





ownCloud @ SCALE14X

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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?



**"If privacy is outlawed,
only outlaws will have privacy."
- from the PGP manual**

Welcome to ownCloud!



The screenshot displays the ownCloud web interface. On the left, a sidebar shows navigation options: All files, Favorites, Shared with you, Shared with others, Shared by link, External storage, and Deleted files. The main area shows a file list with columns for Name, Size, and Modified. The file 'our popcorn.jpg' is selected and highlighted. On the right, the sharing interface for this file is shown, including a preview image of a dog, the file name 'our popcorn.jpg', size '6.8 MB', and date '23 days ago'. Below this, there are tabs for 'Activities', 'Sharing', and 'Versions'. A sharing list shows 'Rosa Parks' as the sharer. A tooltip indicates that users can share with other ownClouds using the syntax 'username@example.com/owncloud'. The sharing options include checkboxes for 'notify by email', 'can share', and 'can edit'. A 'Share link' option is also visible.

Name	Size	Modified
Documents	9.4 MB	7 minutes ago
important documents	74.5 MB	2 hours ago
Photos	663 kB	21 days ago
pretty pictures	27.1 MB	21 days ago
lorum ipsum.txt	7 kB	6 days ago
my latest thoughts.txt	< 1 kB	44 minutes ago
our popcorn.jpg	6.8 MB	23 days ago
ownCloud Manual.pdf	2.1 MB	21 days ago
ownCloudUserManual.pdf	2.1 MB	21 days ago
release blog.odt	61 kB	31 minutes ago

our popcorn.jpg
6.8 MB, 23 days ago

Share with people on other ownClouds using the syntax `username@example.com/owncloud`

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

4 folders and 6 files 122.8 MB

<https://doc.owncloud.org/server/8.2/go.php?to=user-sharing-federated>

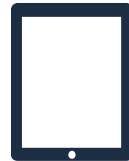
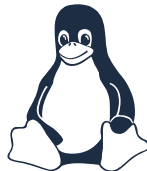
About ownCloud



- 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**



ownCloud Apps

apps.owncloud.com



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

82,080 commits

913 developers

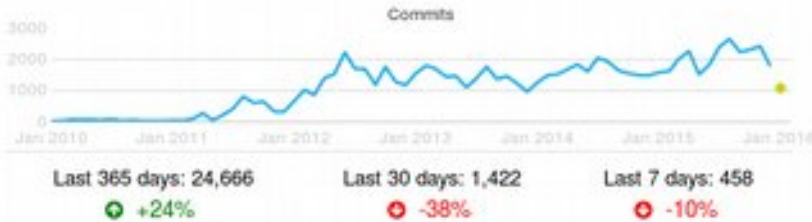
39,840 tickets

17,152 mail messages

Code Developers

913

Core	Regular	Casual
32	66	809



Ticket Participants

12,131

Fixers	Submitters
1,629	7,511



Mailing List Participants

657

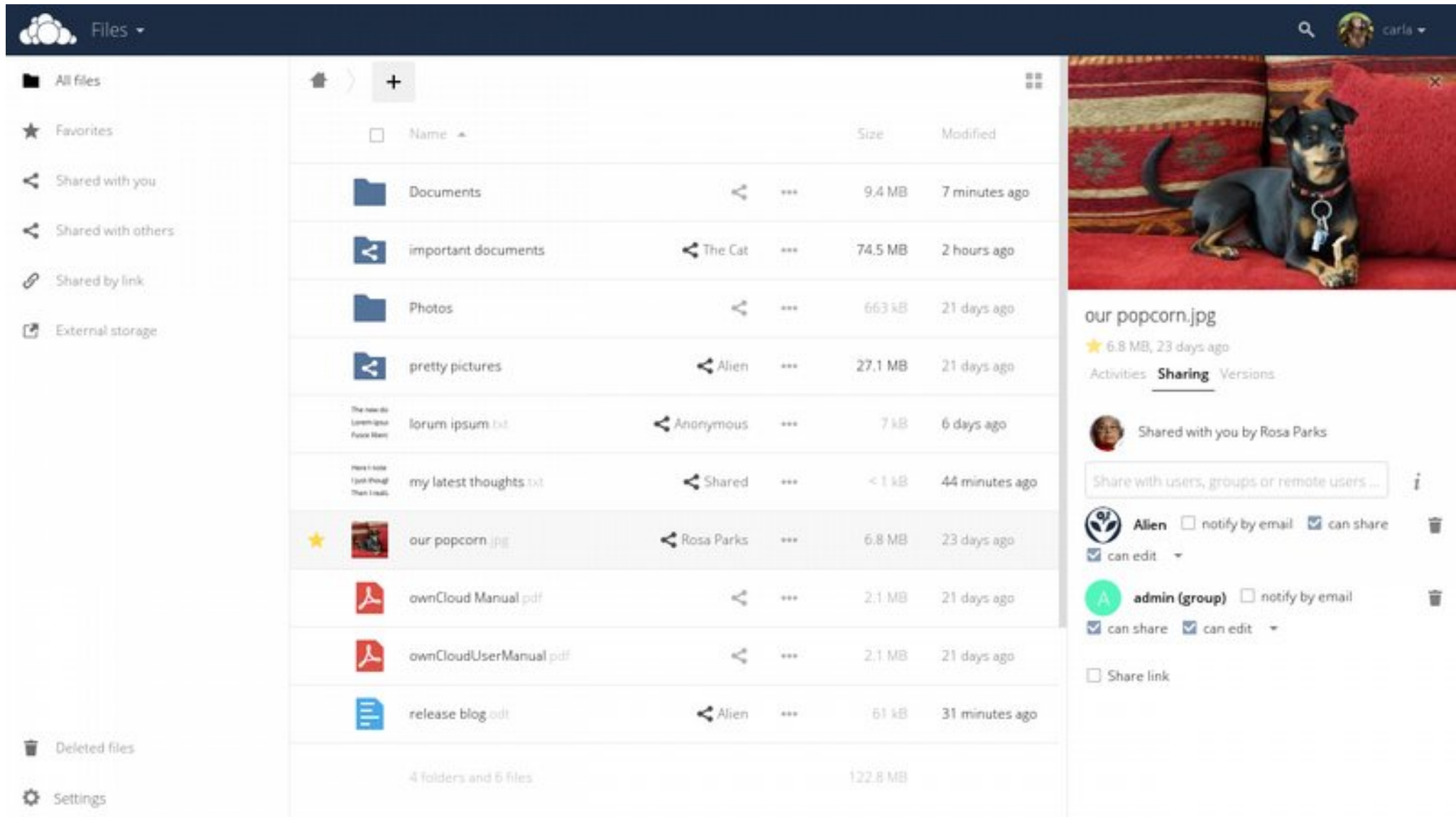
Thread Initiators	First Repliers
522	442





