

Matrix and ActivityPub for Everything

How to Konquer the world using decentralization

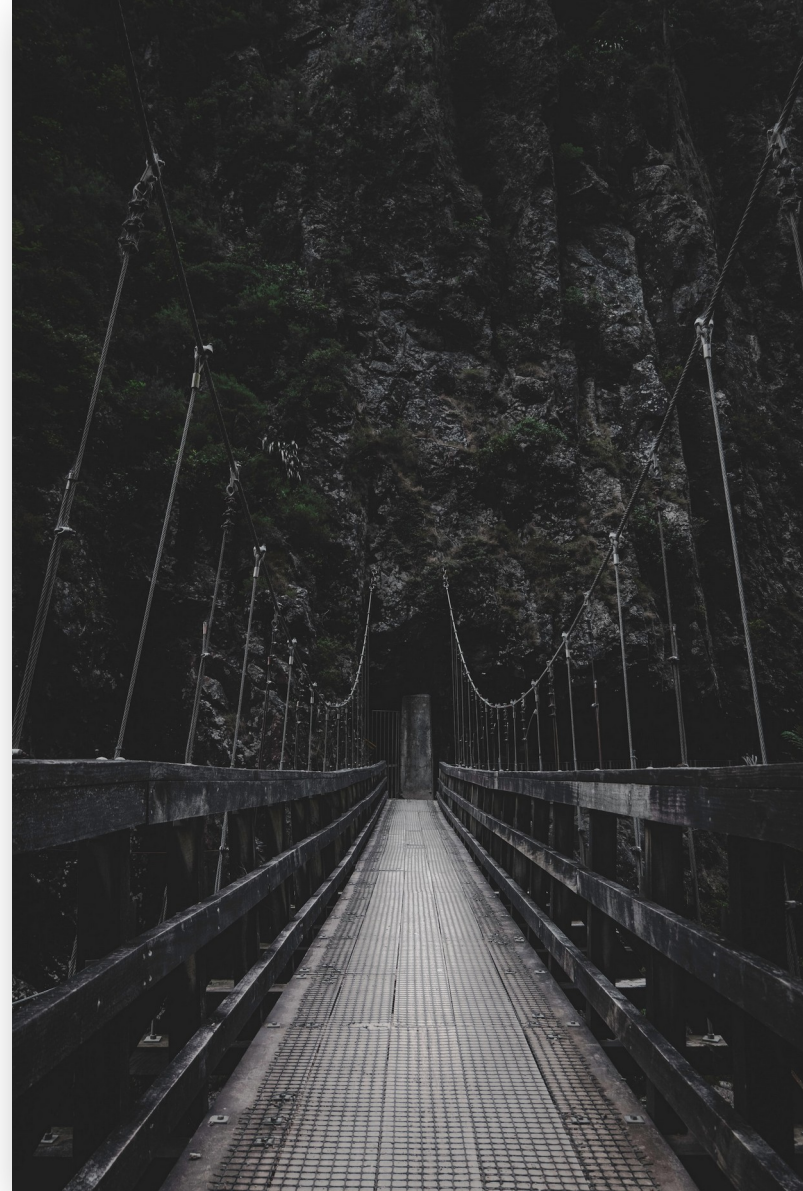
Carl Schwan and Tobias Fella

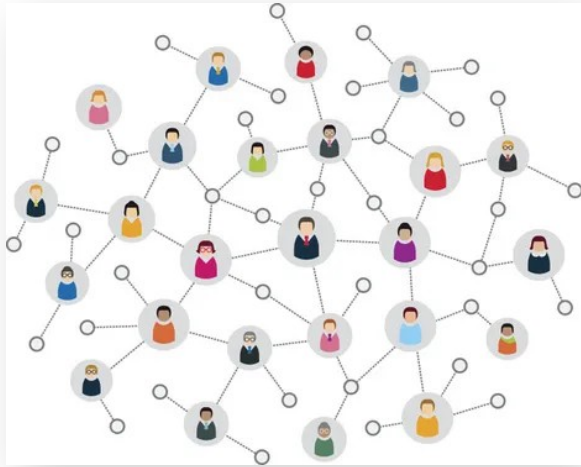




Decentralize, you must.

- Yoda, probably





Decentralization

What? Everyone can use any server, while also interacting with anybody on another server

Why? See Twitter & Reddit

How? DIY! Use Matrix or ActivityPub

Matrix

An open network for secure,
decentralised communication.



