

Federation: Decentralized Social Networking and Services

LinuxFest Northwest

2022Apr23 @ 15:00

Big Blue Button

der.hans (https://floss.social/@FLOX_advocate)

Database Support Manager

Object Rocket, a rackspace company

<https://www.ObjectRocket.com/>

Yes, I'm hiring :)

Rackspace Technologies

<https://rackspace.jobs/>

Finding Hans

My Conferences and Presentations



- <https://www.SpiralArray.com/talks>

Social Media / Fediverse

- FLOX_advocate on Mastodon, https://floss.social/@FLOX_advocate
- LuftHans on Libera.chat IRC, usually in #SeaGL and #PLUGaz



What is the Fediverse?

Fediverse

coalition of decentralized, interoperable, digital, social spaces

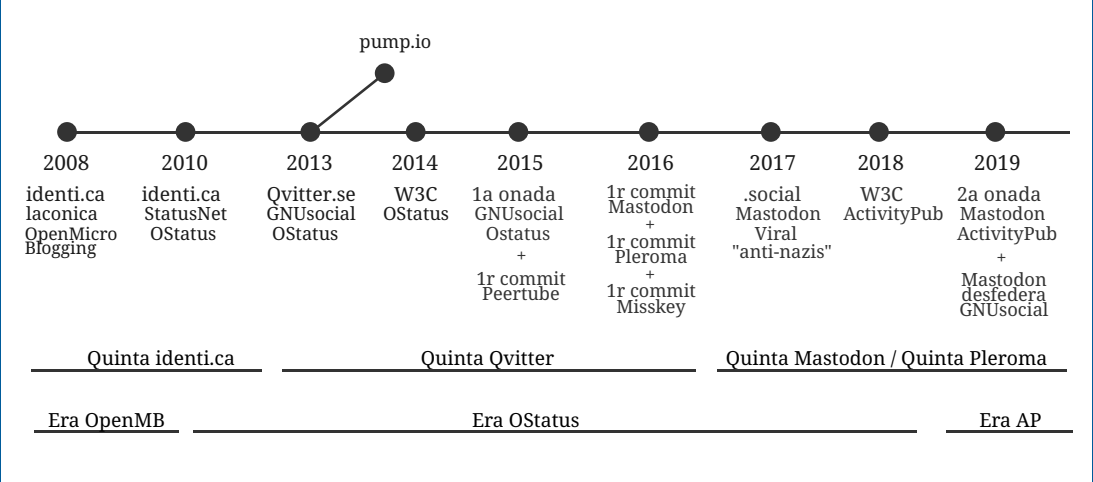
Features/Options

- many providers with local control
- no centralized authority
- interact with other services
- run your own
- unfiltered timeline

Who am I?

- privacy activist
- Free Software activist
- technologist
- spouse
- parent
- school volunteer

History Mapping



History of Federation

- email
- IRC
- web
- RSS
- XMPP/Jabber
- Status.net
- Diaspora
- MediaGoblin
- identi.ca
- Social WG
- ActivityPub - W3C standard

Sample Services

- Social Network
- Microblogging
- Image Sharing
- Video Sharing
- Book club
- Blogging
- File Sharing
- Audio Hosting
- Link Aggregator
- Event and Group Management
- Live Video Streaming

Building the Fediverse

Service

specific type of Fediverse service, .e.g. Mastodon or PixelFed

Instance

The particular domain an account is on

examples

- <https://FLOSS.social/> or <https://FOSStodon.org/> Mastodon instances
- <https://PixelFed.social/> PixelFed instance

What are digital social networks?

- online communities where people share experiences, thoughts, whatever

What are centralised social networks?

- spyware building exploitable psychological profiles of you



What are centralised social networks?