ownCloud -- For end users

Sharing



The screenshot displays the ownCloud web interface. On the left is a sidebar with navigation options: All files, Favorites, Shared with you, Shared with others, Shared by link, External storage, Deleted files, and Settings. The main area shows a file list with columns for Name, Size, and Modified. The file 'our popcorn.jpg' is selected and highlighted. On the right, a sharing dialog is open for this file, showing a preview of the image and sharing options. The sharing settings include a list of users and groups with checkboxes for 'notify by email', 'can share', and 'can edit'. The 'admin (group)' is checked for all three options. There is also a 'Share link' checkbox which is currently unchecked.

Name	Size	Modified
Documents	9,4 MB	7 minutes ago
important documents	74.5 MB	2 hours ago
Photos	663 kB	21 days ago
pretty pictures	27.1 MB	21 days ago
lorum ipsum.txt	7 kB	6 days ago
my latest thoughts.txt	< 1 kB	44 minutes ago
our popcorn.jpg	6.8 MB	23 days ago
ownCloud Manual.pdf	2.1 MB	21 days ago
ownCloudUserManual.pdf	2.1 MB	21 days ago
release blog.odt	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

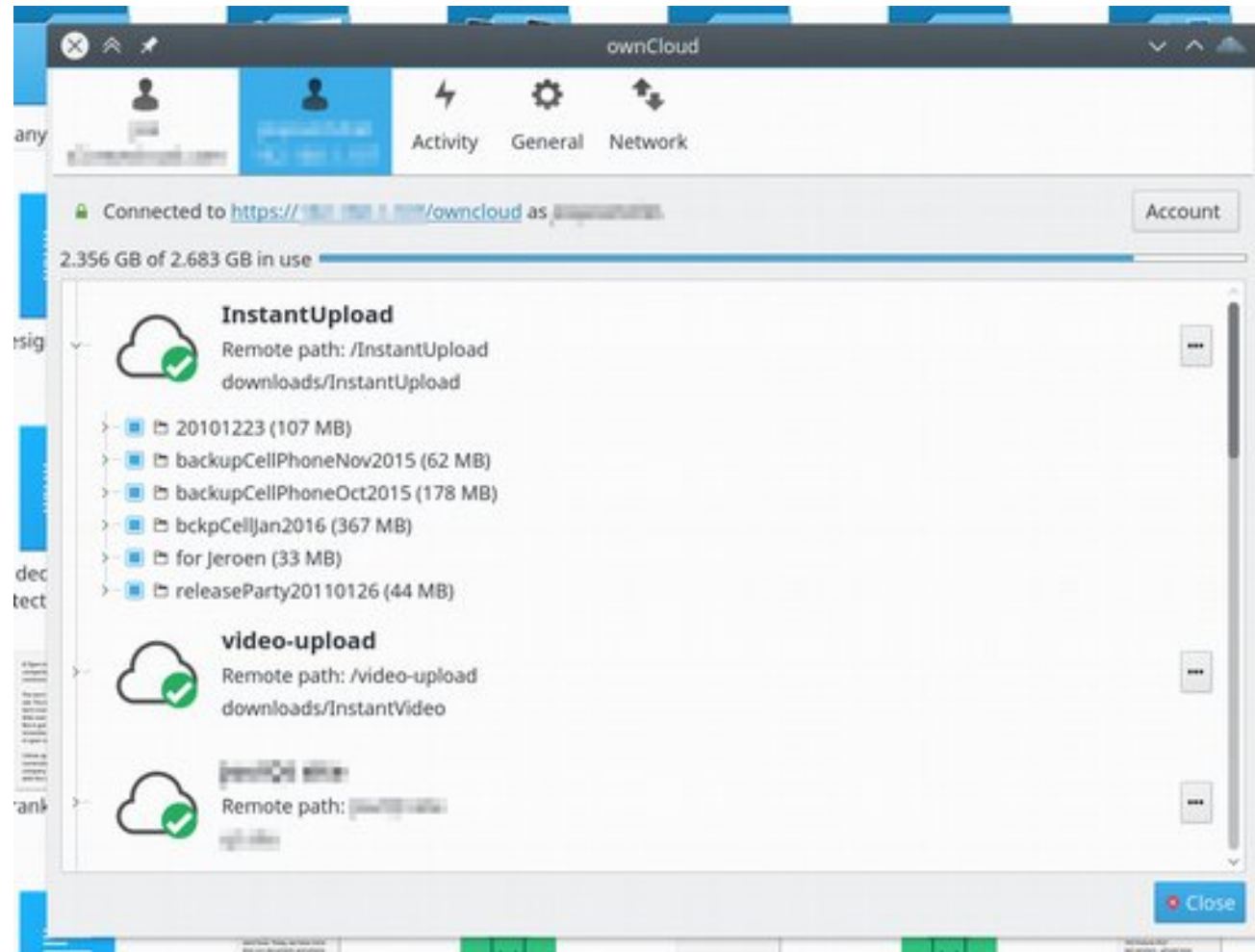
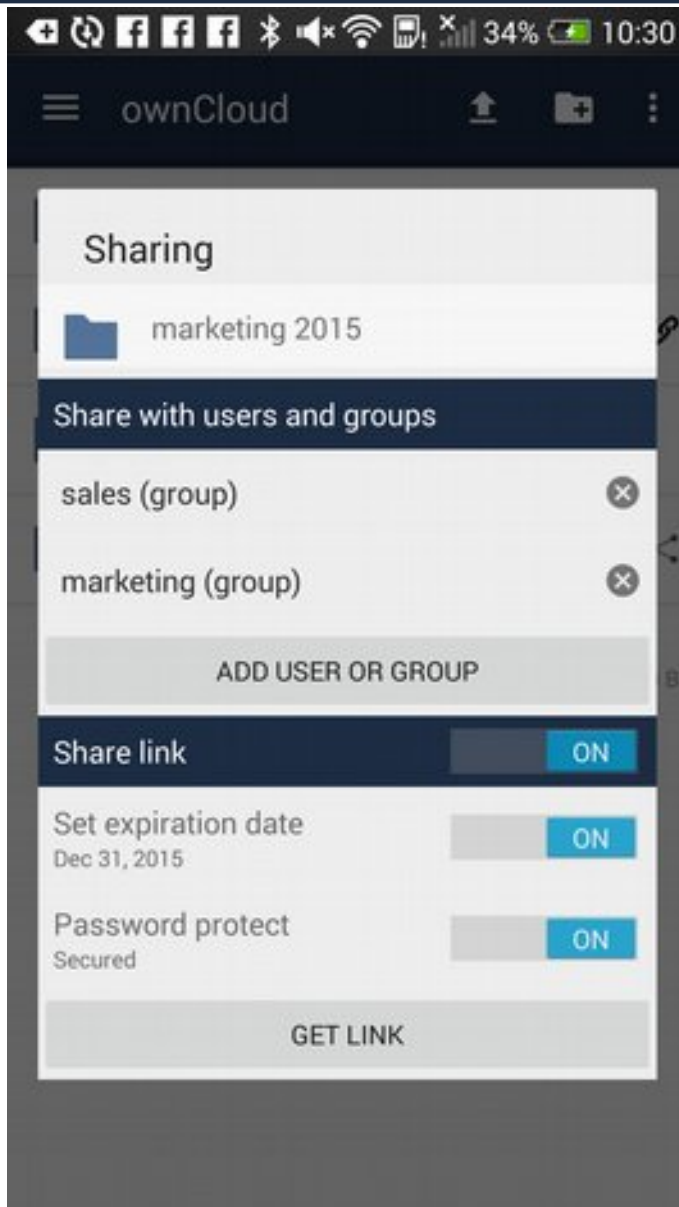
Shared with you by Rosa Parks

