

[**matrix**]

Matrix: One Year In

Daniel Wagner-Hall

daniel@matrix.org

[@illicitonion:matrix.org](https://twitter.com/illicitonion)



Matrix?

- Open standard
- Decentralised communication
 - Instant messaging
 - Voice and video (WebRTC)
 - Generic pub-sub
- Federated servers
- The missing signalling layer for WebRTC

[matrix]



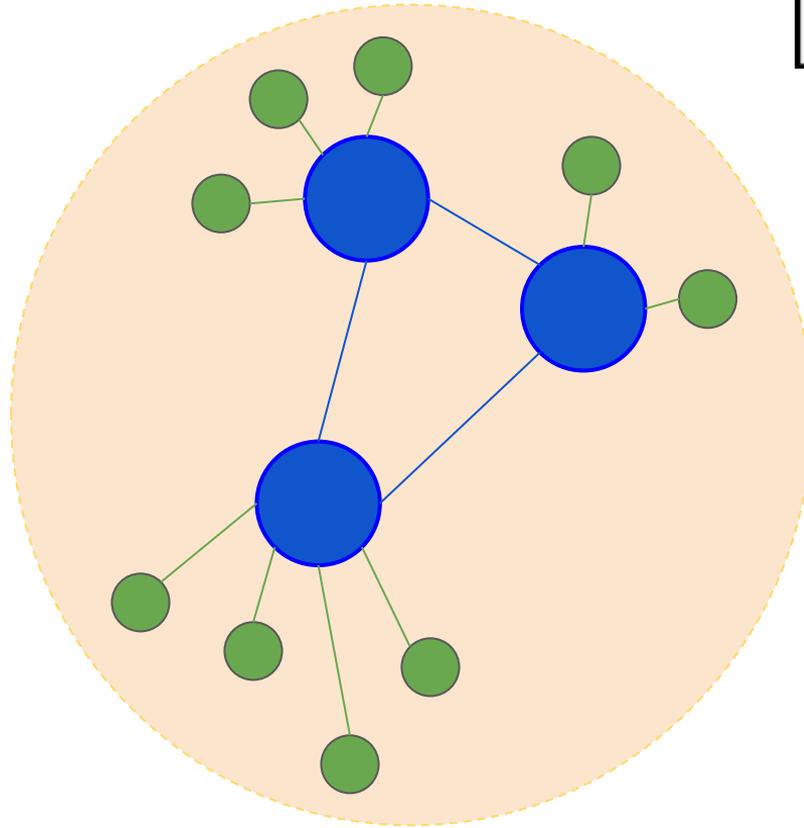
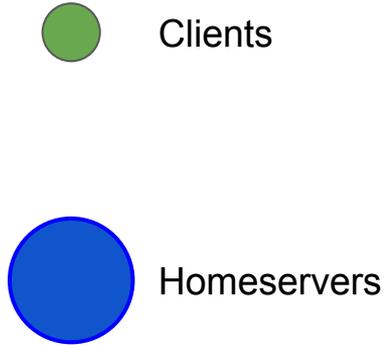
Matrix?

- JSON over HTTP
- Primitives
 - Users
 - Rooms
 - Events
 - Homeservers
- 2 APIs
 - Server – Server
 - Client – Server

[matrix]



[matrix]