End-to-end encrypted

For one-to-one and group
conversations

Federated

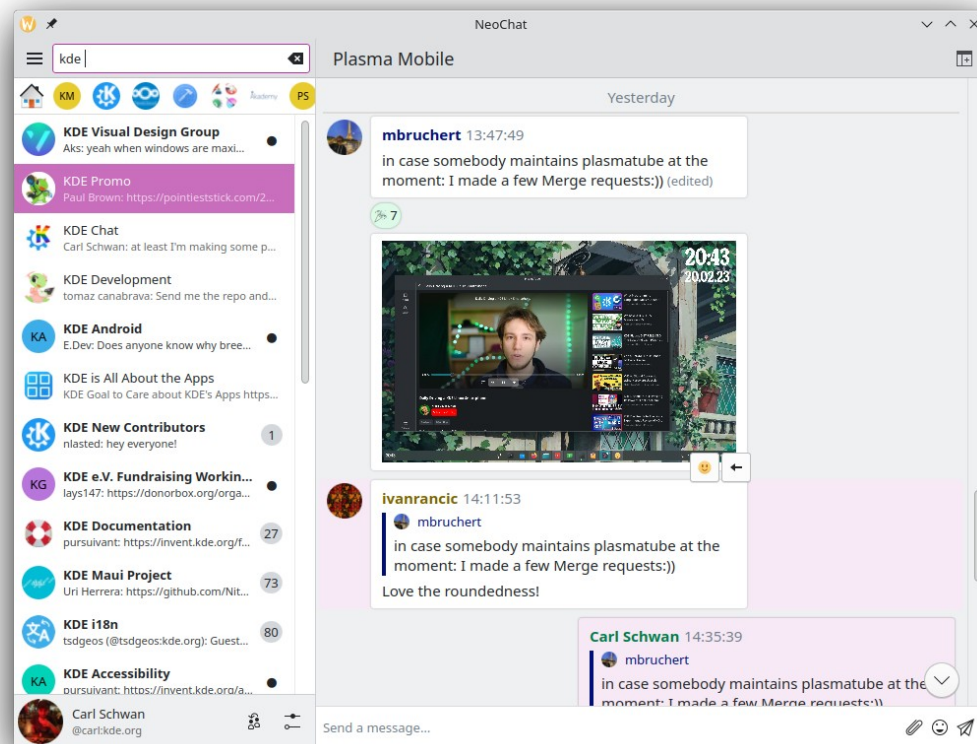
Not one server, but many
communicating between each other via
the Matrix protocol

Open

The specification is open and everyone
can contribute to it

What makes Matrix interesting for us?

- KDE has:
 - a server: kde.org
 - a chat client: NeoChat
 - Matrix integration in Itinerary
- KDE contributes actively to libQuotient (Qt library for Matrix)
- Generic communication protocol with possibility to extend it with custom events. It's just JSON!
- Matches our values (privacy, Open Source, ...)



ActivityPub / Fediverse?

“The fediverse is a collection of community-owned, ad-free, decentralised, and privacy-centric social networks.”



~~End to end
encrypted~~

~~For both one to one and
group conversation~~

Federated

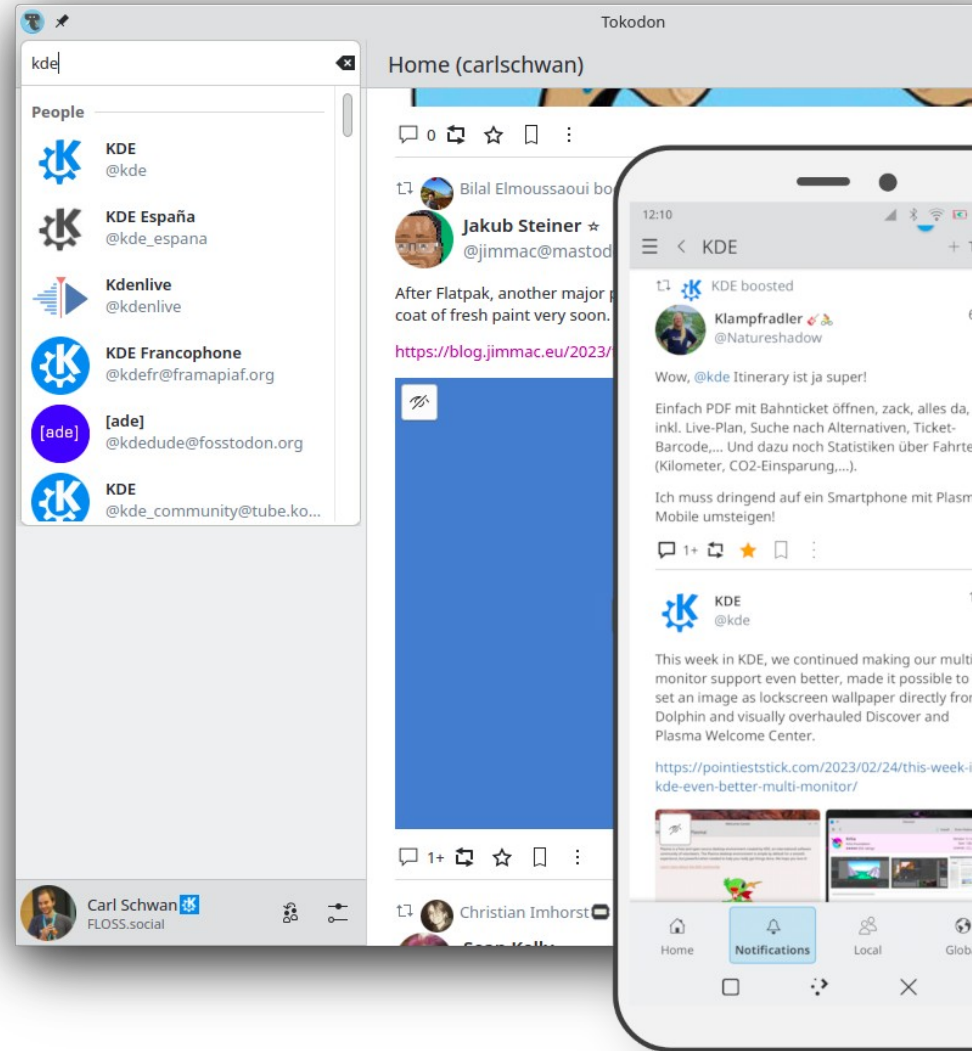
Not one server, but many
communicating between each others
with many implementations

