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-on-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, BookWyrm, Nextcloud Social, Mobilizon, Peertube, ...
  - Also matches our values (privacy, Open Source, ...)
• 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*
I have a hard time keeping track of which contacts use which chat systems.
Existing use case

Use Mastodon as a comment platform

Existing use case

Use Matrix as a comment platforms

https://cactus.chat
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
Matrix and Itinerary?!
Matrix in Itinerary

Location sharing with Matrix and 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
Future Ideas

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 Kalendar/KOrganizer

Similar to importing the events in Itinerary
Future ideas

How?

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

ActivityPub: Nothing yet, come talk to us
QUESTION
TIME