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	
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	A file or folder has been shared
<input type="checkbox"/>	<input checked="" type="checkbox"/>	A new file or folder has been created in a shared folder
<input type="checkbox"/>	<input checked="" type="checkbox"/>	A file or folder has been changed in a shared folder
<input type="checkbox"/>	<input checked="" type="checkbox"/>	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** ↓

The activity feed shows a list of recent actions:

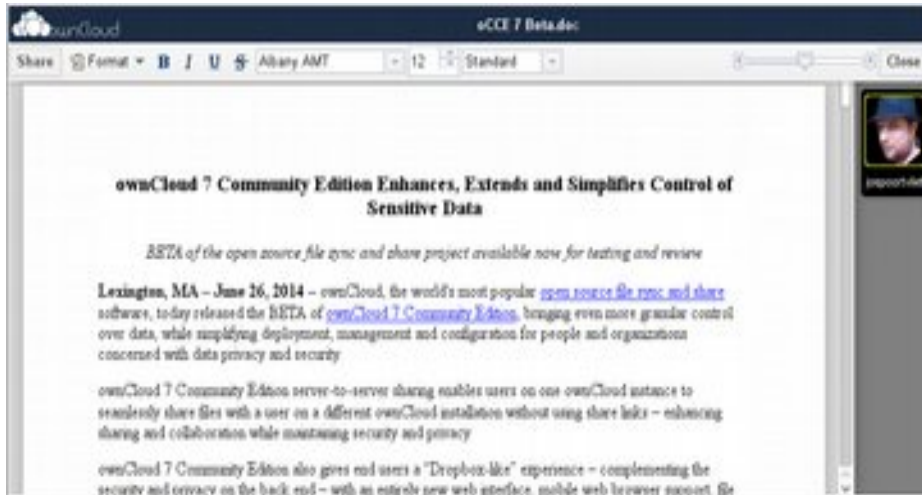
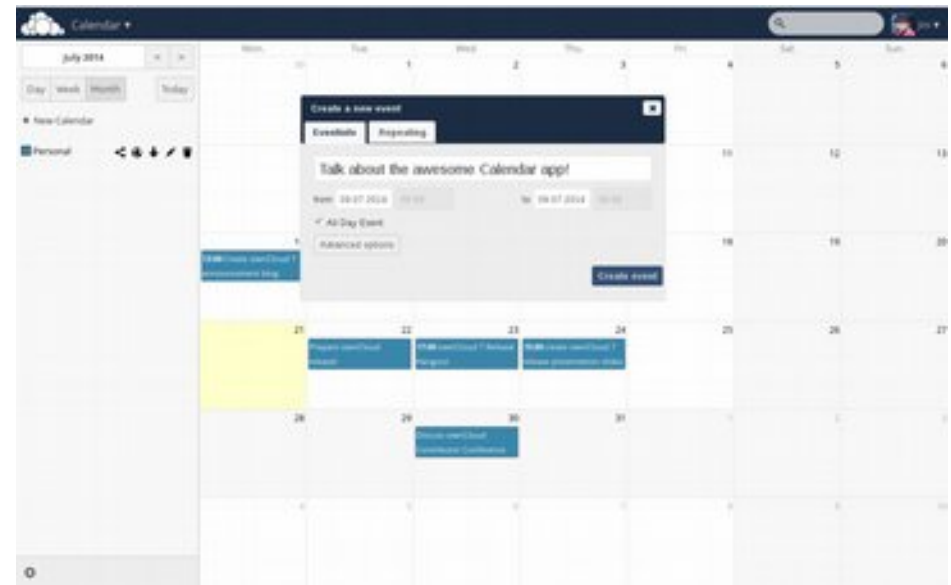
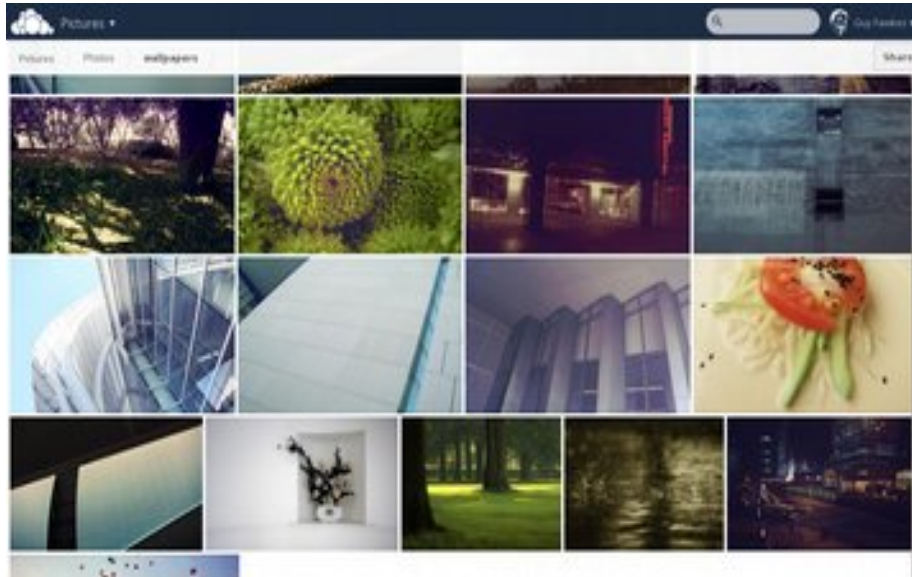
- today**
- You restored **LDAP Wizard comments.odt** (3 minutes ago)
- You deleted **LDAP Wizard comments.odt** (4 minutes ago)
- You shared **LDAP Wizard comments.odt** with **The Cat** (4 minutes ago)
- You created **LDAP Wizard comments.odt, optical-illusion.jpg, rotating-discs-optical-illusion-1.gif**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