Open

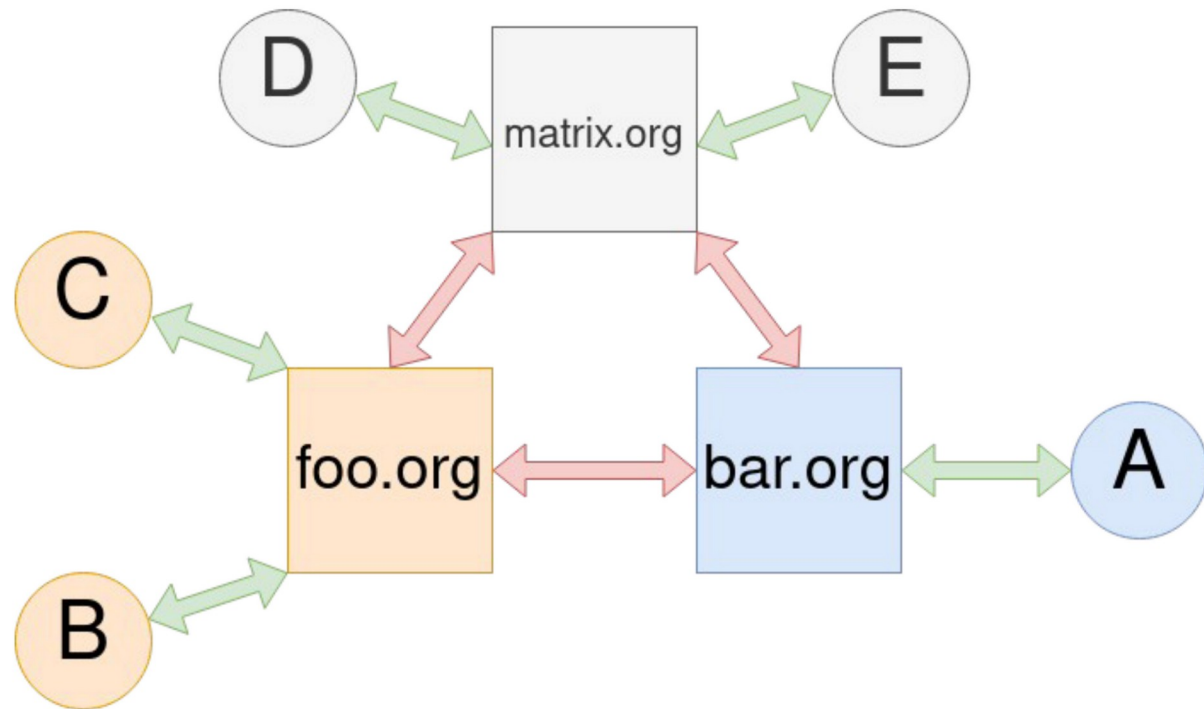
The specification is open and is called
ActivityPub. It is a W3C standard

What about Mastodon and the Fediverse?

- KDE has:
 - an (unofficial) instance: kde.social
 - Two clients: Tokodon and Choqok
- Lots of different usage: Mastodon, Lemmy, Pixelfed, Funkwhale, BookWorm, Nextcloud Social, Mobilizon, Peertube, ...
- Also matches our values (privacy, Open Source, ...)



