

How Awala apps may circumvent Internet censorship

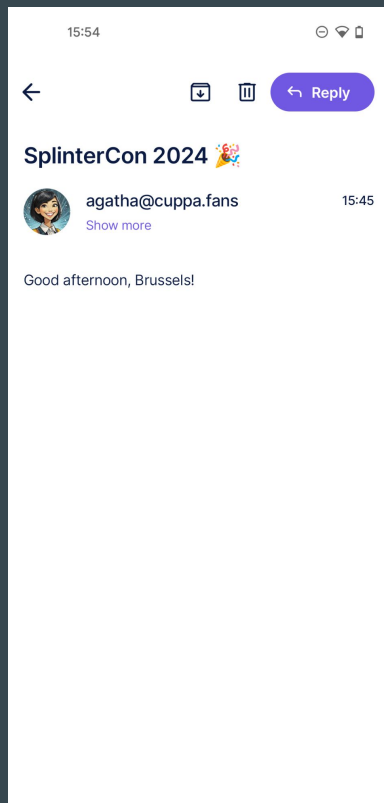


By Gus Narea, architect of Awala and founder of Relaycorp.

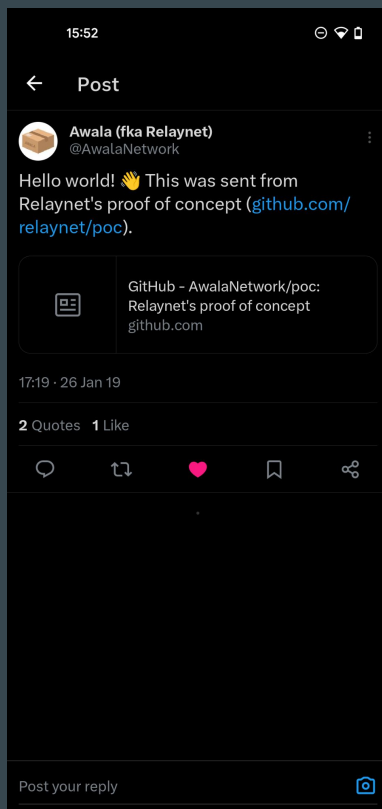
Awala enables compatible
apps to communicate with
and without the Internet.



Letro



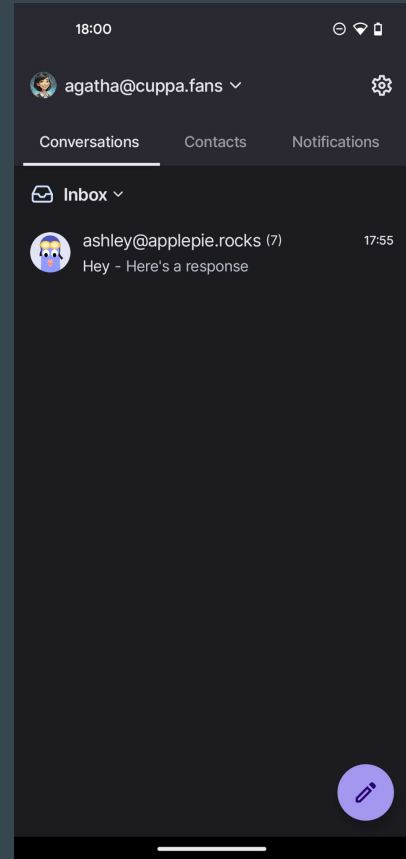
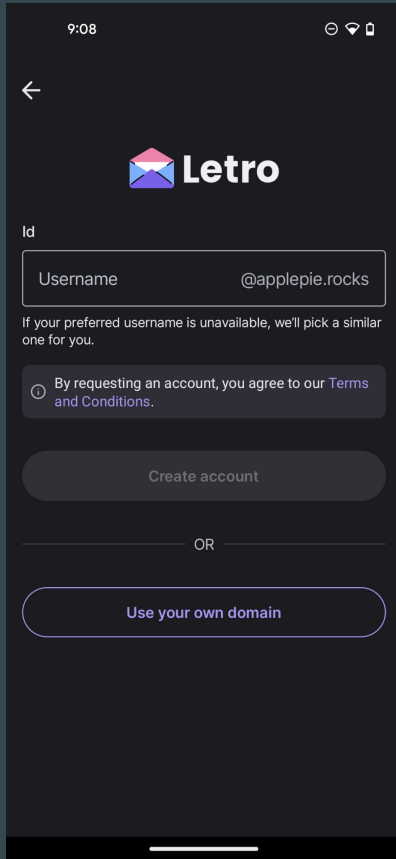
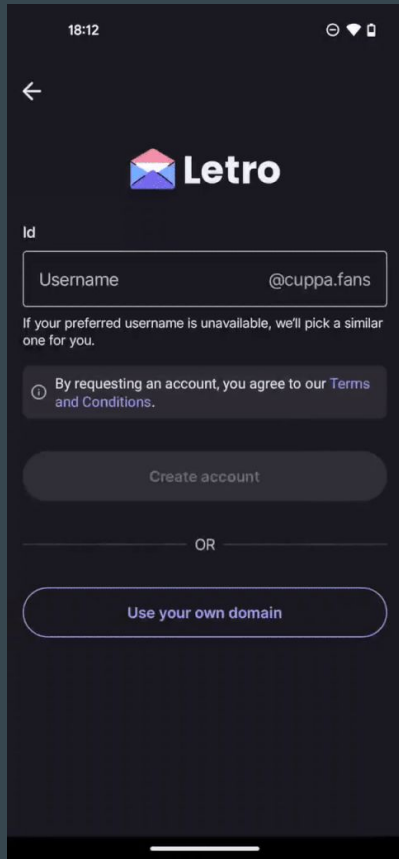
Twitter (Awala's PoC)