External Storage

Folder name	External storage	Configuration	Available for
Google Drive	Google Drive	Access granted	
Dropbox	Dropbox	Access granted	
Pictures	Local	/media/~/Pictures	
Series	Local	/media/~/series	
Music	Local	/media/~/Music	
Films	Local	/media/~/films	

Folder name **Add storage**

More apps



App management




ownCloud Apps

- Enabled
- Not enabled
- Recommended
- Multimedia
- PIM
- Productivity
- Game
- Tool
- other
- More apps ...
- Add your app ...


PDF.js is a JavaScript library developed by Mozilla, you can learn more

Disable Enable only for specific groups

 **Pictures** 0.6.0
by Robin Appelman (AGPL-licensed)
✓ Recommended
Picture gallery for ownCloud.

Provides a dedicated view of all images in a grid, adds image viewing

Disable Enable only for specific groups

 **Provisioning API** 0.2
by Tom Needham (AGPL-licensed)
✓ Recommended

This application enables a set of APIs that external systems can use to manage quota and query total storage used in ownCloud. Group admin users can manage. The API also enables an admin to query for active ownCloud users. If the API is enabled, http requests can be used via a Basic Auth header to perform API calls. See the [API documentation](#), including example calls and server responses.

Documentation: [Admin Documentation](#)

Disable Enable only for specific groups

ownCloud

Apps Knowledge People

view add app my apps search content

APPS ▲


- All
- Multimedia
- PIM
- Productivity
- Games
- Tools
- other


Search


FORUM ▲

- global
- CVS-app ??
- apps Disabled

Latest **Alphabetical** **Highest**

 **Tasks**
ownCloud
30 Comments

 **ocSafe**
ownCloud
4 Comments

 **drawio**
ownCloud
1 Fan



ownCloud--For administrators

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

Security

Enforce HTTPS

Forces the clients to connect to ownCloud via an encrypted connection.

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

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

Sharing

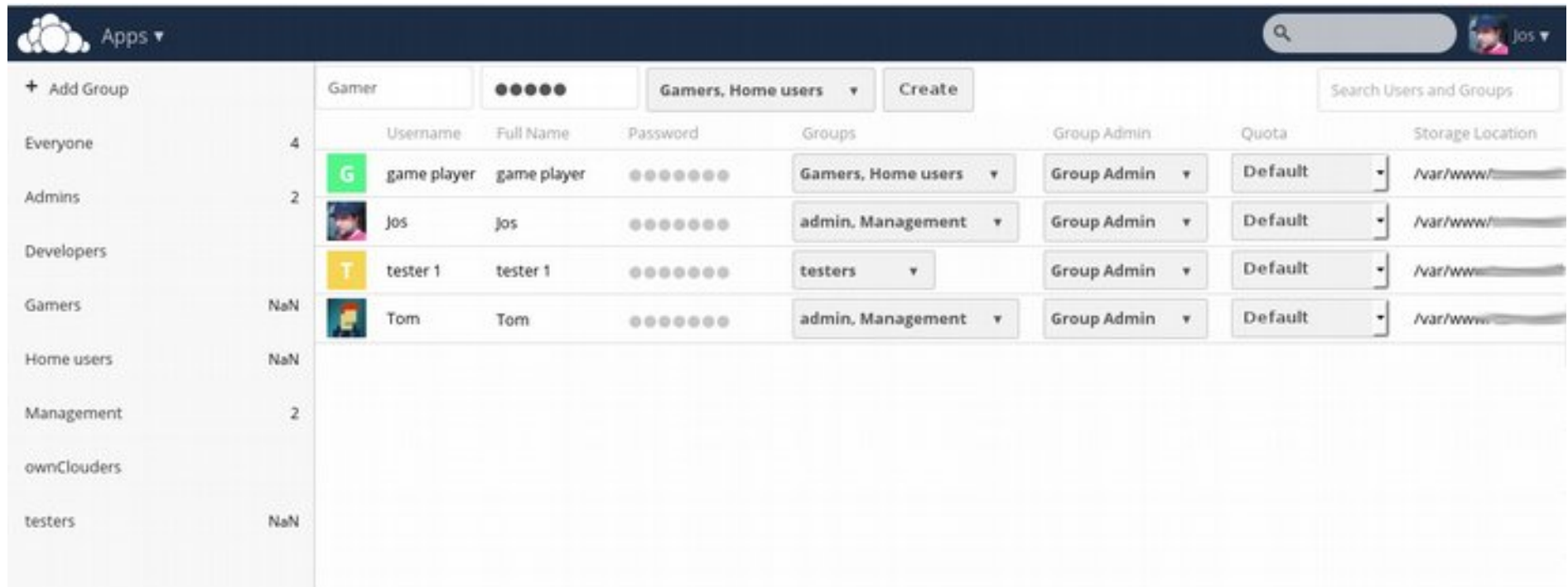
- Allow apps to use the Share API
- Allow users to share via link
 - Enforce password protection
 - Allow public uploads
 - Set default expiration date
- Expire after days Enforce expiration date
- Allow resharing
- Restrict users to only share with users in their groups
- Allow users to send mail notification for shared files
- Exclude groups from sharing

▼

These groups will still be able to receive shares, but not to initiate them.

