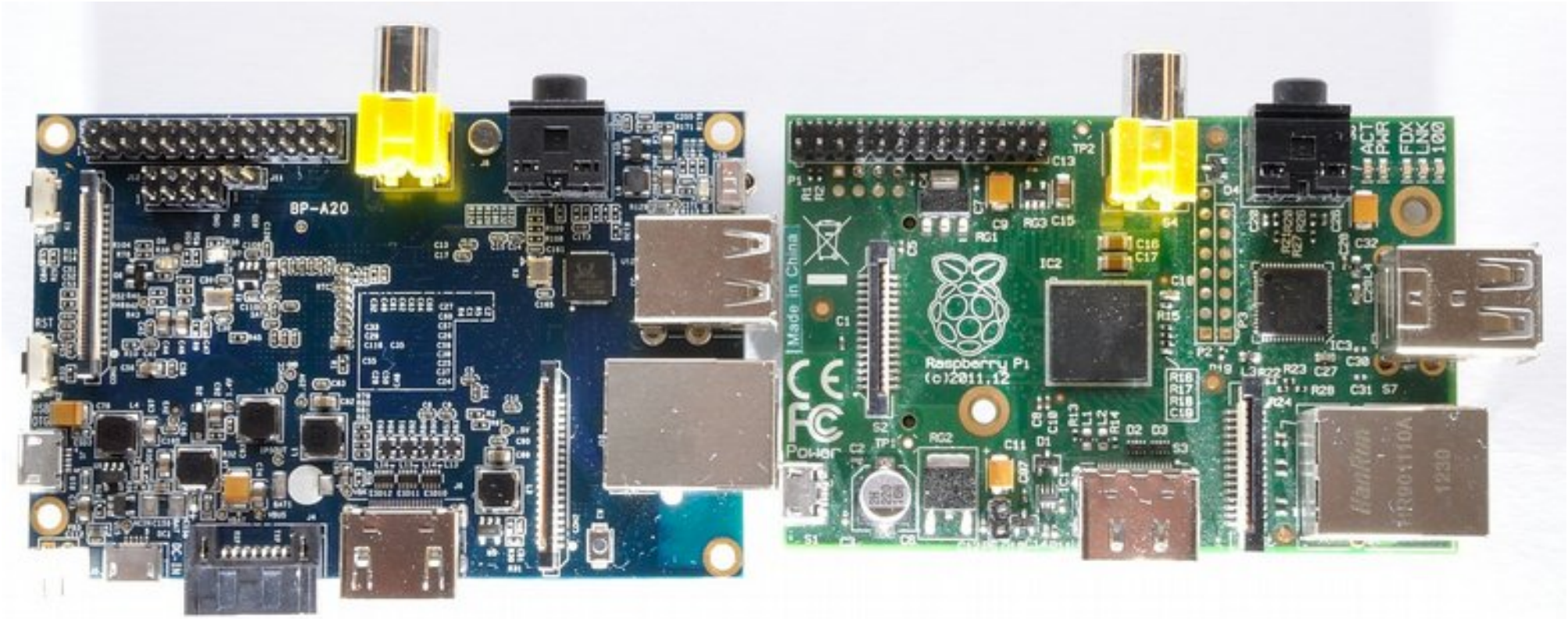
User management




6X FASTER
MAKE > LEARN > DESIGN
Raspberry Pi
Raspberry Pi 2
Model B 1GB
14392

Let's talk Pi

The Pi's



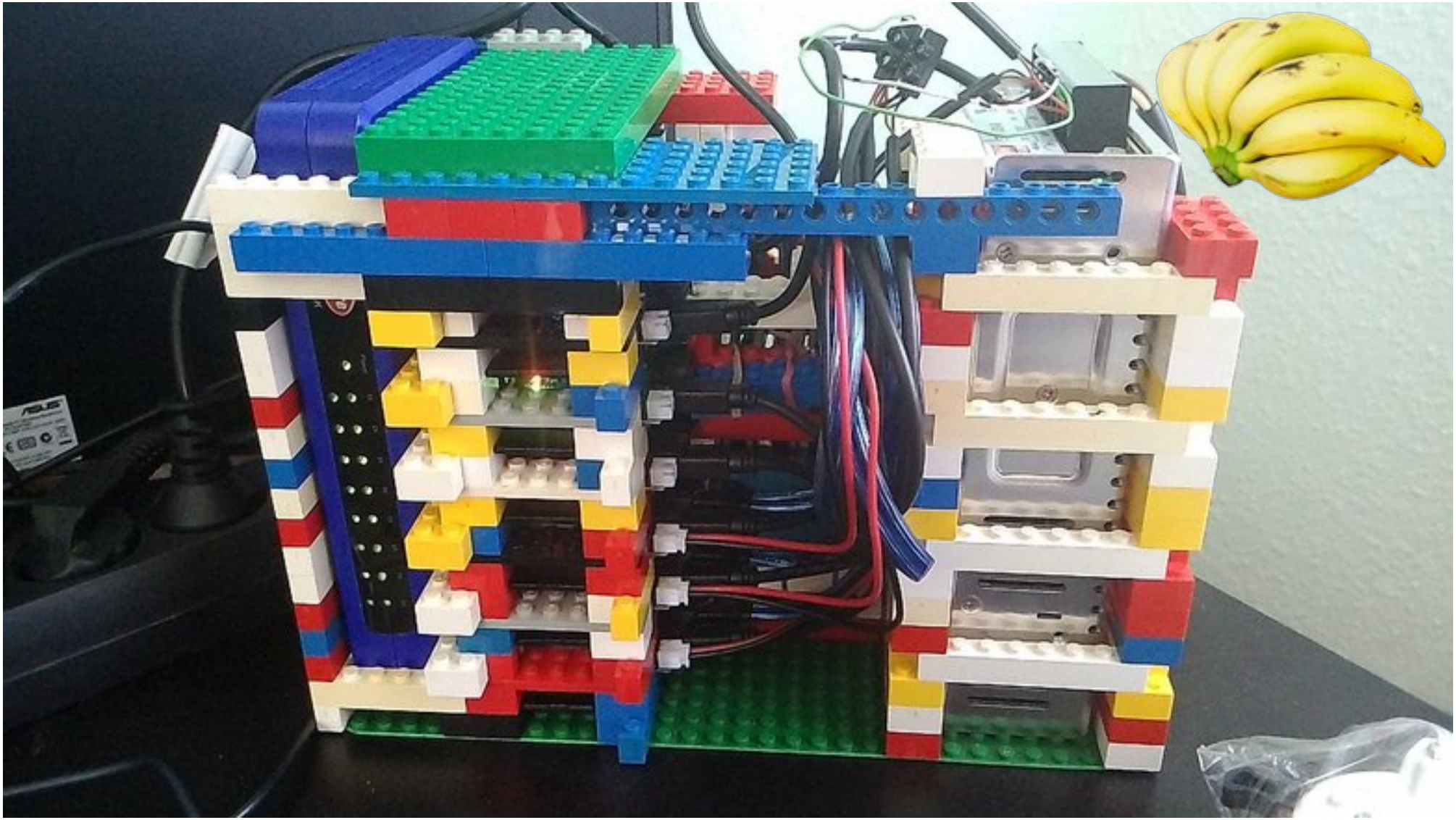
Comparison

- Dual 1ghz A7
- Mali 400 mp2
- 1gb DDR3
- 1000mbit RJ45 direct
- 1x SATA II
- 2x USB 2.0 direct
- 1x USB 2.0 OTG
- SD, HDMI, 3,5mm

- Quad 900mhz A7
- VideoCore IV
- 1gb DDR2
- 100mbit RJ45 hub
- 4x USB 2.0 hub
- MicroSD, HDMI, 3.5mm