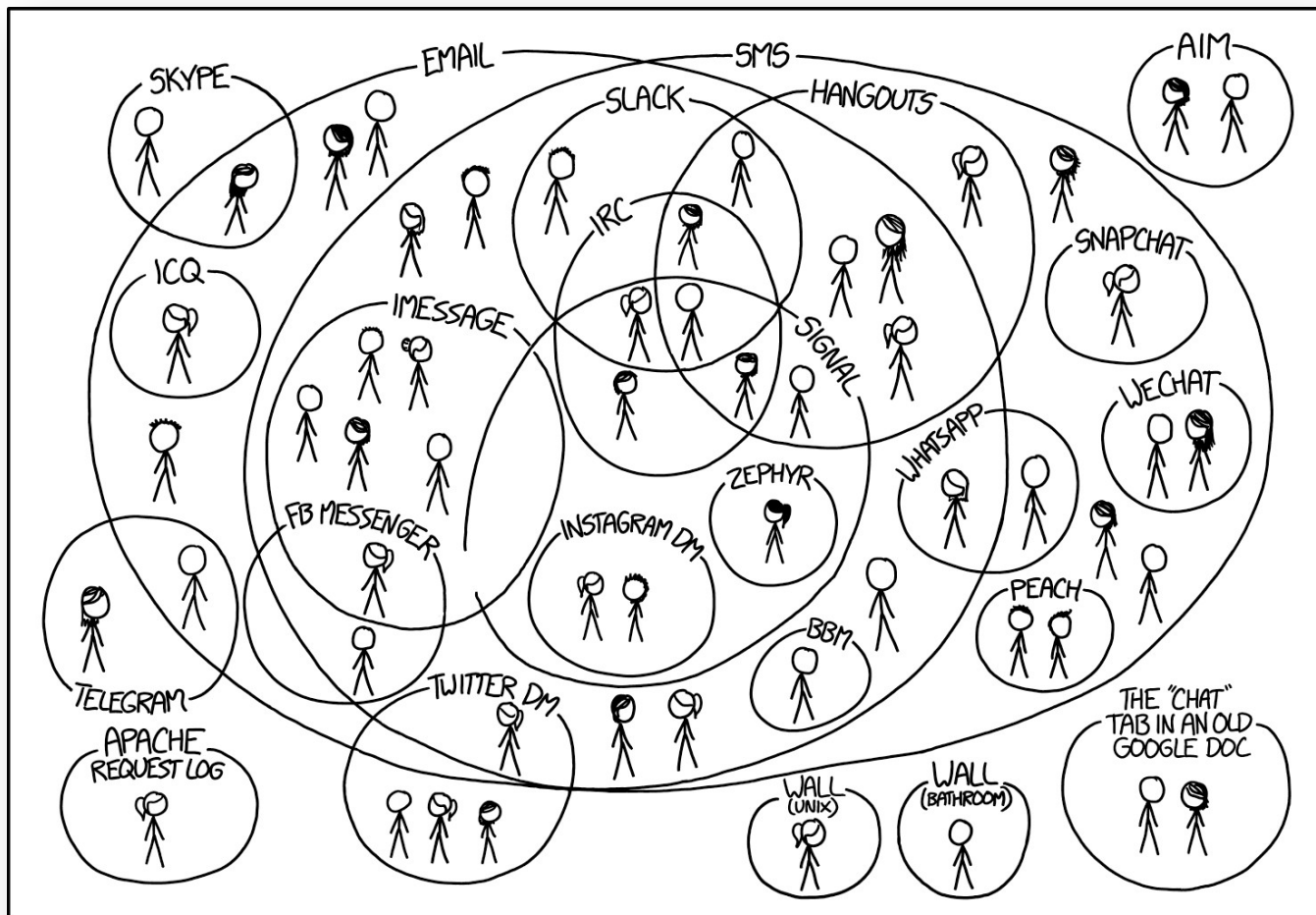
Federation - Matrix



Encryption

- End-to-End Encryption
- Server shouldn't be able to read messages
- In Matrix: Olm and MegOlm, based on Double Ratchet algorithm from Signal
- In ActivityPub: Nothing*