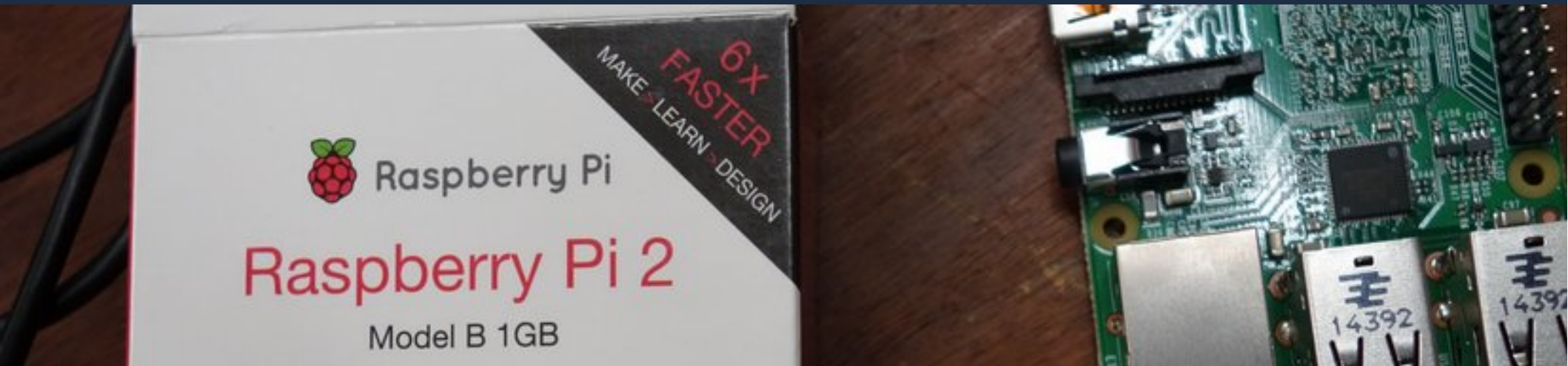
- Enable User External Storage
 - Allow users to mount the following
 - Amazon S3 and compliant
 - Dropbox
 - FTP
 - Google Drive
 - OpenStack Object Storage
 - ownCloud
 - SFTP
 - WebDAV

User management



The screenshot shows the user management interface in ownCloud. At the top, there is a search bar and a user profile for 'Jos'. Below this, a form allows creating a new user with fields for Username, Full Name, Password, Groups, Group Admin, Quota, and Storage Location. A table below the form lists existing users and groups.

	Username	Full Name	Password	Groups	Group Admin	Quota	Storage Location
Everyone	4						
Admins	2						
Developers							
Gamers	NaN						
Home users	NaN						
Management	2						
ownClouders							
testers	NaN						



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**

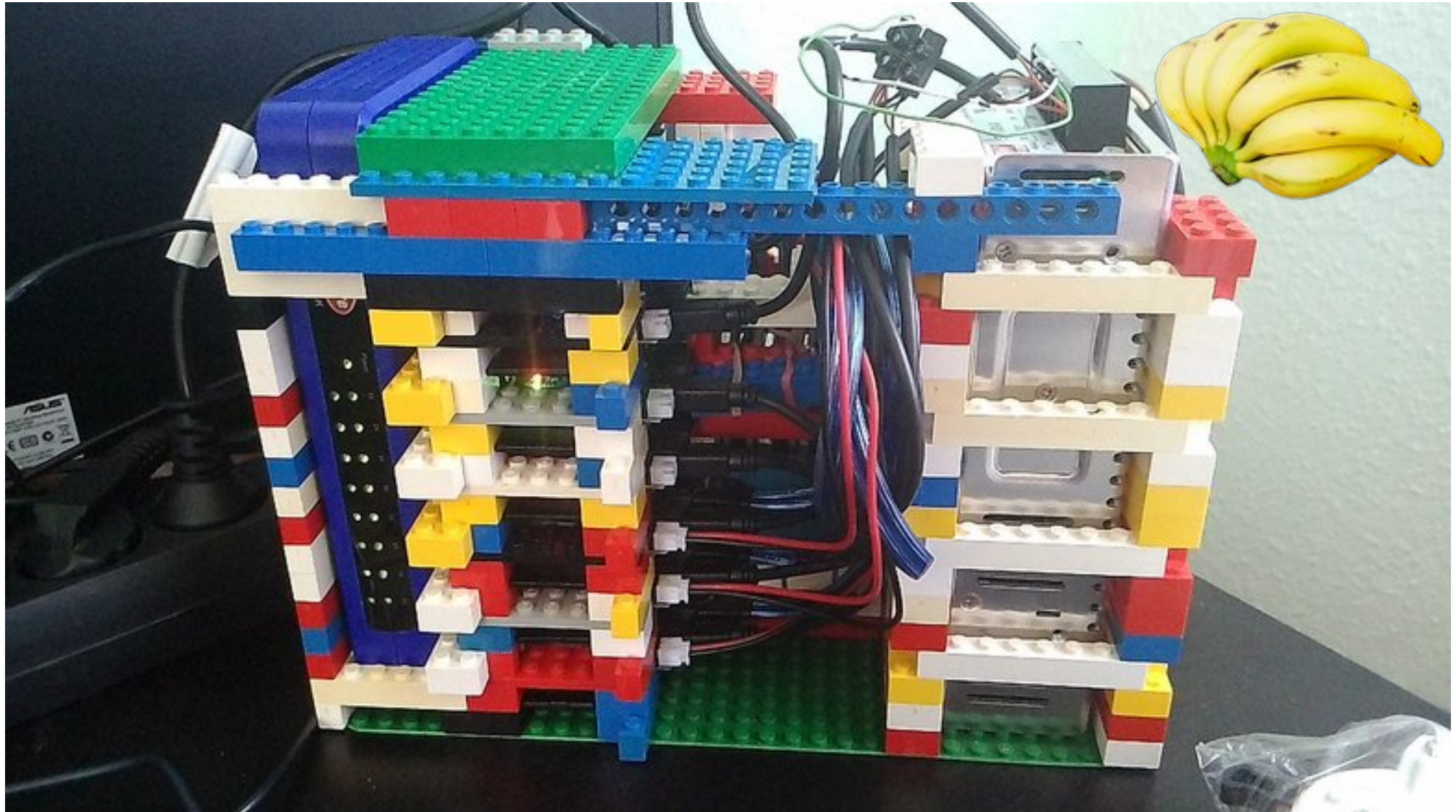


- **Quad 900mhz A7**
- **VideoCore IV**
- **1gb DDR2**
- **100mbit RJ45 hub**
- **4x USB 2.0 hub**
- **MicroSD, HDMI, 3.5mm**