Installing ownCloud on a Pi

The Pi Cluster



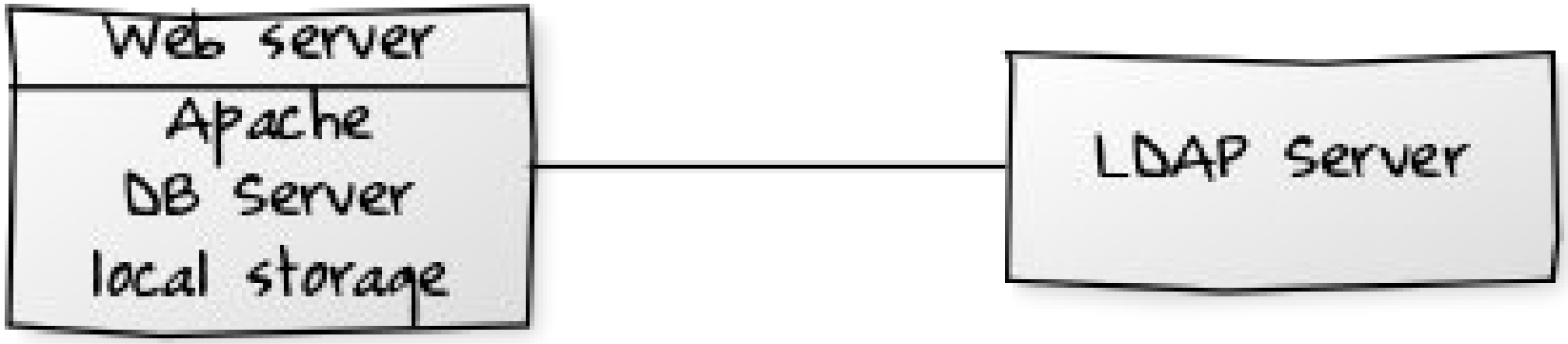
Let's talk SCALABILITY

Some basics:

- **Apache, MySQL, are you crazy?**
- **PHP 7?**
- **Redis?**

One device/server

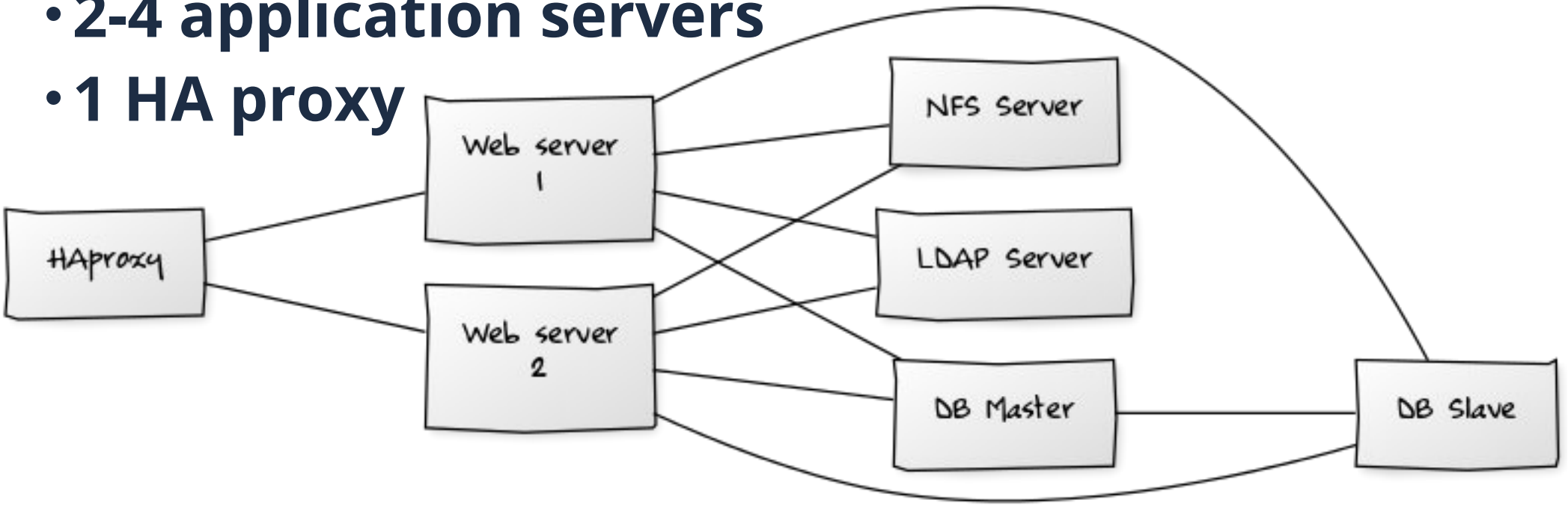
- **Linux**
- **Apache, mod_php**
- **MySQL**
- **Btrfs for backup!**
- **Session management**



