

Libervia: the Universal Communication Ecosystem

Jérôme Poisson (Goffi)

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Libervia: A Comprehensive Overview

- ▶ A feature-rich ecosystem
- ▶ End-to-end encryption, decentralized, and standards-based
- ▶ Multi-frontends
- ▶ Multi-platform
- ▶ Open Source/Libre (AGPL v3+)
- ▶ Highly extensible/customizable

Instant Messaging



Libervia Chat Demo



pierre

Hi Louise! I'm good, thanks. How about you?

22:03



louise

I'm great, thanks for asking. Have you seen the new chat page in the Libervia web frontend?

22:03



pierre

Yes, I have! I really like its simple and efficient design. What do you think?

22:04



louise

I agree, the design is really user-friendly. Also, did you read about the XMPP <=> ActivityPub gateway they're working on? It sounds really promising!

22:04



pierre

Absolutely, the potential for increased interoperability is huge! It's impressive to see these technologies coming together.

22:04



louise

Definitely. Oh, before I forget, I wanted to show you something. Let me find the file...

22:04



louise



22:04



pierre

Wow, this image of the mountains is stunning! Did you take it during your hiking trip?

22:04



louise

Yes, it's from my trip! I'm glad you like it. Nature can be breathtaking, right?

22:04



louise

22:04

Enter your message



Blogging



Libervia progress note 2023-W22

goffi 31/05/2023, 20:39 jabber-imp-en SaT Libervia project libre Libervia progress SaT progress

Hello,

It's been a while since my last progress note. I've been immersed in work on Libervia, with many tasks to accomplish. I'll keep this update brief.

A/V Implementation in Libervia

I'm thrilled to announce a new development that I haven't yet officially shared on this blog: Libervia has once again received a grant from [NLnet](#), this time via the NGI Assure Fund. This funding will facilitate the implementation of A/V calls with Jingle across several frontends: Web, Desktop, and CLI. In addition to one-on-one calls, multi-party calls are in the plans. The first approach will be using [XEP-0272: Multiparty Jingle \(MuJ\)](#), which supports Peer-to-Peer (P2P) connections between participants without the need for a specific service—ideal for a small number of participants. For larger groups, a Selective Forwarding Unit (SFU) will be used, mirroring the technology used in platforms such as [Jitsi Meet](#).

Alongside calls, we plan to offer Desktop Sharing, and even a specification and implementation for Remote Desktop Control atop XMPP!

Progress is well underway; one-on-one calls are already functional within the web frontend. However, there is still substantial work ahead.

To gain insight into the related tasks and what we've accomplished so far, you can check [the associated tickets](#).

ActivityPub Gateway

I realize the high level of anticipation surrounding this gateway. While the gateway is operational (this blog utilizes it), it is yet to stabilize. I had hoped early adopters would install it and provide bug reports or other feedback. Unfortunately, this was not the case, with only one person (to my knowledge) having used it and provided prior feedback. This is understandable considering the requirement of an existing XMPP server, installation of a dev version of Libervia, and setting everything up. If you wish to try it out, you're welcome to join our official chat at libervia@chat.jabberfr.org ([http link](#)).

Nonetheless, I've decided to adjust my strategy. At some point, I plan to open a test instance. Due to limited resources for moderation, it will likely be invitation-only initially. The ultimate aim is to gather sufficient feedback to ensure stability.

Official Website and Test Instance

There have been several changes to the website:

- The Flatpak and Docker images appeared to be malfunctioning. I've temporarily removed them and plan to rectify this issue later. If you wish to test Libervia in the meantime, the sources remain available.
- I've added a roadmap at <https://libervia.org/roadmap>. Many had requested this, so here you go.

I've discontinued the libervia.org test instance, after years of service, as I've relocated the official website there to align with the project's new name (Libervia versus formerly Salut a Toi). As mentioned above, I have plans for a new instance, but it will likely be invite-only initially. I'm also considering a local-only demo for a quick overview of the web frontend—a non-federated feature that self-resets every few hours. We'll see if I can make the time to set it up.