Installing ownCloud on a Pi



The Pi Cluster



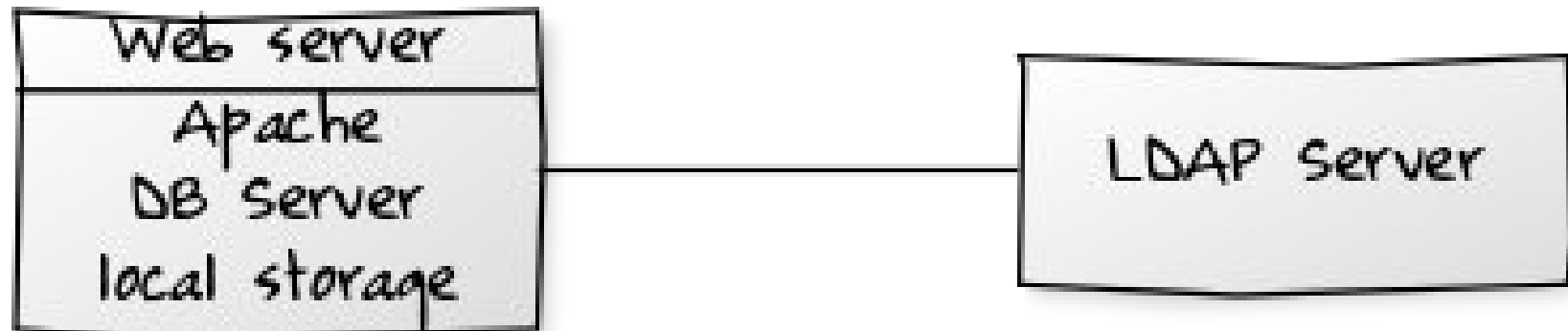
Let's talk SCALABILITY

Some basics:

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

One device/server

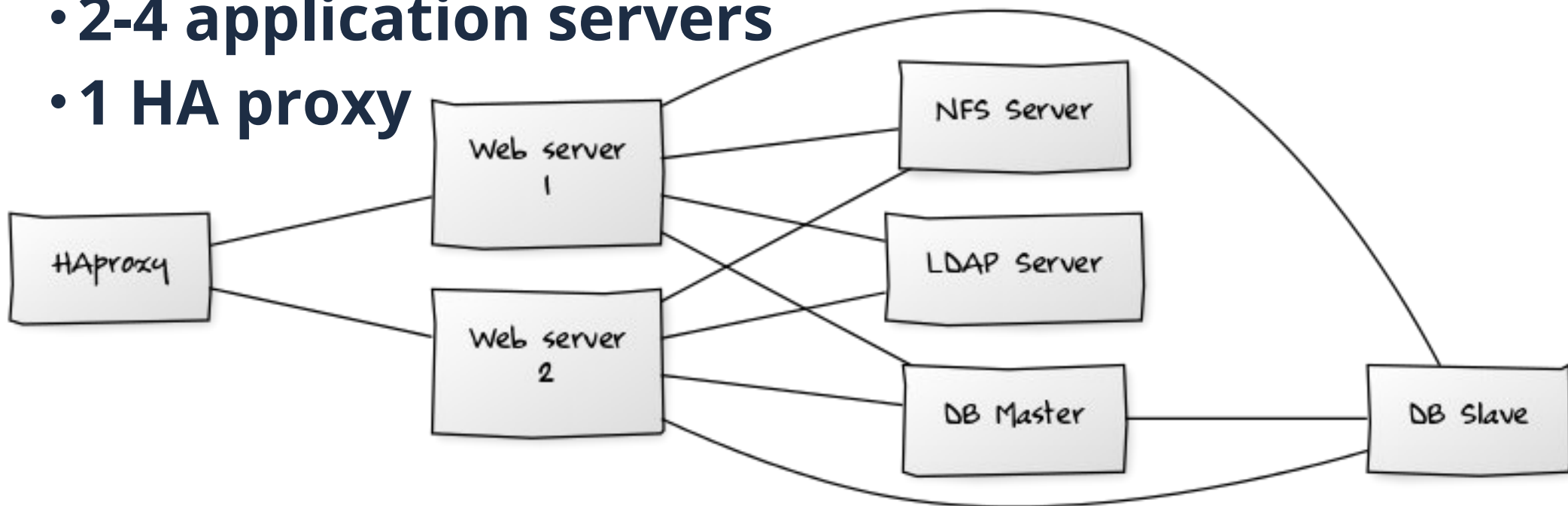
- Linux
- Apache, mod_php
- MySQL
- Btrfs for backup!
- Session management