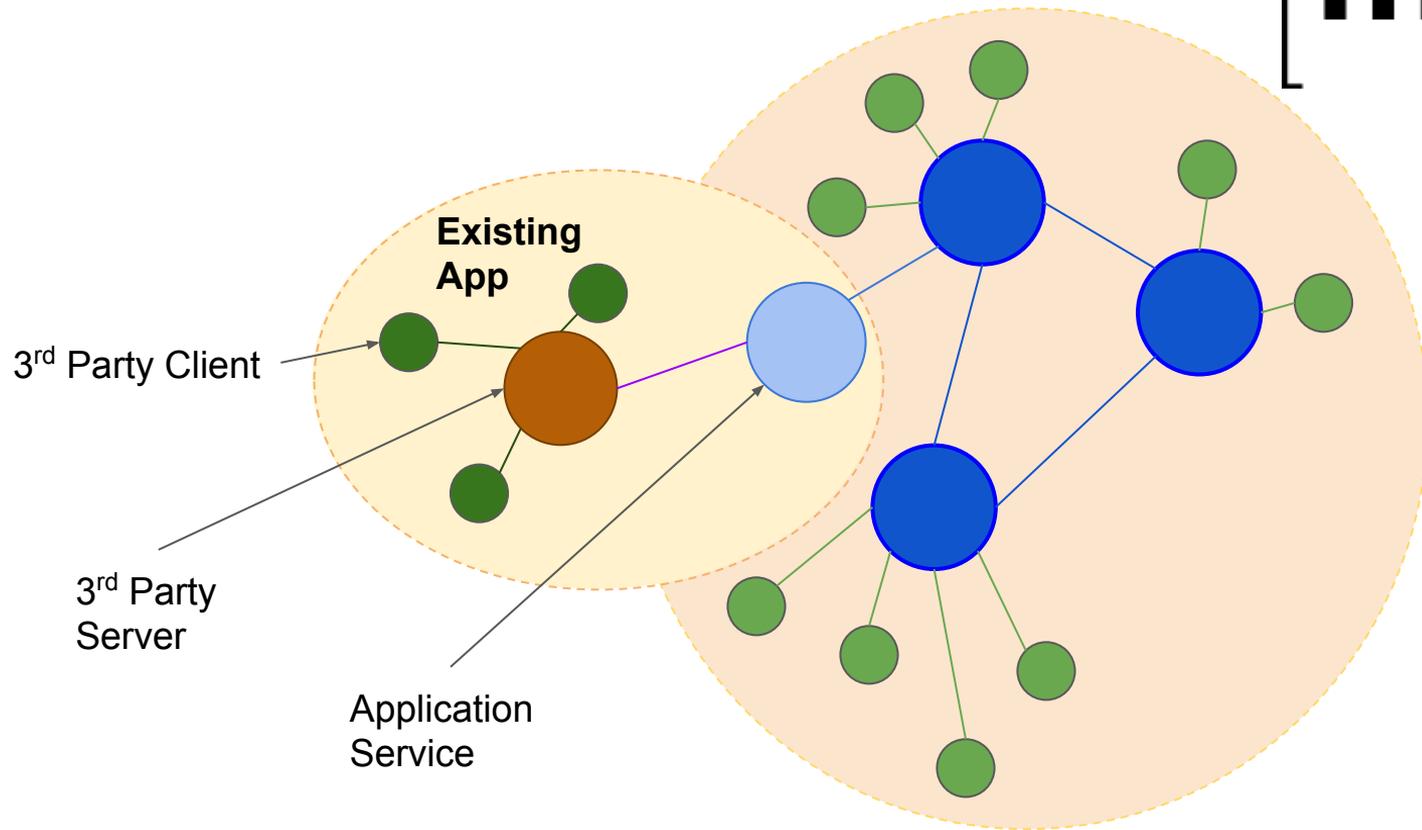
Bridges

- IRC
 - Freenode
 - Moznnet
 - Some others...
- Slack
- SMS
- libpurple
- FreeSWITCH Verto
- Asterisk Respoke
- Bridging SDK

[matrix]



[matrix]



Matrix?

- JSON over HTTP
- Primitives
 - Users
 - Rooms
 - Events
 - Homeservers
- **2.5 APIs**
 - Server – Server
 - Client – Server
 - **Application Service**
 - **Client – Server + super-powers**

[matrix]



Client SDKs

- iOS
- Android
- JS
- React
- Python
- Perl

Community-contributed:

- Lisp
- Erlang

[matrix]



New Features

- Search
- History ACLs
- Typing notifications
- Read receipts
- Voice & Video via WebRTC

[matrix]



WebRTC

- Voice and video calls
- Web: Use browser's support
- Mobile: Four separate stacks
 - Chrome WebView
 - libjingle
 - OpenWebRTC
 - Our own soon-to-be-open-sourced implementation
- FreeSWITCH Verto Application Service
 - Allows MCU

[matrix]



Spec

- Released client – server specification r0.0.0
- Lots of new APIs
- Lots of cleanup
- All APIs documented in Swagger

[matrix]



Vector

- Fully-featured, usability-driven web client
- 100% open source
- Video: 1:1 (native WebRTC) and MCU (FreeSWITCH)
- Bridges into other protocols
- End-to-end encryption coming soon

[matrix]



[**matrix**]

[Demo]



The Future

- Polishing clients
- Rewriting prototype server to scale
- Lots more bridges
- Higher fidelity bridges
- Finalising server – server API
- End-to-end encryption

[matrix]



What Should You Do?

- Use it for chat!
 - Like Slack but open source
 - Like IRC but more friendly
 - WebRTC Voice and video as standard
 - Plus bridging
- Use it as a protocol
 - Don't make new islands!
- Bridge with us
- Run a homeserver
 - Or use ours

<https://matrix.org/blog/try-matrix-now>

<https://matrix.org/docs/spec>

[**matrix**]



[**matrix**]

Matrix: One Year In

Daniel Wagner-Hall

daniel@matrix.org

[@illicitonion:matrix.org](https://twitter.com/illicitonion)