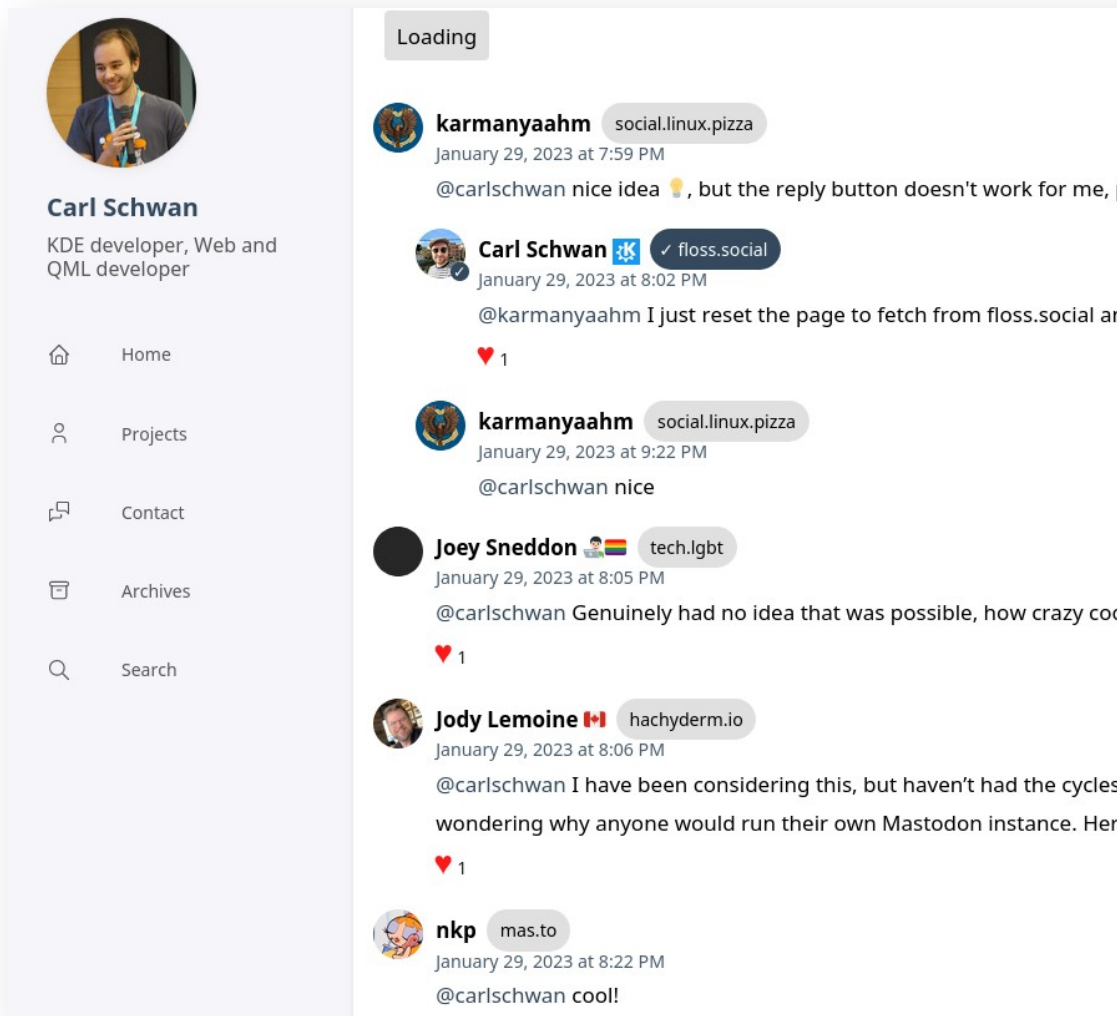
Bridges



I HAVE A HARD TIME KEEPING TRACK OF WHICH CONTACTS USE WHICH CHAT SYSTEMS.

Existing use case

Use Mastodon as a comment platform



The screenshot shows a Mastodon profile page for Carl Schwan. The profile information includes a circular profile picture, the name "Carl Schwan", and the bio "KDE developer, Web and QML developer". A navigation menu on the left side contains icons and labels for "Home", "Projects", "Contact", "Archives", and "Search". The main content area displays a list of comments from other users, each with a profile picture, name, domain, timestamp, and text. The comments are as follows:

- karmanyaahm** (social.linux.pizza) on January 29, 2023 at 7:59 PM: "@carlschwan nice idea 🧡, but the reply button doesn't work for me,"
- Carl Schwan** (floss.social) on January 29, 2023 at 8:02 PM: "@karmanyaahm I just reset the page to fetch from floss.social and"
- karmanyaahm** (social.linux.pizza) on January 29, 2023 at 9:22 PM: "@carlschwan nice"
- Joey Sneddon** (tech.lgbt) on January 29, 2023 at 8:05 PM: "@carlschwan Genuinely had no idea that was possible, how crazy coo"
- Jody Lemoine** (hachyderm.io) on January 29, 2023 at 8:06 PM: "@carlschwan I have been considering this, but haven't had the cycles wondering why anyone would run their own Mastodon instance. Her"
- nkp** (mas.to) on January 29, 2023 at 8:22 PM: "@carlschwan cool!"

<https://carlschwan.eu/2020/12/29/adding-comments-to-your-static-blog-with-mastodon/>

Existing use case

Use Matrix as a comment platforms

<https://cactus.chat>

Cactus Comments Demo

Here is an embedded comment section, so you can get a feel of what Cactus Comments is like. Enjoy 🙌

⚠️ Shitposts allowed ⚠️

Add a comment

Name

Log in

Post

? **Test** 47 minutes ago

Hwewo

? **Test** 17 hours ago

Jammy Wammies

? **Test** 17 hours ago

Bruh?

? **jorge** 17 hours ago

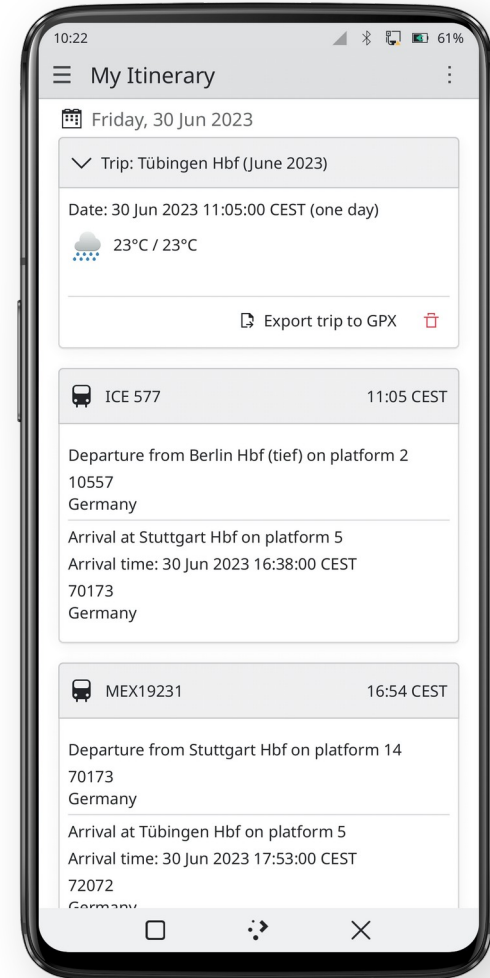
teste

? **TTTTTTTT** 18 hours ago

What is Itinerary?

KDE Itinerary is a digital travel assistant that protects your privacy. It makes collecting all the information about your travel inside a single application easy and straightforward.

<https://kde.org/for/travelers/>



Import Mobilizon events in Itinerary

Mobilizon

Se connecter S'inscrire



7
NOV

Plus d'arbres, moins de Pub !

Par Les ContribUtopistes

Événement public Politique et organisations anti-pub contribution utopie surveillance toulouse

Participer
3 personnes participent
Actions ...

À propos de cet événement

Cachons les écran de pub-surveillance !

Des écrans qui nous surveillent


Ces écrans polluent notre ville, nos espaces publics et nos cerveaux.

Mais le pire, c'est qu'ils nous observent, et prennent des notes.