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**

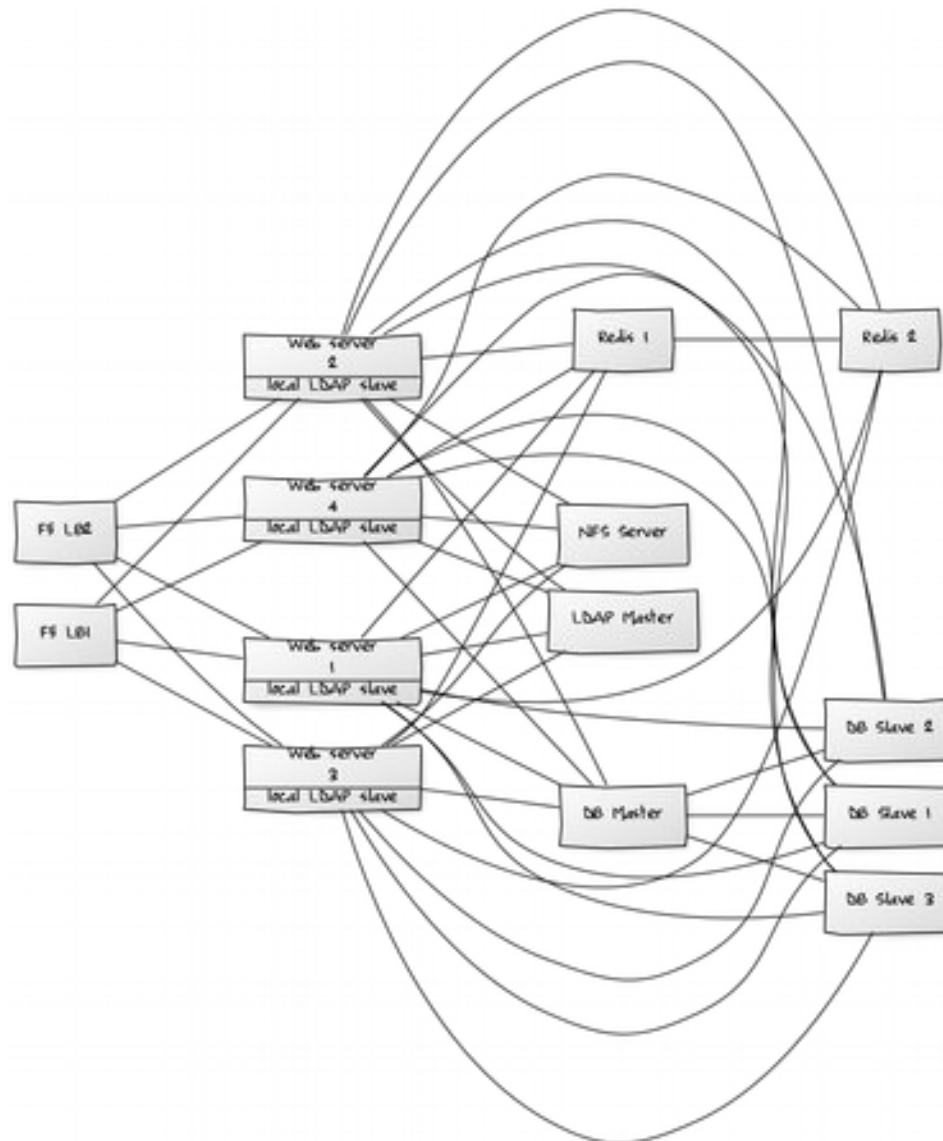
Backup

database slave, NFS snapshot,

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

1000 users, 200TB storage

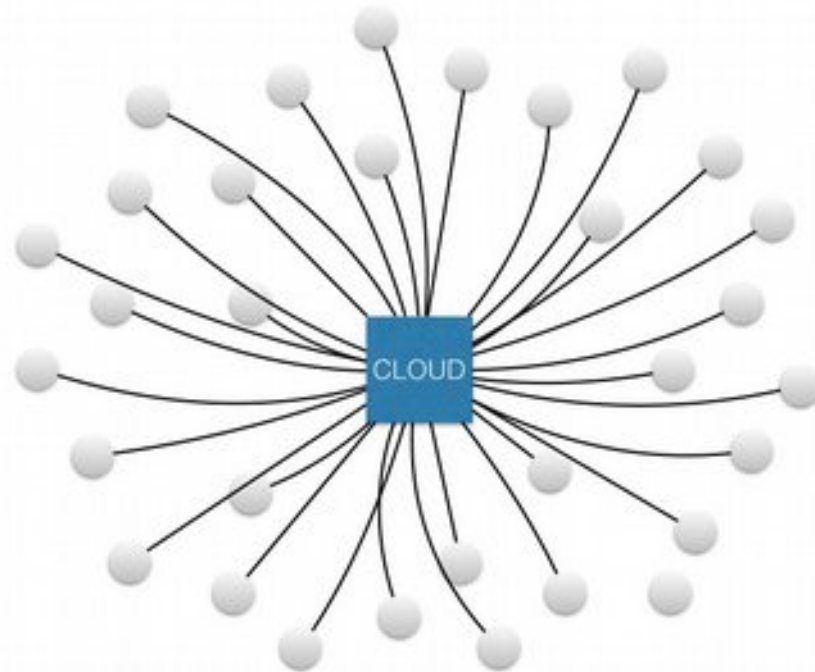
Real Big Stuff



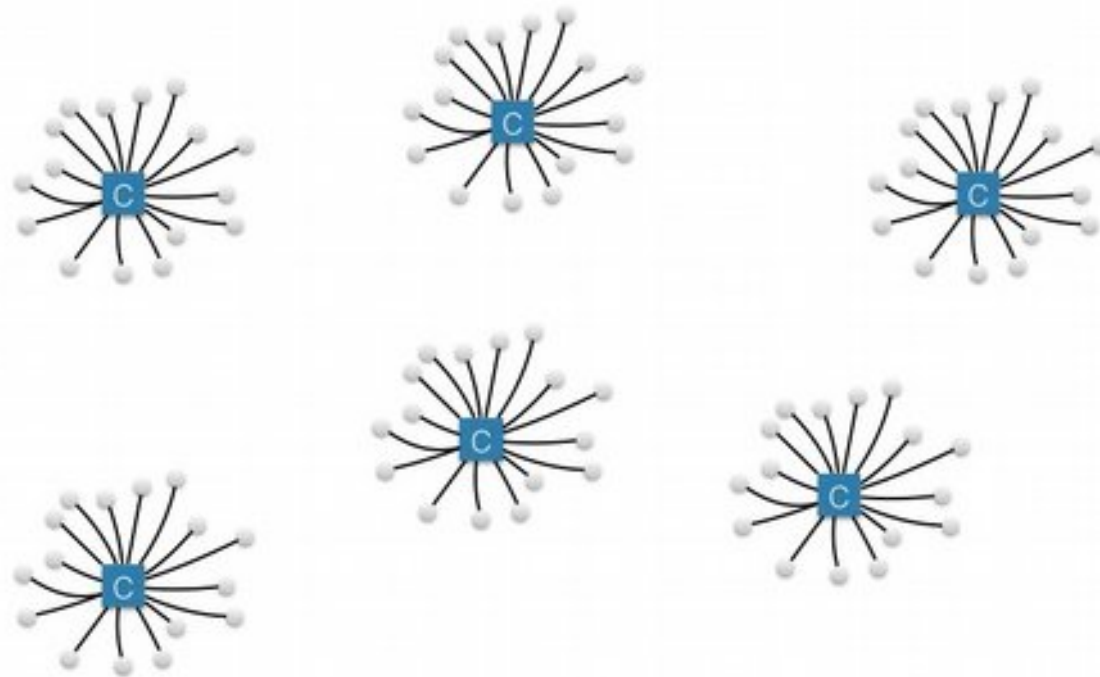
