Fixing the internet with a federated cloud
Frank Karlitschek

- Born in Reutlingen, Germany
- Studied Computer Science in Tübingen
- Unit Manager and VP Engineering in different Internet companies
- Founded several startups
- Involved in open source and social networks for 20 years
- Developed openDesktop.org and a distributed social networking API 15 years ago
- W3C invited expert
- Founded ownCloud
- Founded Nextcloud
Agenda

- The problem with centralized services
- The challenges to implement decentralization services
- Some Nextcloud real world examples
- Questions
The Internet started decentralized
The Internet started decentralized

“The Internet is the global system of interconnected computer networks”
What is decentralized?
What is decentralized?

- No central instance
- Multiple provider
- Multiple server software
- Multiple client software
- Open Source / Free Software
Decentralized Internet Services:
Decentralized Internet Services:

- Mail
- Usenet (News)
- IRC
- Web
- XMPP
Centralized Internet Services:
Centralized Internet Services:

- File sync and share
- Social Networking
- Video / Voice
- Messenger
- IoT
- Cloud Computing
- AI / Personal Assistant
Why is this a problem?

- Proprietary software
- Cost
- Speed
- Legal issues
- Backdoors / espionage
- No ownership over own data
What can we do?
Fixing Step 1 - Free Software
Fixing Step 1 - Free Software

- AjaXplorer
- ownCloud
- Cozy
- Seafile
Fixing Step 2 - Federation

- ownCloud
- Nextcloud
- Pydio
- ...

-> Open Standard
Fixing Step 2 - Federation
Victory !!
Really ????
Diaspora vs. Facebook
XMPP vs. WhatsApp
identi.ca vs. Twitter
Ekiga vs. Skype
Cloud Federation vs. Dropbox, Google, …
Why didn’t this work?
What do we need to do differently?
• Making self hosting super easy
• Finding people
• Collaboration between projects
• Thinking out of the box
• Innovate
Nextcloud real world example
Public directory

Profile picture
Frank Karlitschek

Full name
Frank Karlitschek

Phone number
Your phone number

Website
karlitschek.de

Email
frank@karlitschek.de

Address
For password recovery and notifications

Private
Only visible to you

Contacts
Visible to local users and to trusted servers

Public
Will be synced to a global and public address book

Groups
You are member of the following groups:
admin

Password

Change password
Public directory

Global User directory
• Network of Lookup-Servers
• Master-Master-Master replication
• Similar to GPG Key Servers

Future:
• Distributed Hash Table
• W3C standard
• Integration of proprietary services
Vertrag Freie Mitarbeiter.odt

Actions and Minutes template.odt

Letterhead_Nextcloud.odt

Briefbogen_Nextcloud.odt

OIN agreement.pdf

5 files

204 KB

Actions and Minutes template.odt

26 KB, 5 months ago

Activities

Comments

Sharing

Versions

Frank Karlitschek

New comment ...

Frank Karlitschek

seconds ago

Indeed. Very useful

Olivier Paroz

5 months ago

This is mainly useful when working with customers and partners
<table>
<thead>
<tr>
<th>File Name</th>
<th>Size</th>
<th>Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertrag Freie Mitarbeit.odt</td>
<td>21 KB</td>
<td>23 days ago</td>
</tr>
<tr>
<td>Actions and Minutes template.odt</td>
<td>26 KB</td>
<td>5 months ago</td>
</tr>
<tr>
<td>Letterhead_Nextcloud.odt</td>
<td>22 KB</td>
<td>5 months ago</td>
</tr>
<tr>
<td>Briefbogen_Nextcloud.odt</td>
<td>18 KB</td>
<td>5 months ago</td>
</tr>
<tr>
<td>OIN agreement.pdf</td>
<td>118 KB</td>
<td>7 months ago</td>
</tr>
</tbody>
</table>

5 files 204 KB

Activities

Comments

Frank Karlitschek 26 KB, 5 months ago

New comment ...

Indeed. Very useful

Frank Karlitschek seconds ago

Olivier Paroz 5 months ago

This is mainly useful when working with customers and partners
Please help to fix the internet

Every user, company, country should be able to host it
Distribute and federated
Great UI / UX
Open protocols and standards
Fully open source and free software
Change the rules of the game
Questions ?