

Degoogling

Freya Murphy

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RITlug

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Degoogle?

Degoogle?

1. The act of removing everything google from your android device
 - 1.1 Google Play Services
 - 1.2 Play Store
 - 1.3 Gmail
 - 1.4 Google Maps
 - 1.5 Google Photos
 - 1.6 Google Account
 - 1.7 ...

Why?

1. Google is not FOSS/Libre
 - 1.1 You dont have control
2. Google collects data on you
 - 2.1 Integrated into android
 - 2.2 We dont want this!
3. Google services run highly privileged
 - 3.1 `system_app`, `gmscore_app`, ...

Why?

Google Play Services runs with more permissions than you may think.

1. Access all files
2. Access system settings
3. Network
4. Contacts
5. Location
6. Camera and microphone
7. Calendar
8. SMS texts
9. Google can act as a middleman for many permissions
10. Cannot be uninstalled

Solution?

1. Replace all services with FOSS alternatives
2. Use custom ROM to remove system google integrations
 - 2.1 You cannot remove it from stock.

ROMs

ROMs

You have alternatives.

1. LineageOS
2. CalyxOS
3. GrapheneOS

LineageOS



<https://lineageos.org/>

1. Many devices supported
 - 1.1 Over 20 manufacturers
 - 1.2 Support usually lasts longer then the manufacturer
2. Backups with Seed Vault
3. Uses builtin android services for location and geocoding
4. No shipped app store.

CalyxOS



<https://calyxos.org/>

1. Supports Google Pixels, Fairphone, and Moto G
2. Ships F-Droid app store, and aurora store
3. Ships Signal for secure messaging
4. Positon or BeaconDB as location services
5. Nominatim as geolocation service

GrapheneOS



<https://grapheneos.org/>

1. Privacy and security focused
 - 1.1 Hardened memory allocator
 - 1.2 More granular permission controls
2. Uses custom (private) reimplementation of google play location services
3. Uses builtin android services for geocoding
4. Ships GrapheneOS "App Store"
 - 4.1 Used for updating GrapheneOS system apps
5. Only supports Google Pixels

App Alternatives

Google Play Services

Needed for many apps.

1. MicroG
2. Sandboxed Google Play

MicroG



1. Independent Re-implementation of the google play services and google libraries
 - 1.1 Not everything is supported. Not all apps will work.
2. Either must run as a system app, or android system must support signature spoofing.
3. Shipped as a `system_app` on CalyxOS, supported LineageOS.

Sandboxed Google Play

1. Repackaged google play services installed as a `untrusted_app` with little to no permissions.
2. Can be installed on GrapheneOS.
 - 2.1 Android system must support proxying play service requests.
3. Full support for google apis
 - 3.1 Same code directly from google
 - 3.2 App apps *should* work.

Play Store



1. Aurora store
 - 1.1 Download play store apps without logging in
 - 1.2 Connections are anonymized

Notifications

1. App must support alternative to google play.
2. Native per-app implementations.
3. Custom notification provider, can differ between apps.
4. Or just use google...
 - 4.1 MicroG reads from `mtalk.google.com`
 - 4.2 Sandboxed Google Play

SMS messaging



1. Fossify SMS Messenger
2. Must use google messenger if you want RCS :(

Secure chat



1. Element (matrix)
2. Fluffy Chat (matrix)
3. Conversations (xmpp)
4. Signal (proprietary service)

Gmail (client)



1. Thunderbird mobile (was K-9 mail).
 - 1.1 FOSS email client.
2. Proton Mail
 - 2.1 Only works with proton mail email accounts. (proton is an email provider).
 - 2.2 Only available google play store (can use aurora!).

Gmail (email provider)



Selfhosted

1. Mailcow
 - 1.1 Uses docker for deployment
2. Mail-in-a-Box
 - 2.1 Must be installed on a fresh machine

Paid(ish)

1. Proton Mail
 - 1.1 Has paid and free tier.
 - 1.2 Have to use the proton mail app (does not support custom clients*)

Google Photos



Selfhosted

1. Nextcloud
2. Immich
3. Photoprism

Paid

1. Proton Drive (same service as proton mail)

Google Drive



Selfhosted

1. Nextcloud

Paid

1. Proton Drive

Google Maps



1. OsmAnd
2. Organic Maps

Uses open street maps. Very cool :)

Google Calendar



1. Fossify Calander (local and caldav)
2. *Davx⁵* (caldav sync)
3. Radical (selfhosted caldav)
4. Nextcloud (selfhosted caldav and client)

Youtube



1. NewPipe
2. ReVanced
 - 2.1 Patcher app (must source APKs)
 - 2.2 Supports Youtube

Phone app



1. Use app from custom ROM
2. Fossify Phone

Contacts app



1. Use app from custom ROM
2. Fossify Contacts
3. Nextcloud (syncing)

Gboard (keyboard)



1. Fossfiy Keyboard
2. Futo Keyboard
3. Florisboard

Speech synthesizer engine



1. RH Voice

Provides text-to-speech for android. (for example: the voice in google maps).

Streaming



Jellyfin clients

1. Jellyfin (official)
2. Finamp (music only)
3. Findroid (movies and tv only)

Use can also use plex if you want...