Let's split up

High Availability Setup

- 2 DB servers (master/slave)
- NFS storage server
- LDAP server
- 2-4 application servers
- 1 HA proxy



Load balancing, DB Cluster

Load balancer

- **HAProxy**
- **SSL termination**
- **Sticky sessions**

Database

- **MySQL/MariaDB**
- **Galera master/slave**

Backup

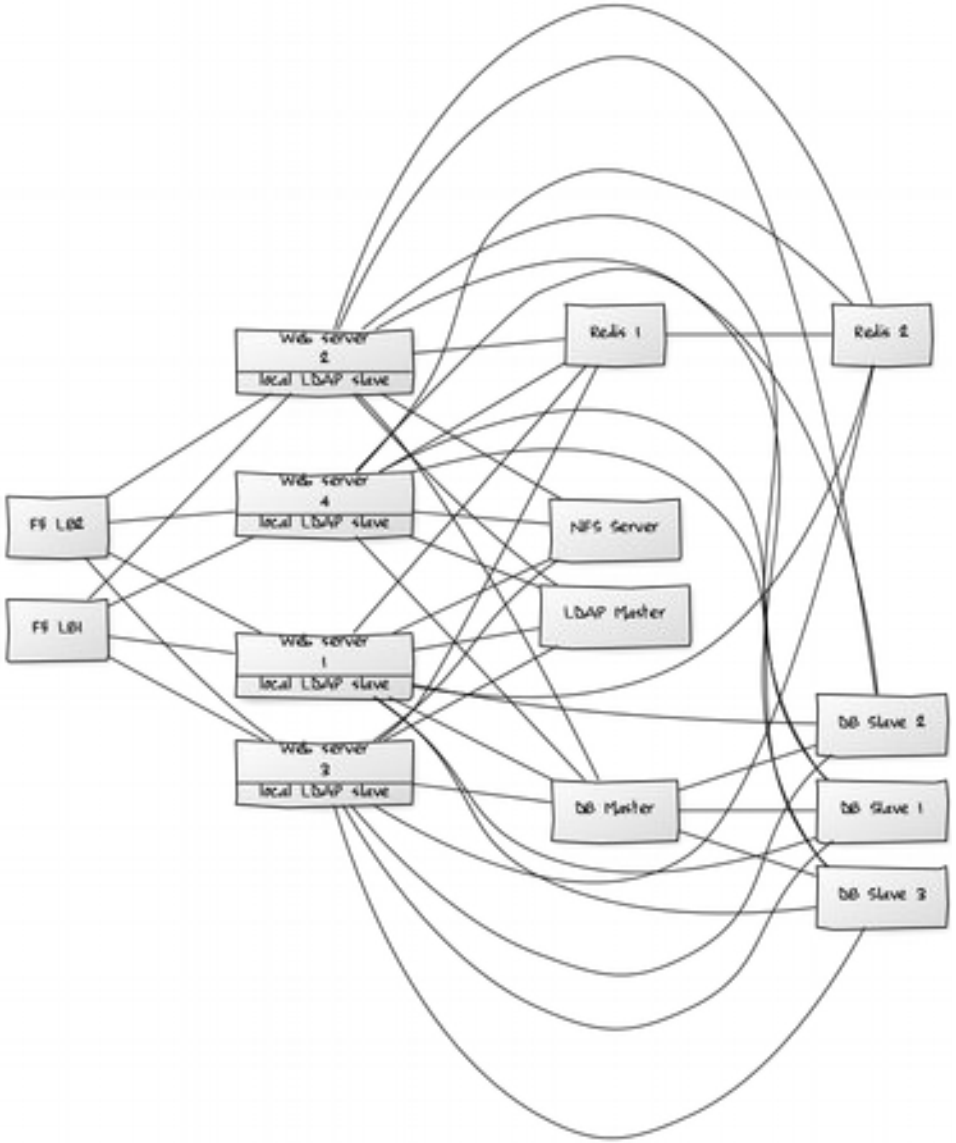
database slave, NFS snapshot,

LDAP, Memcache, ...

- **Read-only slaves on application servers**
- **REDIS & APCU**
  - Redis for file locking and distributed
  - APCU for local
- **Ceph, Elastic Storage**

