Jami and how it empowers users

LibrePlanet 2021

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What is Jami?
Jami is free software for universal communication that respects the freedom and privacy of its users
Jami is developed by Savoir-faire Linux® based in Montréal, Canada. Savoir-faire Linux is a team of free software consultants providing training, consulting, development, and support services for free software technologies.
• one-on-one conversations
• file sharing
• audio/video calls & conferences
• screen sharing in video calls & conferences
• recording & sending audio/video messages
• SIP phone software functionality
• cross-platform communication framework
Architecture overview
Architecture & components of Jami
Jami is an end-to-end encrypted secure and distributed voice, video, and chat communication platform that requires no central server and leaves the power of privacy and freedom in the hands of users.
OpenDHT

- lightweight and scalable, designed for large networks and small devices
- high resilience to network disruption
- IPv4 and IPv6 support
- clean and powerful C++14 map API
- C, Rust, and Python 3 bindings
- public key crypto layer providing optional data signing and encryption (using GnuTLS)
- REST API with optional HTTP client+server and push notification support
alice

bob

LISTEN
alice  ICE  bob
Development news
• many connectivity improvements
• automatic video bitrate adjustment
• detached host rendezvous points
• notification improvements
• bidi text in the chat view
• video renderer improvements
• conference call moderation
• improved error handling
• object copy reductions
• plugin API overhaul
• ... and more!
Rendezvous points
Plugins
AutoAnswer
GreenScreen
discover more Jami plugins
jami.net/plugins

learn more about the plugins SDK
jami.net/plugins-sdk
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JAMS
Jami account & device management
Jami account & device management (with JAMS)
jami-qt client
jami-qt – main window
jami-qt - settings view (account)
jamii/qt – settings view (general)
Moderation
jami-qt - moderation
Swarm chat
characteristic features of swarm chats:
  • split and merge based on connectivity
  • message history synchronization
  • no central authority or server
  • non-repudiation: each device must be able to verify validity of old messages and replay the whole history
  • PFS during transport
  • device-local storage
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four modes for swarm chats:

- **1-to-1** (conversation with another Jami user)
- **admin-invite-only** (e.g. a class where the teacher can invite people, but not students)
- **invite-only** (a private group of friends)
- **public** (a public chat forum)
four modes for swarm chats:

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maintain a synchronized Merkle tree of messages

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reasons for using git include:

- need to synchronize and order messages
- git is distributed by nature
- widely used and popular
- can verify commits using hooks and cryptographic signatures
- can be stored in a database if needed
- conflicts arising from splits/merges are much better handled by using commit messages rather than files
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demo time!
Community
- jami.net
- forum.jami.net
- jami@gnu.org
- #jami on freenode
- git.jami.net
- review.jami.net
- docs.jami.net

- write and share your own plugins
- help translate Jami to your language(s)
- package Jami in your GNU/Linux distribution
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Thanks!

Amin Bandali <bandali@gnu.org>
kelar.org/~bandali/talks/jami-empowers-users.html
(GPLv3+)