Federation



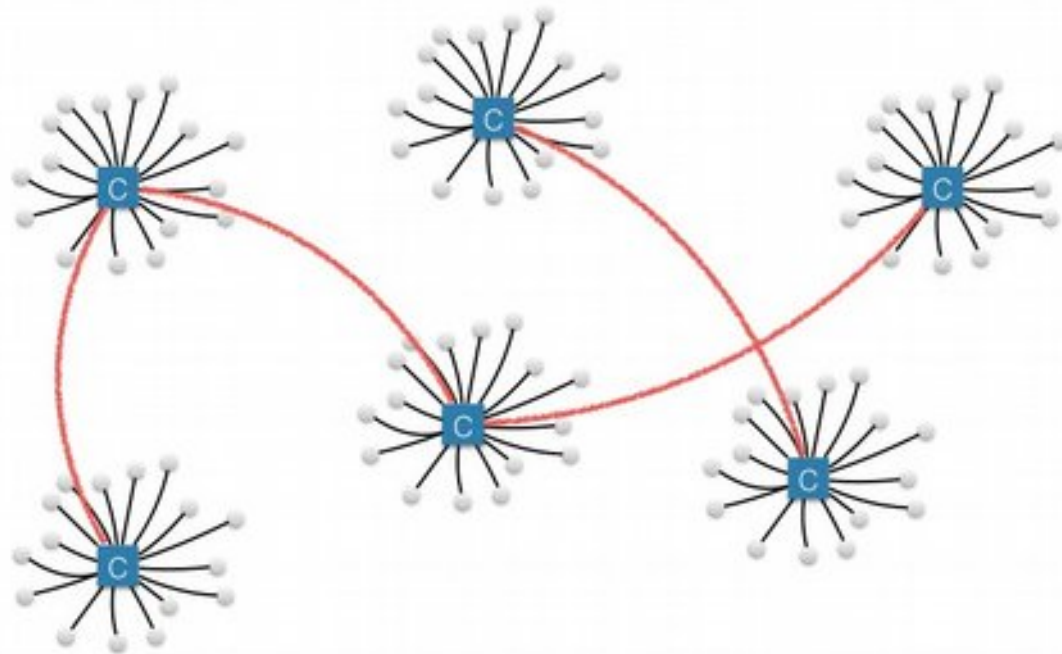
Ye Olde Cloud



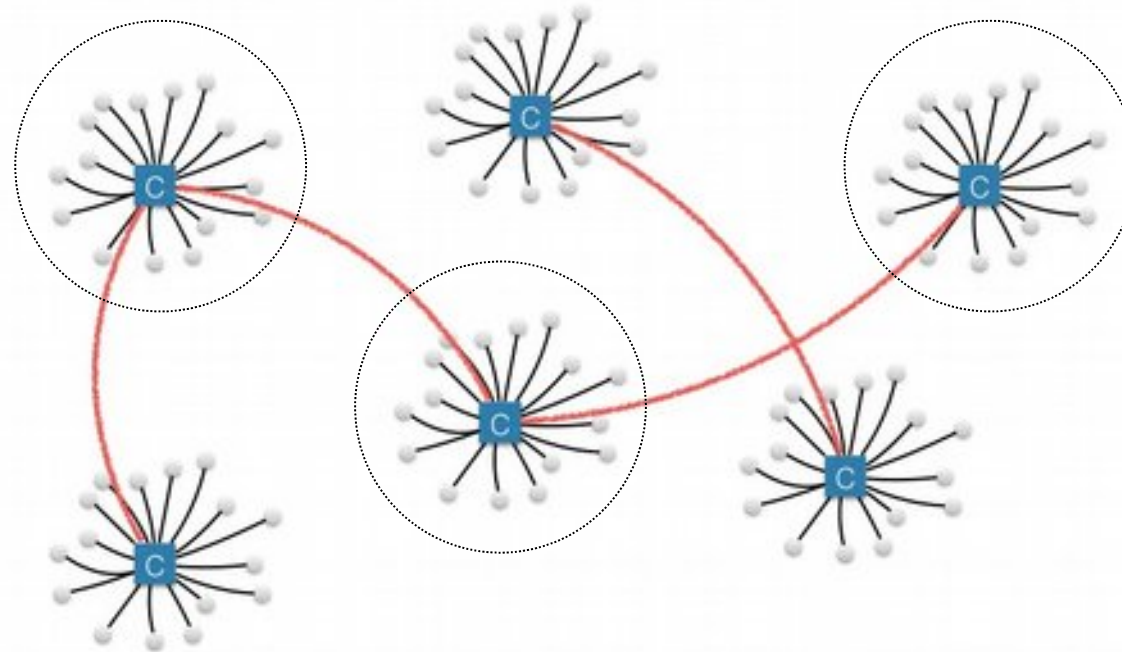
Private Clouds



Federated Clouds

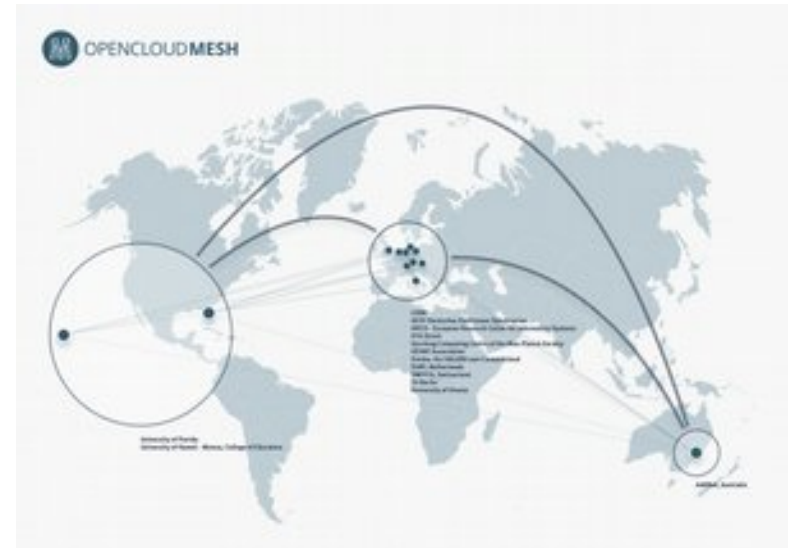


And security...





Questions???



- **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