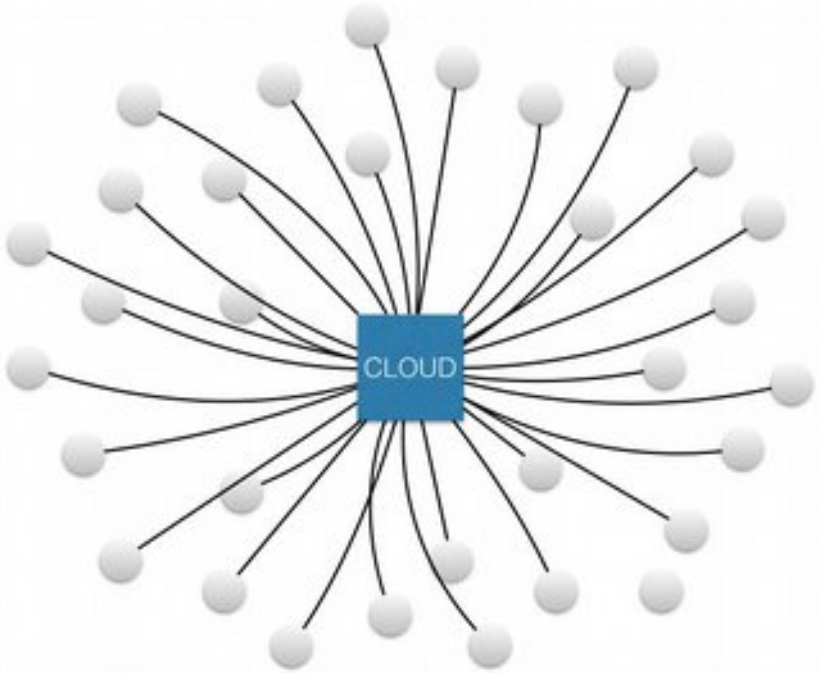
1000 users, 200TB storage

Real Big Stuff

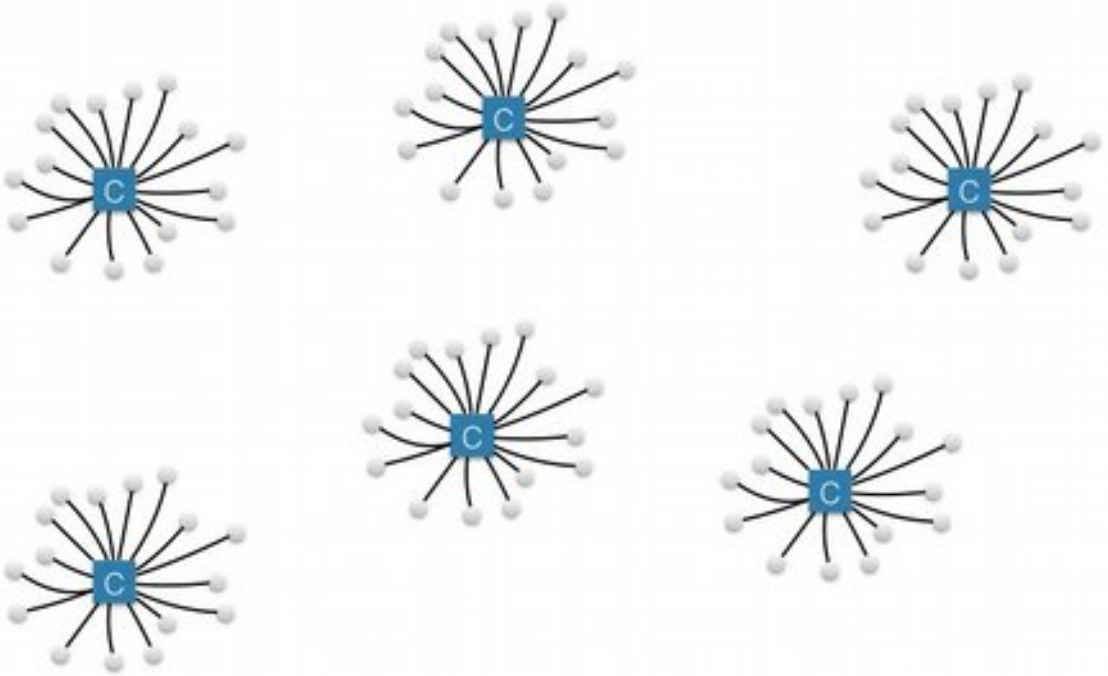


Federation

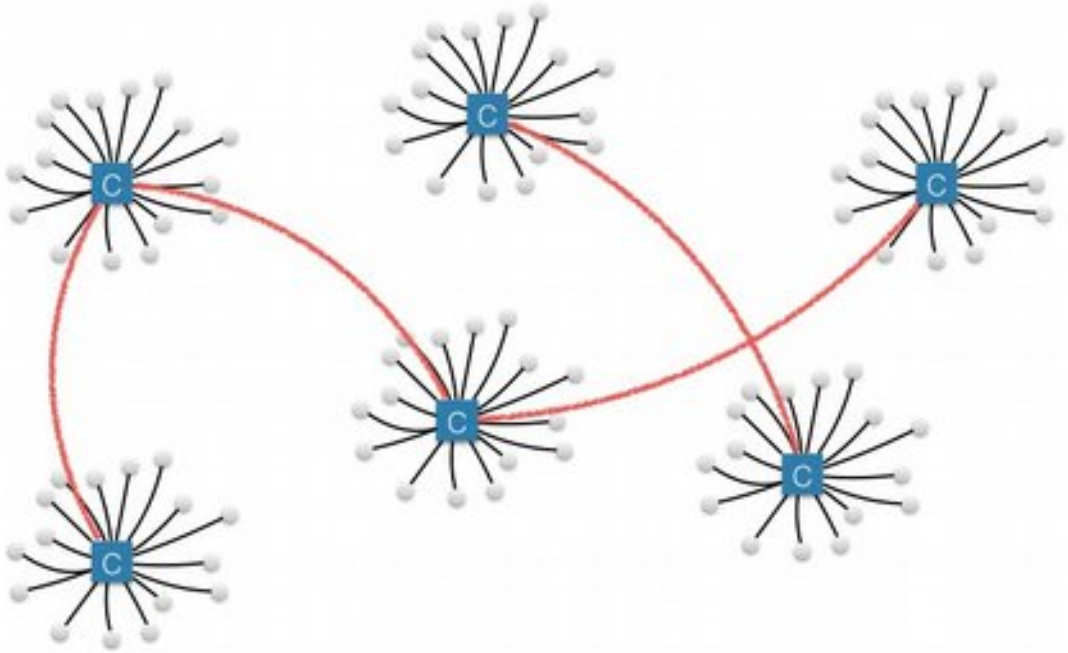
Ye Olde Cloud