Talks

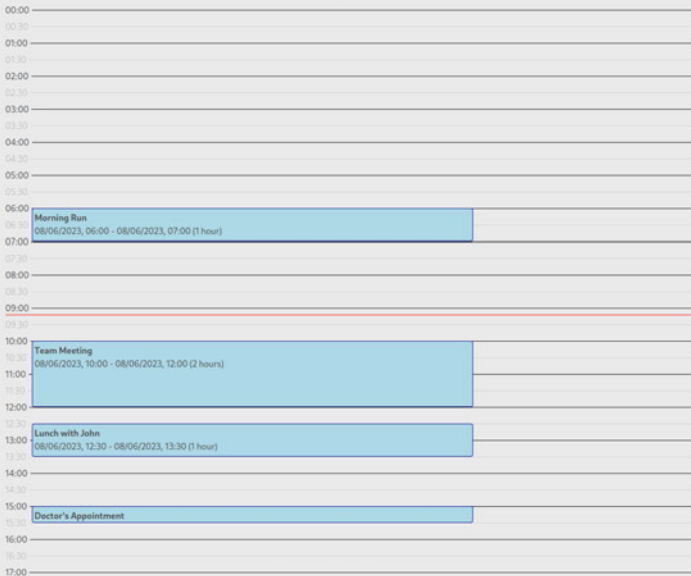
I'll be delivering two talks next month in Paris:

- A 20-minute presentation in English at [OW2: Catch me on stage at 15:00 on Thursday, June 15](#)

Calendar Events

[create](#)

Wednesday, 7 June 2023



Vous avez actuellement 4 événements dans votre liste personnelle

vendredi 17 décembre 2021



Atelier cuisine
dans 1 mois

vendredi 31 décembre 2021



New Year's Eve
dans 1 mois

samedi 6 octobre 2018



Repas Pycon 2018
il y a 3 ans

jeudi 1 avril 2021



Figure 4: Group Events

Lists

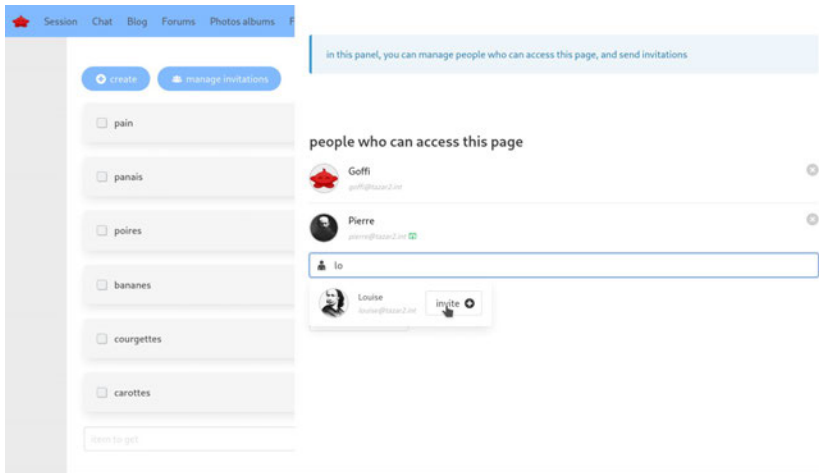


Figure 5: List with Invitation Panel

File Sharing

- ▶ Upload and access files from any device
- ▶ Simplified permission management
- ▶ Optional end-to-end encryption
- ▶ Generate public HTTP link for any uploaded file
- ▶ P2P for large file exchanges between any devices
- ▶ NAT/Firewall traversal (Jingle FT)
- ▶ Optional quotas