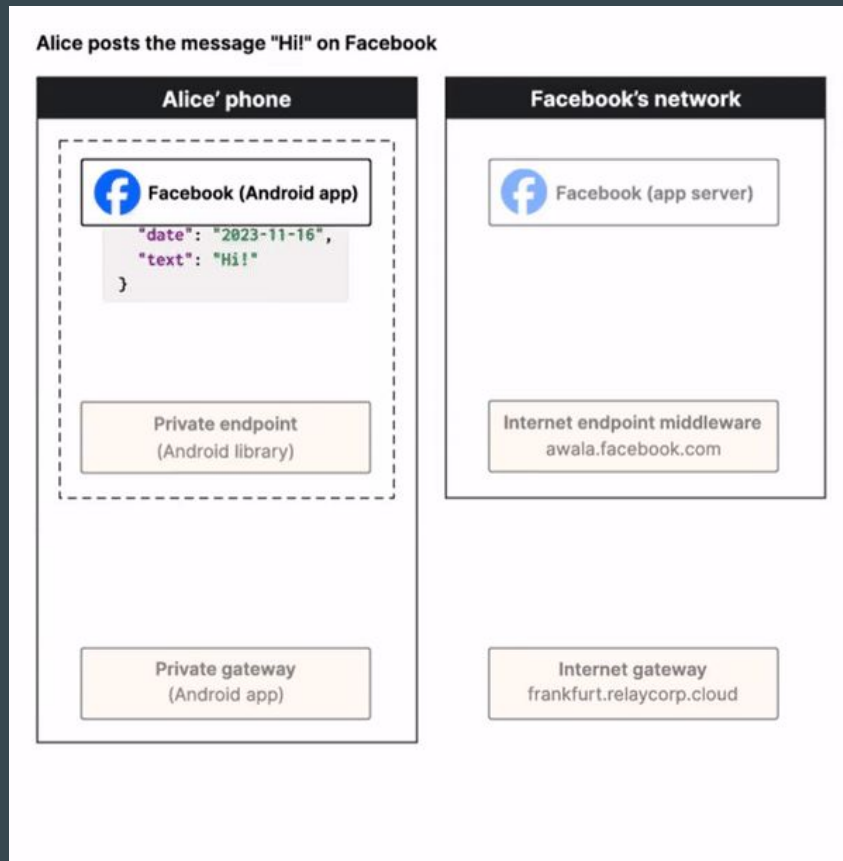
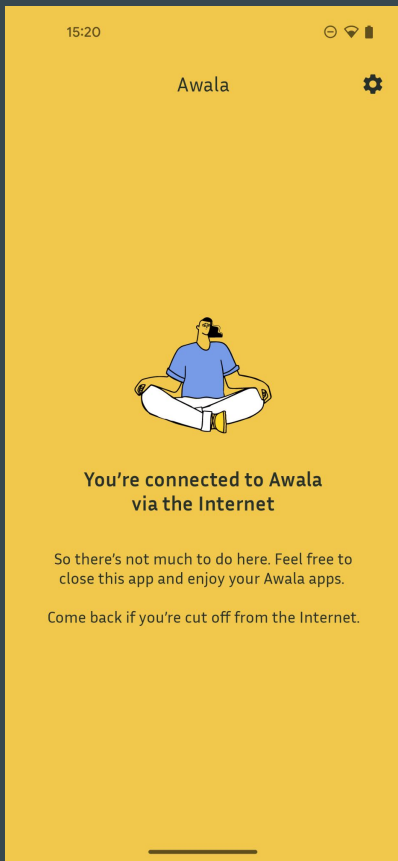
Potential apps