- spyware building exploitable psychological profiles of you
 - even if you don't have an account



Fediverse for Community



Enjoy Mastodon



Join Mastodon Microblogging

The image shows the Mastodon website homepage and a mobile app interface. The website header features the Mastodon logo (a grey elephant head) and the text "mastodon". Navigation links include "Apps", "Sponsors", "Code", "Resources", and "文". The main heading is "Social networking, back in your hands". Below this, a paragraph states: "Follow friends and discover new ones among more than 4.4M people. Publish anything you want: links, pictures, text, video. All on a platform that is community-owned and ad-free." Two buttons are present: "Get started" and "How it works". The mobile app interface is shown in the foreground, displaying a "Home" feed with posts from users like @Satoshi Kojima, IvaFakeName (ACAB, Villain), and Bucky the Sheep. A search bar and a notification panel are also visible.

Mastodon Description

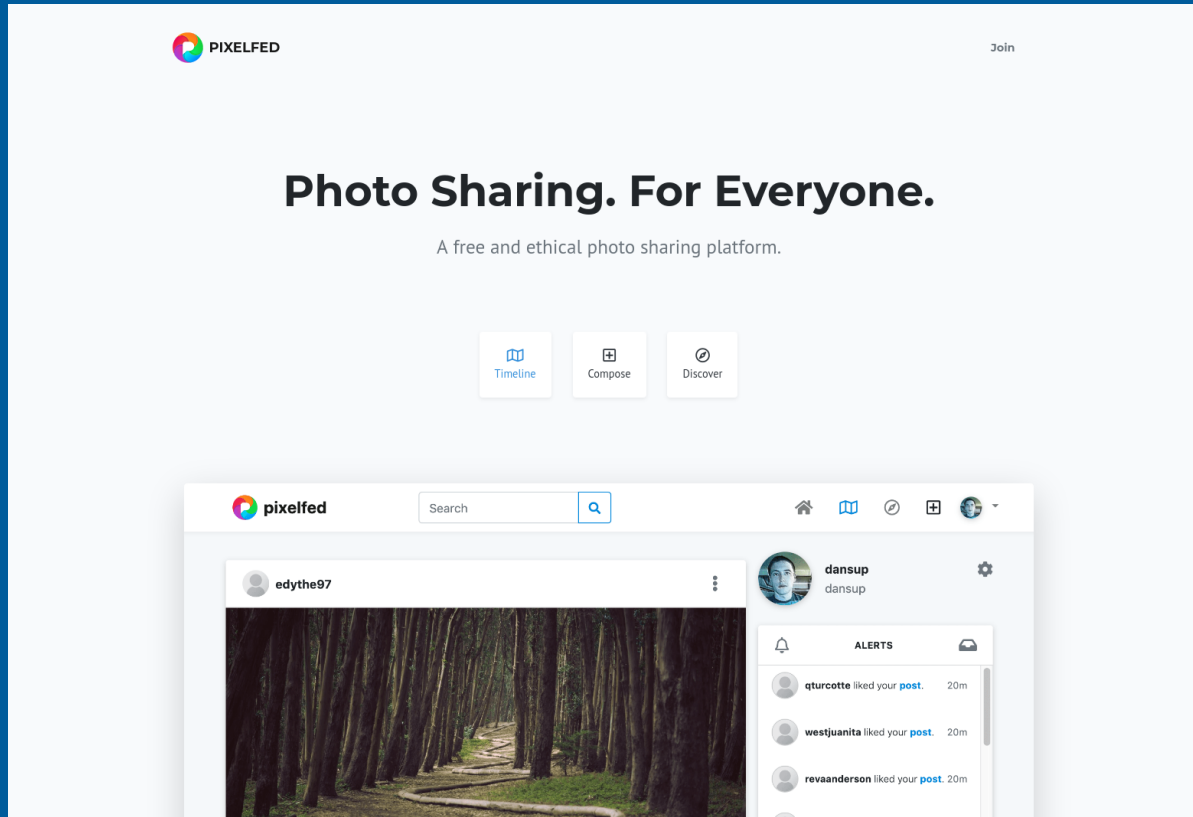
Mastodon description from Wikipedia

Mastodon is a decentralized social media platform where users are in control. It is Free Software that any individual or organization can run on their own infrastructure while connecting to a global network, allowing communities effective self-government. It comes with better publishing capabilities and robust anti-abuse tools.