Photo Albums

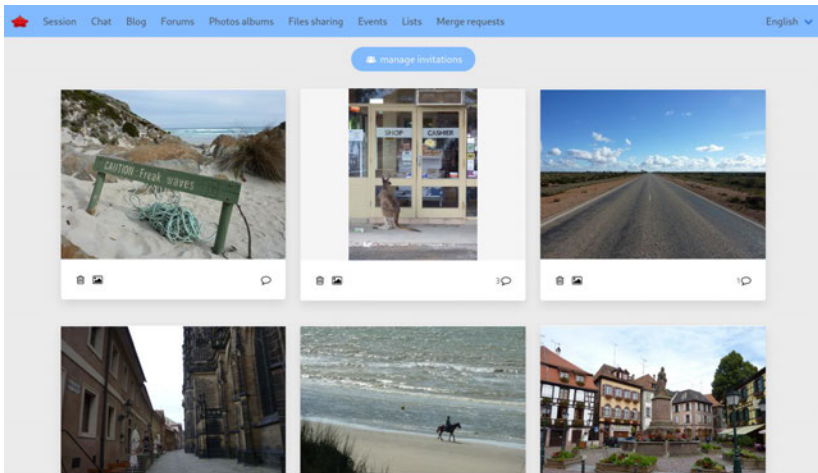


Figure 6: Photo Albums

State-of-the-Art End-to-End Encryption

- ▶ OMEMO:2
- ▶ OX (OpenPGP for XMPP)
- ▶ Pubsub e2ee
- ▶ Pubsub Signature

Audio/Video Calls and Desktop Sharing/Remote Control

- ▶ Current grant from NLnet/NGI Assure
- ▶ One-to-one calls working with web frontend
- ▶ Upcoming features:
 - ▶ Desktop sharing
 - ▶ Multi-Party (MUJI/SFU)
 - ▶ Remote Desktop Control

Seamless Integration

- ▶ Natively compatible with the entire XMPP ecosystem
- ▶ Third-party integration with other protocols:
 - ▶ Slidge for Signal, Telegram, Discord, Steam, Mattermost, Facebook, Skype, WhatsApp
 - ▶ Biboumi for IRC
 - ▶ Spectrum2
 - ▶ and more.
- ▶ ActivityPub <=> XMPP Gateway

ActivityPub <=> XMPP Gateway

- ▶ Enable Libervia (or any XMPP software) to work seamlessly with software such as Mastodon, Pleroma, PeerTube, Mobilizon, etc.
- ▶ Smooth integration: it should be transparent to end-users
- ▶ Public AP messages are mapped to XMPP Pubsub
- ▶ Private AP messages are mapped to XMPP Instant Messages

Customization Capabilities

- ▶ Robust theme engine
- ▶ The web frontend is essentially a web framework using XMPP to handle data
- ▶ Same templates in backend and frontend
- ▶ Work is underway on API stabilization for frontends and a plugin architecture for easy backend and frontend enhancements
- ▶ Documenting the process of creating new frontends or plugins is currently a top priority

Standards Compliance

- ▶ Long-standing member of XSF (XMPP Standards Foundation)
- ▶ Authored several XEPs (XMPP Extension Protocol):
 - ▶ XEP-0355: Namespace Delegation
 - ▶ XEP-0356: Privileged Entity
 - ▶ XEP-0413: Order-By
 - ▶ XEP-0460: Pubsub Caching Hints
 - ▶ XEP-0465: Pubsub Public Subscriptions
 - ▶ XEP-0470: Pubsub Attachments
 - ▶ XEP-0471: Events
 - ▶ XEP-0473: OpenPGP for XMPP Pubsub
 - ▶ XEP-0475: Pubsub Signing
 - ▶ XEP-0476: Pubsub Signing: OpenPGP Profile
 - ▶ XEP-0477: Pubsub Targeted Encryption
- ▶ Testing compatibility with XMPP ecosystem

Current State

- ▶ In the stabilization phase
- ▶ Version 0.9 coming soon (ETA: Q4 2023)
- ▶ Mostly a single-person project to date

Future

- ▶ Moving towards sustainability
- ▶ Potential to establish a trustworthy and ethical service provider in the communication domain
- ▶ Offering SaaS
- ▶ Implementing dedicated tools

Potential Users

- ▶ Individuals (group of friends, family)
- ▶ Associations
- ▶ Schools/universities
- ▶ Public services
- ▶ Companies
- ▶ NGOs
- ▶ And you!

Conclusion

Libervia is

- ▶ An all-in-one solution
- ▶ Open Source/Libre, standard, and decentralized
- ▶ Privacy-focused with state-of-the-art end-to-end encryption
- ▶ Compatible with third-party networks
- ▶ Feature-rich
- ▶ Highly customizable

In essence, it's a unique offering

Join Our Journey

Libervia is not just a project, but a growing community.

- ▶ **Contribute:** If you have skills in programming, design, translation, or technical writing, your contributions are welcome. Join our community and help enhance Libervia.
- ▶ **Support:** Ensuring the sustainable development of Libervia is crucial. If you're able, consider supporting us financially. Every contribution, no matter the size, helps us continue our work.

Thanks

Thank you for your time. Any questions?

- ▶ <https://libervia.org>: Official Website
- ▶ <https://www.goffi.org>: My blog, project news
- ▶ Also available on XMPP **and** ActivityPub! `goffi@goffi.org` JID and actor handle
- ▶ `libervia@chat.jabberfr.org`: Official XMPP Chat Group
- ▶ `goffi@mastodon.social`: Mastodon account