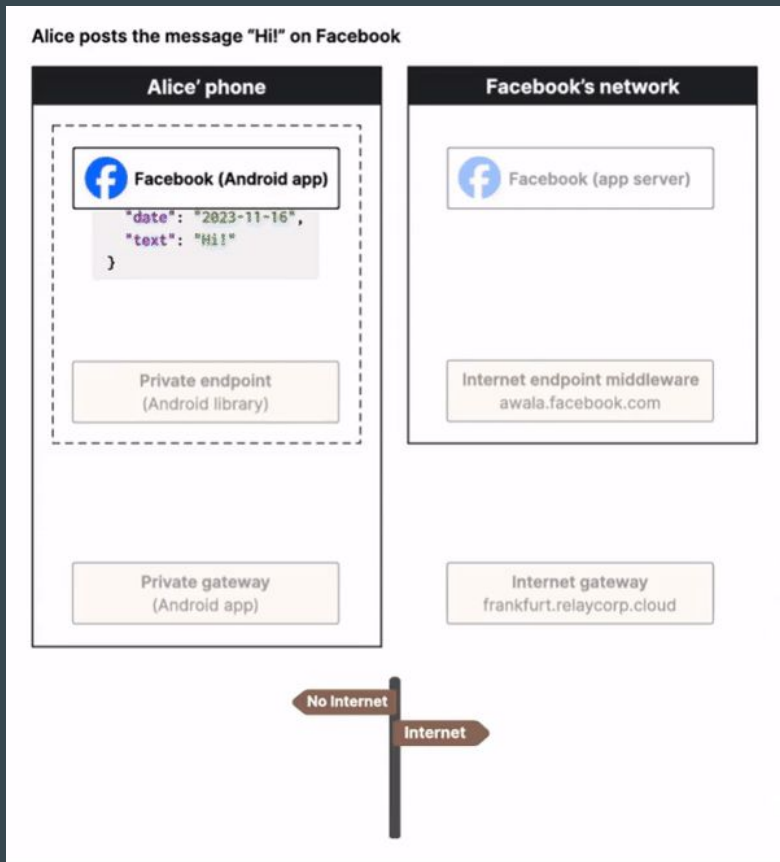
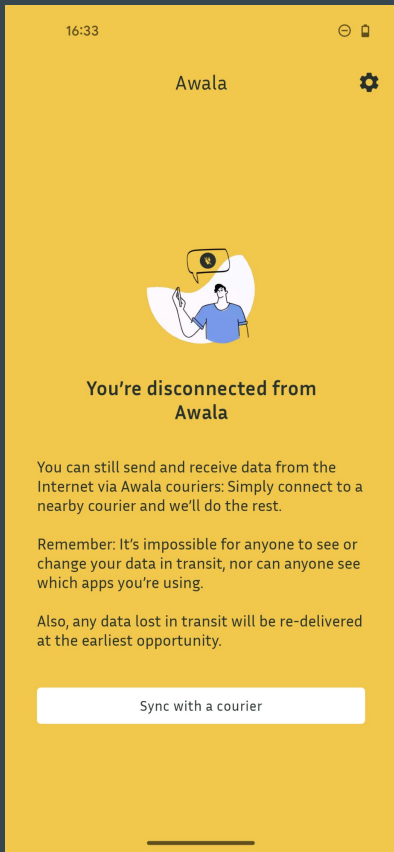
Example apps