[https://en.wikipedia.org/wiki/Mastodon_\(software\)](https://en.wikipedia.org/wiki/Mastodon_(software))

users are in control

Pixelfed Photo Sharing



PeerTube Video Sharing



Free software to take back control of your videos



Search for PeerTube videos and channels



PeerTube, developed by Framasoft, is the free and decentralized alternative to video platforms, providing you over 400,000 videos published by 60,000 users and viewed over 15 million times



What is PeerTube?



See the instances list

Privacy and Security in Your Hands

- Firefox containers
- data liberation
- hide your social graph
- opt-out of search engine indexing
- be aware of RSS feed
- few companies on the Fediverse

Choice

- client choice
- "Move to a different account"
- "Delete account"

Privacy in the Fediverse

Ever go outside?



Public Space or Private Garden?



Filtering Your Fediverse: Mastodon

- Mastodon just got a grant to add more filtering options
- follow requests
- filter by keyword or account name
- drop vs hide
- expirable filters
- muting vs blocking
- keyword, user, instance
- hide CW and hide all media
- mute conversation
- lock account
- public feed

Filtering Your Fediverse: PixelFed

- muted and blocked accounts not included in suggested posts, discover page, followed hashtags or your network timeline
- private account
 - When your account is private, only people you approve can see your photos and videos on pixelfed.
- opt-out of search engine indexing

Moderation For Your Fediverse

- local instance moderators
- local instance rules
- instance-wide block, filters
- local-only posting
- reporting problems to moderators, local and remote
 - The account is from another server. Send an anonymized copy of the report there as well?

Mastodon local rules

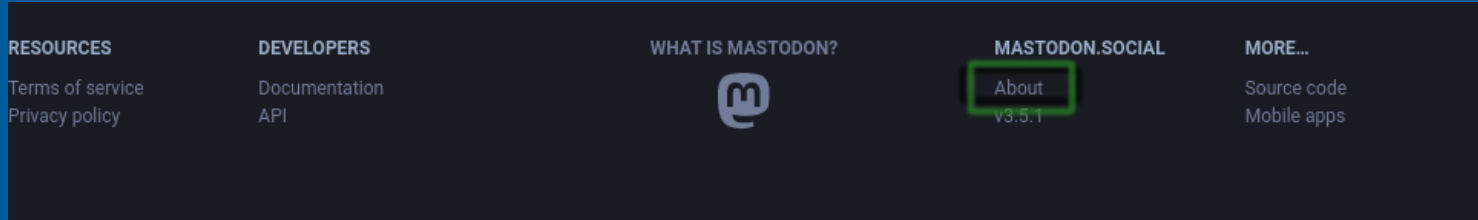




Figure 1. "About" goes to local rules

Home to **385** users

Who published **189K** posts

ADMINISTERED BY:
 **Michael Downey** 
@downey

CONTACT:
admin@floss.social

Server rules

Financial Sustainability

Our Pledge

Our Standards

Our Responsibilities

Scope

Enforcement

Attribution

Server rules

Below is a summary of rules you need to follow if you want to have an account on this server of Mastodon:

1. Use welcoming and inclusive language.
2. Respect differing viewpoints and experiences.
3. Gracefully accept constructive criticism.
4. Focus on what is best for the community.
5. Show empathy towards other community members.