En effet, les capteurs intégrés à ces écrans publicitaires essaient de mesurer nos regards et nos réactions aux publicités émises !

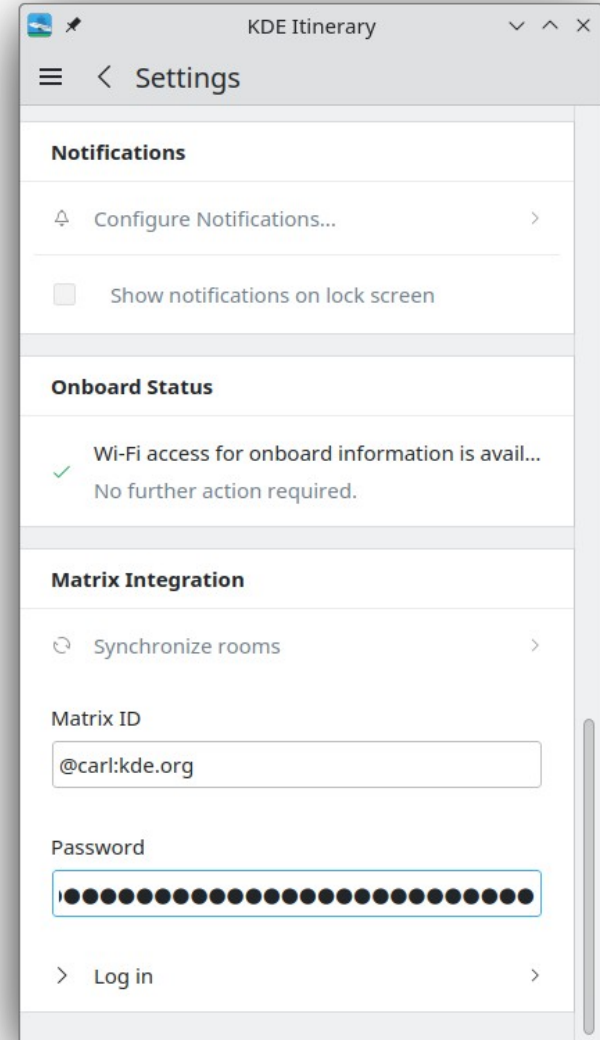
Lieu
Gare de Toulouse-Matabiau
31500, Toulouse, France
[Afficher la carte](#)

Date et heure
Le samedi 7 novembre 2026 de 07:00 à 11:00

Organisé par
 Les ContribUtopistes
@les_contributopistes

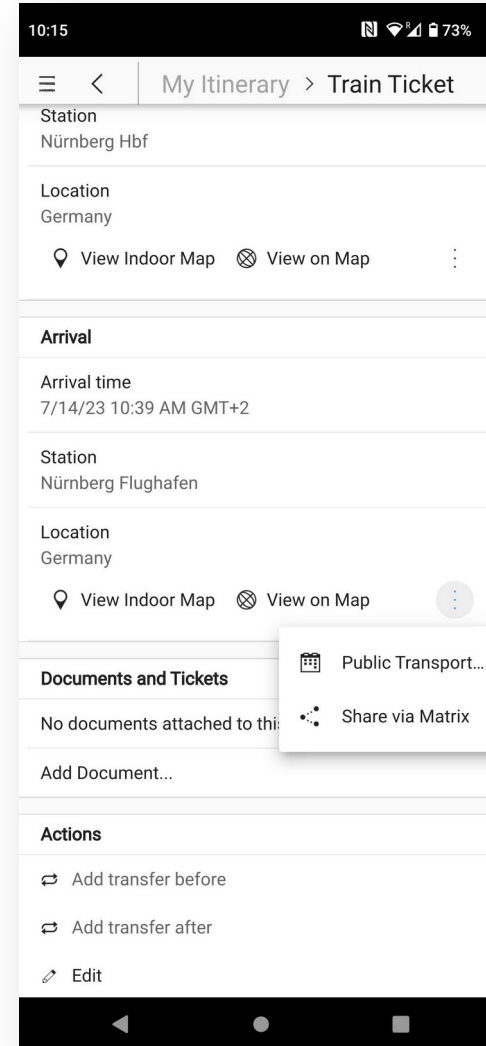
Matrix in Itinerary

Matrix and Itinerary?!