Letro on Android



Awala with the Internet



Awala without the Internet

Current status

- Awala runs on Android and desktop.
- Letro only runs on Android.
- Undergoing a security audit.
- Top priority: Testing and gradual rollout.

Potential censorship circumvention capabilities

Denylist censorship circumvention

Specific services, such as *Awala gateways*, are blocked

- We'd turn any HTTPS website into a proxy.
 - Censors couldn't do *active probing*.
 - Censors could analyse the traffic, but we'd also make it follow an “organic” web browsing pattern.
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National intranet circumvention

Only domestic services are
accessible

- Use couriers as if it were an Internet blackout.
 - Leverage intranet services to relay high-priority data using steganography.
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Allowlist censorship circumvention

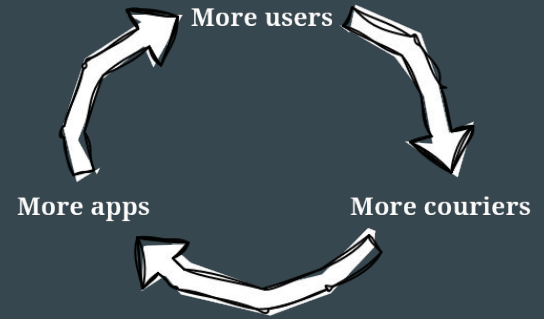
Only select services are allowed

- Use couriers as if it were an Internet blackout.
- Less likely that we'll be able to leverage sanctioned services to relay data.

Threats to *Awala's* censorship circumvention

Not achieving a critical mass of users

- Like any platform on day 1, Awala needs a killer app.
- Censorship circumvention alone is insufficient.
- It must be essential or extremely useful outside censorship episodes.
- We're trying to position Letro as that app.



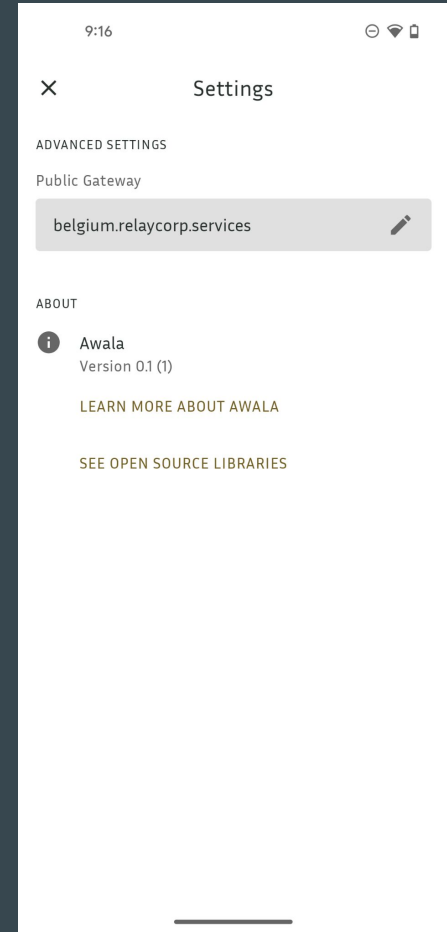
Endpoint-level censorship



Image source: KCNA/Reuters

Distributed Denial of Service (DDoS) attacks

- Awala is decentralised with a federated architecture.
- Servers (called “gateways”) act as brokers.
- Gateways, especially the default ones, may be subject to DDoS attacks.
- Our mitigation strategy is part of the security audit.
- Feedback on Despacito, a key component in the strategy, is most welcomed.



That's all folks!

More information:

- awala.network
- letro.app/en
- despacito.bot
- gus@relaycorp.tech