Figure 2. rules screenshot from FLOSS.social instance

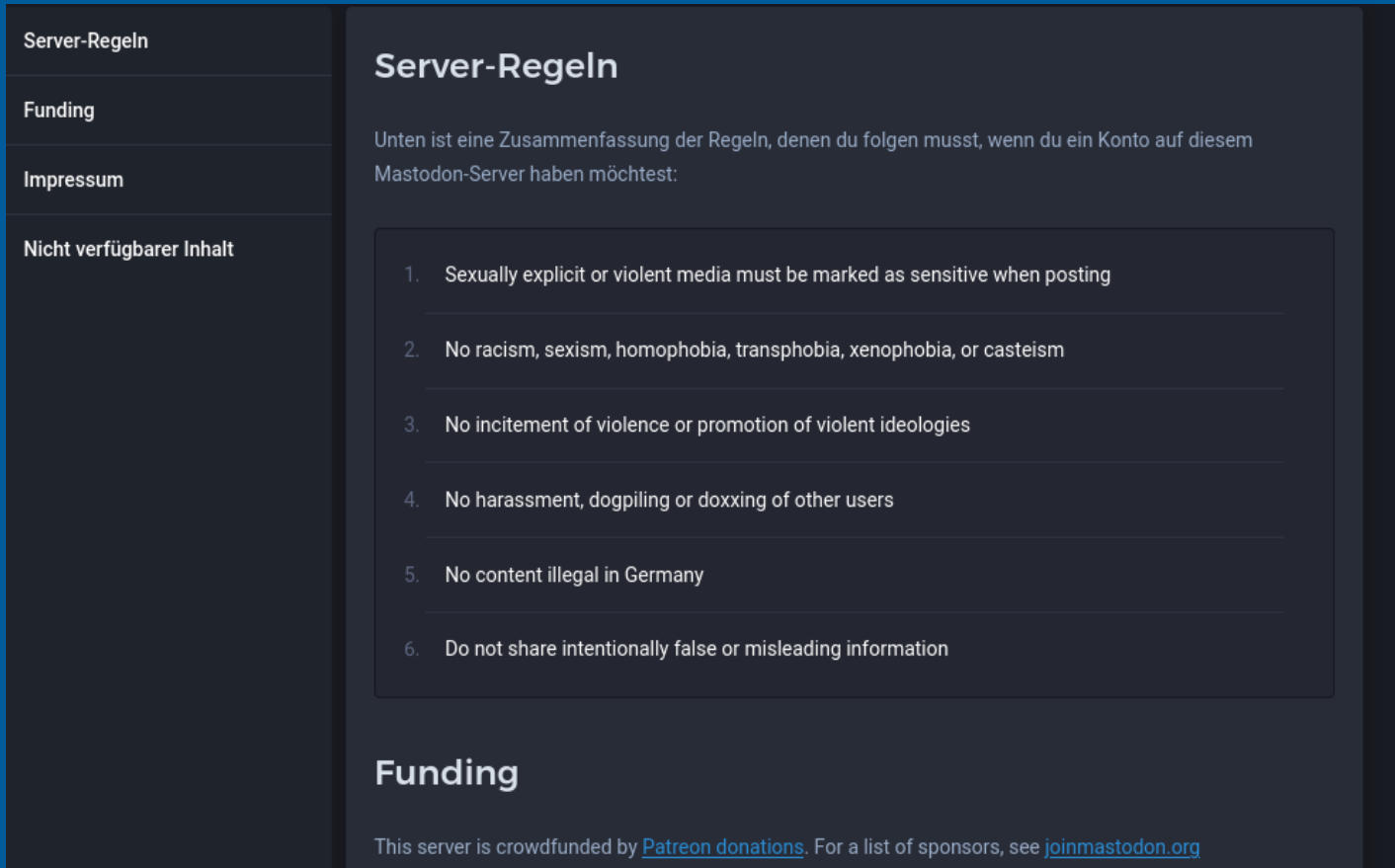


Figure 3. rules screenshot from Mastodon.social instance

Posting Moderation for Your Fediverse

- Public: Everyone can see
- Unlisted: Everyone can see, but not listed in public timeline
- Followers Only: only show to followers
- Direct Message: visible only to those in the message and instance admins
- Local Only: can't be forwarded off the instance