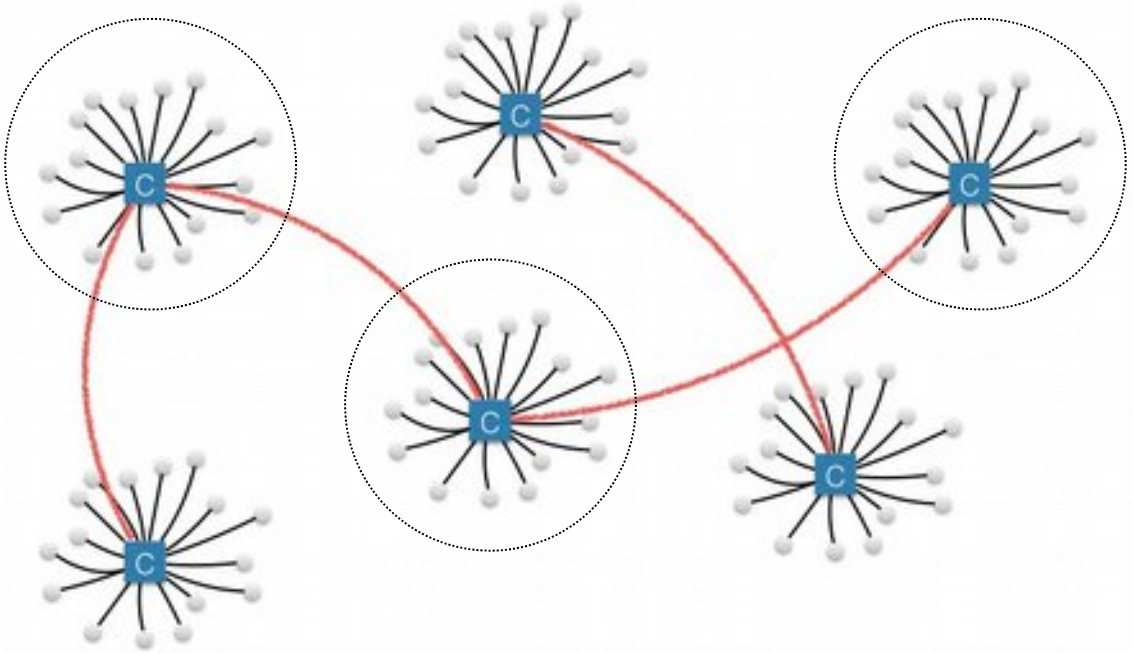
Private Clouds



Federated Clouds



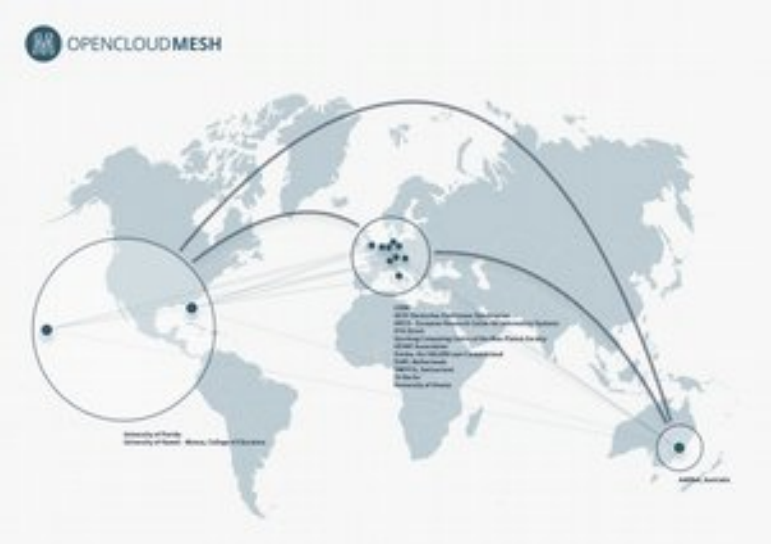
And security...



Questions???

In action

sciebo



- **Germany: NorthRein Westphalia**
- **Global: Open Cloud Mesh**
- **Brazil, India…**

Get it

- **owncloud.org**
- **owncloud.org/install**
- **demo.owncloud.org**
- **owncloud.org/contribute**
- **doc.owncloud.org**
- **owncloud.com**