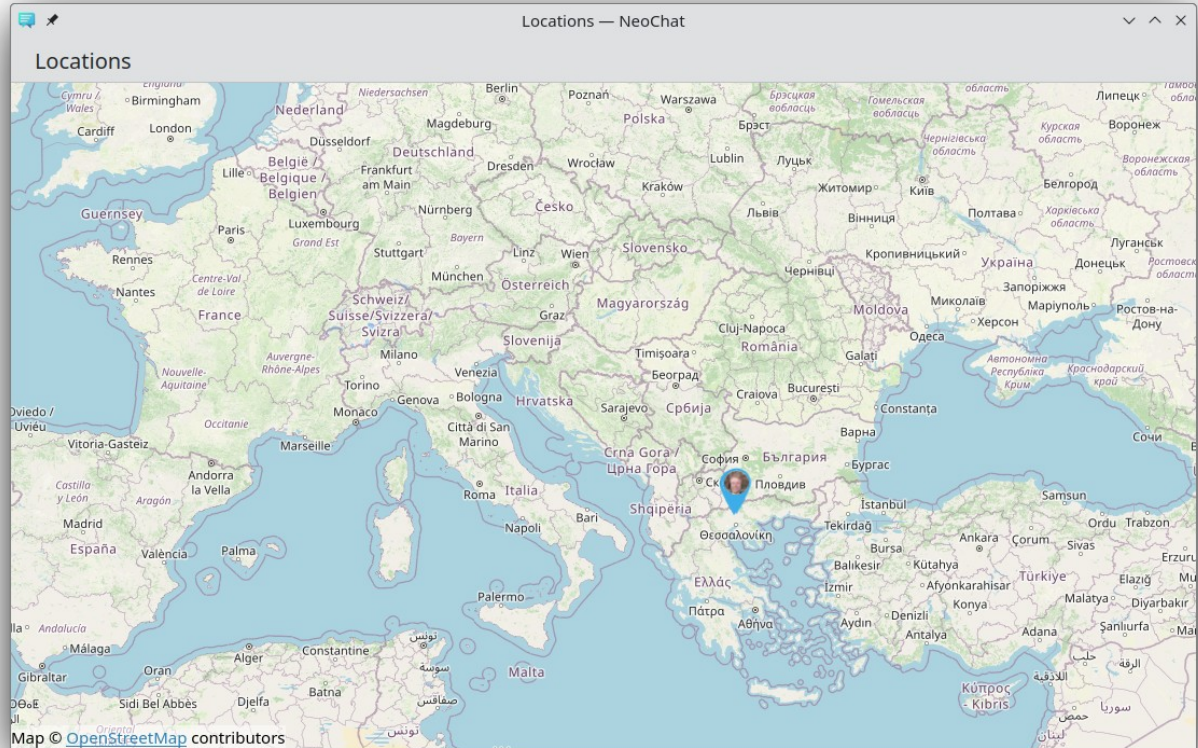
Matrix in Itinerary

Location sharing with Matrix and Itinerary



Matrix in Itinerary

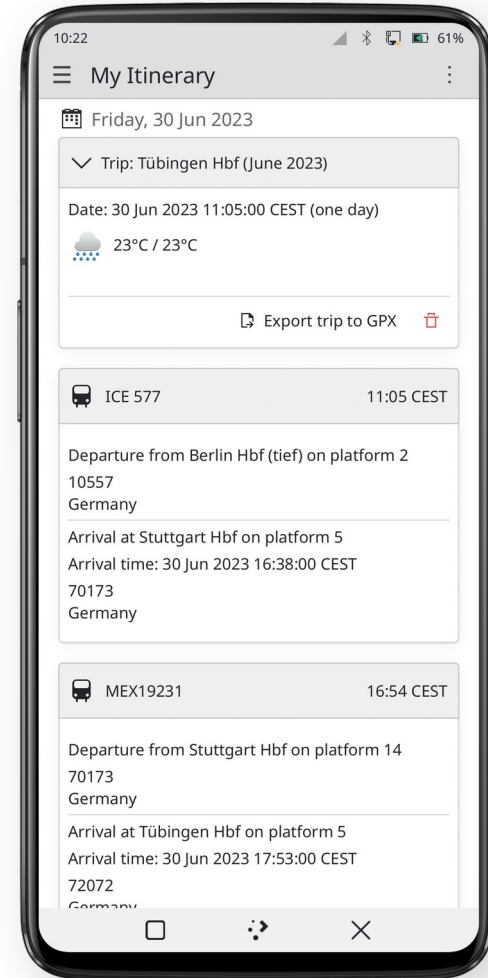
Location sharing with Matrix and Itinerary... And NeoChat