Accessibility in the Fediverse

- Fediverse software projects generally make a public effort towards accessibility
- ex: Mastodon posts are 500 characters, but they allow much longer image descriptions
- ex: Mastodon community generally encourages image descriptions for the visually impaired
- instances can require image descriptions
- screen reader accessibility tips for Mastodon posting

Why Federate

- avoid monoculture
 - "I think nobody, not even Mastodon's development team, wants a monoculture."
 - Christine Lemmer Webber (ActivityPub, MediaGoblin, Penguicon Guest of Honor)
- choose instances for
 - themes and fandoms
 - moderation team
 - instance size
 - has enforced guidelines
 - doesn't have enforced guidelines
- run your own instance

Free Software for Federation

- Is Free Software required to be a federated service?

Federated Protocols



- SMTP
- IRC
- XMPP
- OStatus
- Diaspora
- Activity Streams
- Pump.io
- ActivityPub
- Matrix
- Enterprise File Sync and Share

ActivityPub

- W3C standard
- Used by many Fediverse projects:
 - Mastodon - MicroBlog
 - Pleroma - MicroBlog
 - PixelFed - Image Share
 - Nextcloud - Personal Cloud Services
 - PeerTube - Video Sharing
 - Plume - Blog
- cooperative competition



Advantages of Group Self-Hosting

- choose your moderators
- choose your retention
- choose your filtering levels
- feature forks
 - local only posts (Mastodon fork)
- require accessibility
- security
- privacy
- adult content
- internal only

Why Internal Only?

- business
- school / college / university
- medical provider
- club

Disadvantages of Self-Hosting

- moderation is a lot of work
- not everyone can afford to self-host
- services using other people's computers are 'free'

Methods of Self-Hosting

- use a pi or old laptop on home connection
- use phone with 4G or 5G
- pay a service like masto.host, yourownnet or Spacebear
- install service on virtual host at cloud provider
- talk your roommate into hosting it :)

Welcome to the Fediverse



Choosing an Instance

- not a permanent decision
- local rules
- theme or purpose of instance
- number of users
- moderators
- instance admins
- instance funding

The Fediverse is what we make with it.

Mastodon tags

- #Fediverse
- #FantasticFed
- #FediJobs
- #FollowFriday
- #FLOSSconf
- #cfp
- #LocalGroup
- #LFNW
- #SeaGL

Welcome to the Fediverse: Bad Actors and Disagreements

- freedom isn't free
- We don't have to get along, but it is an option.
- instance and account blocks
- moderation tools

Federated Instance As Walled Garden

- Fediverse isn't necessarily Free as in Freedom



Fediverse Services

Micro Blogging

- Mastodon
- Pleroma
- GNU social

Social Blogging

- Diaspora
- Friendica

Blogging

- WriteFreely
- Plume

Fediverse Services: Media Sharing

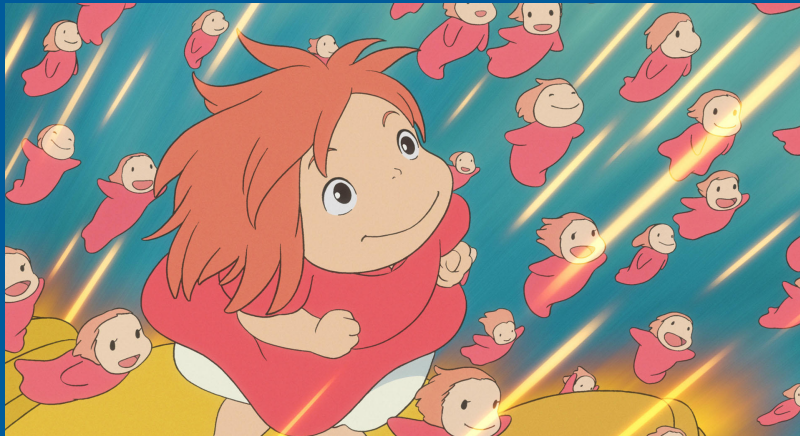
- PixelFed
- PeerTube
- FunkWhale
- Owncast
- MediaGoblin

