

Matrix vs. WhatsApp

This document gives a detailed comparison of Matrix and WhatsApp. Disclaimer: the author of this document has not used WhatsApp personally and therefore may not have completely correct information. Please send any corrections to this document to computersemiexpert@outlook.com, or send me a pull request on GitHub. Updated versions may be found at <https://lorendb.github.io/matrixvswhatsapp.pdf>.

Overview

WhatsApp is a popular instant messaging app created in 2009 and later acquired by Facebook. WhatsApp is accessible on Android, iOS, and through a web browser. It is a closed-source app. To sign up, users enter their phone number. The app then imports their contacts and adds everybody who has WhatsApp to your WhatsApp contacts. WhatsApp encrypts all messages for privacy. It is designed to look like a texting app. Beyond simple instant messaging, it supports voice messages, voice calls and video calls. Users may post 'statuses' (a picture with a caption, usually showing a moment in someone's life) to WhatsApp. Statuses disappear after a short amount of time. For more information about WhatsApp, visit <https://www.whatsapp.com/>.

Matrix is not an app, but rather a protocol. Matrix was first announced in 2014 and completed in 2019. Matrix client apps are available for all the major operating systems (Windows, macOS, Linux, Android, iOS). Matrix rooms may be private or public. Public rooms are especially useful for people collaborating on the same project, or simply people talking about a common interest. Users sign up with a username. Adding an email address is optional, but is required to reset your password. The Matrix protocol and most (or all) Matrix client apps are open source, meaning that anybody may improve upon existing apps. Users may install the client app of their choice. Depending on the client app installed, users may send voice messages, voice calls, and video calls. Matrix does not have support for statuses. Matrix messages may be encrypted if desired. Matrix supports bridges, which allow messages from other chat protocols to be integrated into Matrix rooms. Currently, official and unofficial bridges exist for IRC, Slack, Gitter, XMPP, Mastodon, and WhatsApp, to name a few. For more information about Matrix, visit <https://www.matrix.org/>.

WhatsApp vs. Matrix comparison chart

| Criteria | Matrix | WhatsApp |
|---------------|--------|----------|
| Private chats | Yes | Yes |
| Public chats | Yes | No |
| Open source | Yes | No |

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|---|---|--|
| Voice messages | Yes | Yes |
| Voice calls | Yes* | Yes |
| Video calls | Yes* | Yes |
| Notifications for read messages and typing users | Yes | Yes |
| Encryption | Yes** | Yes |
| Accessible to everybody*** | Yes | No |
| Other pros | Does not attempt to imitate texting*; can be bridged to other instant messaging protocols | Attachments are tethered to a particular message |
| Other cons | Attachments are a single message; messages generally cannot contain multiple lines | Includes statuses, which are irrelevant to the actual function of the app; designed to imitate texting |

*Depends on the Matrix client installed.

**Encryption must be enabled for each room.

***WhatsApp is only available for Android, iOS, and web browsers. In addition, users must possess a phone number to sign up. Matrix, on the other hand, is available on all major operating systems, as well as on the web. Matrix users are not required to sign up with any external address or other identifier. However, to reset your password, you must register an email address with your account.

More resources

WhatsApp homepage: <https://www.whatsapp.com/>

Matrix homepage: <https://www.matrix.org/>

Updates to this document: <https://lorenadb.github.io/>