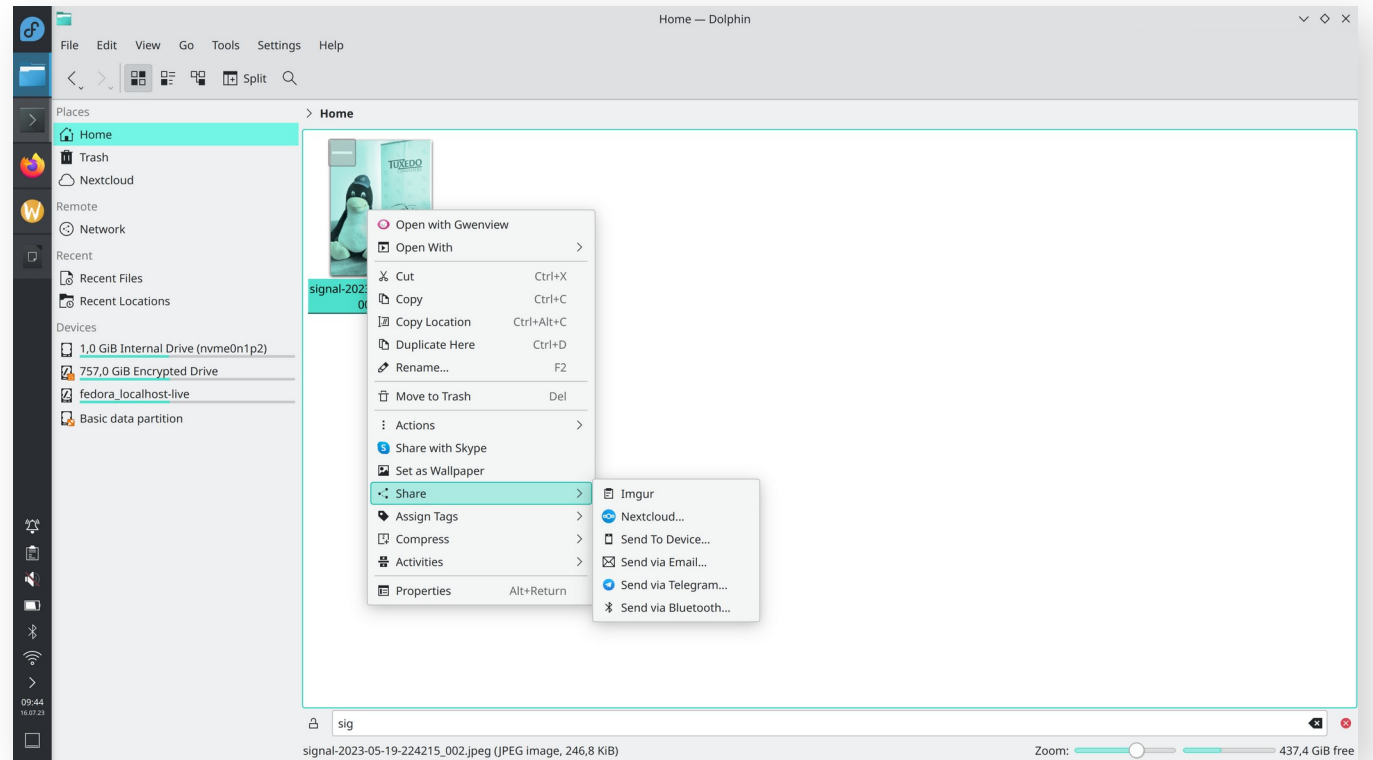
Synchronizing Itinerary data on Matrix

Wanted:

- Synchronizing (JSON) Data
- Synchronizing Files
- Across devices in different networks
- Secure



Endless Possibilities



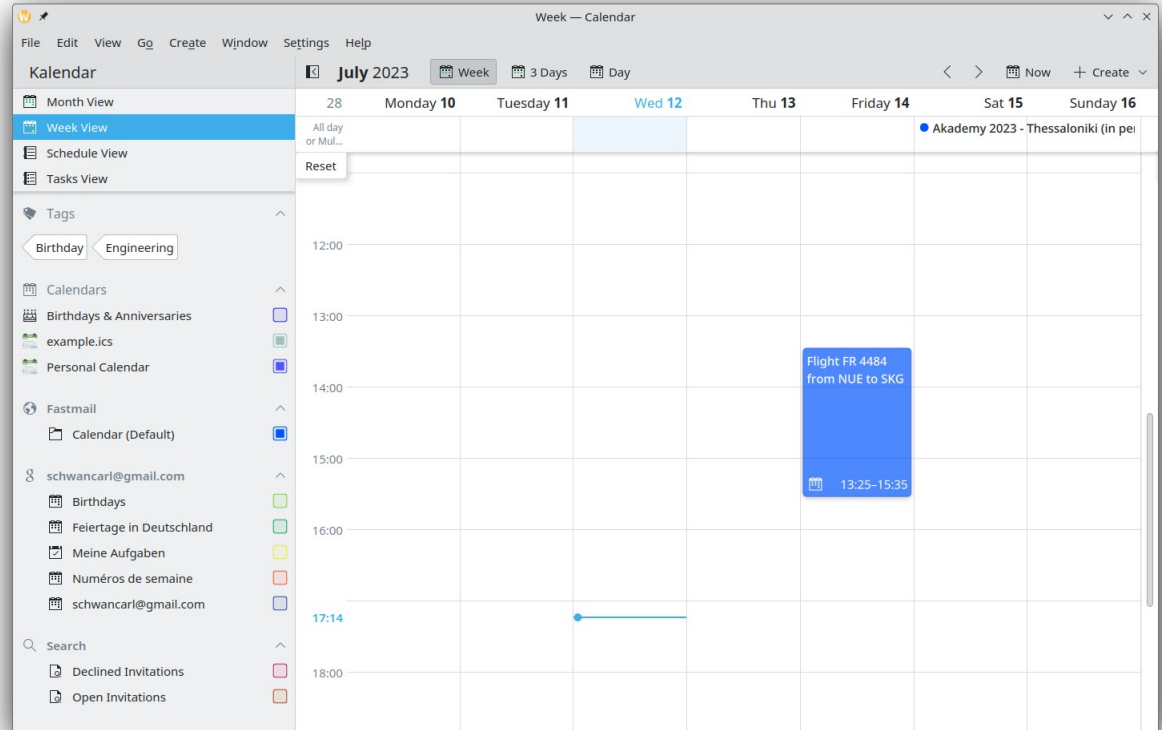
Future ideas

Use Matrix as iTiP handler

iCalendar Transport-Independent

Interoperability Protocol is the standard

(RFC 5546) to send email invitations



Import Mobilizon events in Kalender/KOrganizer

Similar to importing the events in Itinerary

How?

Matrix: LibQuotient, developed by Alexey, Carl, and Tobias

ActivityPub: Nothing yet, come talk to us

QUESTION
TIME