Fediverse Services: Other

- IRC - Chat
- Matrix - Chat
- Nextcloud - Personal Cloud Services
- GetTogether - Event Sharing
- Mobilzon - Event and Group Management
- BookWorm - Book Club
- Hubzilla - Decentralized Identity
- Lemmy - Link Sharing

Participate in the Fediverse

- create an account
 - follow some people
 - firehose



You Can Build the Fediverse

- instance moderation
- development and documentation
- W3C
- weekly Social CG meetings
- donate to your instance
- Outreachy internships



Fediverse Adjacent

- IndieWeb

Homework

- contemplations
 - "Twitter is in the outrage business; Mastodon isn't a business" - @codesections@fosstodon.org
 - Is web federated?
- actions
 - create an account and have fun :)

Thanks and Q&A

We don't have to get along, but with Federation it is an option :).

The Fediverse is what we make with it.



Resources for getting started

- Trunk: a topic organized listing of Mastodon accounts to follow
- FediFollows: a topic organized listing of Mastodon accounts to follow
- Semi-catergorized list of some Mastodon instances
- Moderators are people too
- Mastodon instance chooser
- screen reader accessibility tips for Mastodon posting

Fediverse FLOSS accounts for getting started

- <https://mstdn.social/@feditips>
- <https://mastodon.social/@SeaGL>
- <https://mastodon.technology/@kde>
- <https://floss.social/@gnome>
- <https://framapiaf.org/@davidrevoy>

Resources

- Mastodon founder, Eugen, on decentralization
- Mastodon abuse and harassment design and features
- Mastodon Elevator Pitch
- Mastodon fork that experiments w/ features
- LibreLounge podcast
- The Federation

Articles Fediverse and Adoption

- Towards a Greater Federated Architecture
- Immer mehr Behörden nutzen soziales Netzwerk Mastodon

Service Welcome or Home Pages

- Mastodon - MicroBlog - <https://www.JoinMastodon.org/>
- PixelFed - Image Share - <https://pixelfed.org/>
- Pleroma - MicroBlog - <https://pleroma.social/>
- Nextcloud - Personal Cloud Services - <https://nextcloud.com/>
- PeerTube - Video Sharing - <https://joinpeertube.org/>
- Plume - Blog - <https://joinplu.me/>
- Diaspora - Social Blog - <https://diasporafoundation.org/>
- Friendica - Social Blog - <https://friendi.ca/>
- Matrix - Chat - <https://matrix.org/>
- BookWorm - Book Club - <https://bookworm.social/>
- FunkWhale - Audio Hosting - <https://funkwhale.audio/>
- Mobilizon - Event and Group Management - <https://joinmobilizon.org/en/>
- Owncast - Live Video Streaming - <https://owncast.online/>

Credits

- DJ Sundog - not reusing personally identifying information
- Wikipedia - definition of Fediverse
- fedi-timeline.svg - <https://documents.lleialtat.cat/LleialTec/Fediverse/historia/fedi-timeline.svg>
thanks to @murph@fosstodon.org for pointing it out
- Screenshot_2021-04-25_Mastodon.png - Screenshot of JoinMastodon.org
- Screenshot_2021-04-25_Pixelfed.png - Screenshot of PixelFed.org
- Screenshot_2021-04-25_JoinPeerTube.png - Screenshot of JoinPeerTube.org
- Prayitno - Welcome.jpg - CC BY 2.0
- Studio Ghibli images - <https://www.ghibli.jp/gallery/>