

NEXT GENERATION INTERNET

The GNU Taler payment system

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Rethinking Money Symposium

What is GNU Taler?

<https://taler.net/en/features.html>

Taler is

- ▶ a Free/Libre software *payment system* infrastructure project
- ▶ ... with a surrounding software ecosystem
- ▶ ... and a company (Taler Systems S.A.) and community that wants to deploy it as widely as possible.

However, Taler is

- ▶ *not* a currency or speculative asset
- ▶ *not* a long-term store of value
- ▶ *not* a network or instance of a system
- ▶ *not* decentralized
- ▶ *not* based on proof-of-work or proof-of-stake

Design principles

<https://taler.net/en/principles.html>

GNU Taler must ...

1. ... be implemented as **free software**.
2. ... protect the **privacy of buyers**.
3. ... enable the state to **tax income** and crack down on illegal business activities.
4. ... prevent payment fraud.
5. ... only **disclose the minimal amount of information necessary**.
6. ... be usable.
7. ... be efficient.
8. ... avoid single points of failure.
9. ... foster **competition**.

NGI TALER PILOT

<https://taler.net/en/consortium.html>

- ▶ EU Project started December 2023 to deploy GNU Taler
- ▶ 3 financial institutions (GLS Bank, Magnet Bank, Visual Vest), 2 academic institutions (Berner FH, TU Eindhoven), 3 SMEs (Taler Systems SA, Code Blau GmbH, Petit Singularites), 3 non-profits (NLnet Foundation, E-Seniors Association, Homo Digitalis)
- ▶ ≈ €5M budget over 3 years
- ▶ Objective: **Deploy GNU Taler in Europe**

Launch Timeline

- Q2'2022 Internal deployment at BFH
- Q4'2024 Deployment of local currency Netzbond in Basel
- Q2'2025 Public deployment of eCHF in Switzerland
- Q3'2025 GLS bank launches in Eurozone
- Q4'2025 Magnet bank launches in Hungary (?)

Operators

- ▶ <https://netzbon.ch/> is site of deployment in Basel (**NETZBON**)
- ▶ <https://exchange.e.netzbon-basel.ch/> hosts production REST API
- ▶ <https://taler-ops.ch/> is site of Taler Operations AG, Biel (**CHF**)
- ▶ <https://exchange.taler-ops.ch/> hosts production REST API
- ▶ <https://glb.de/taler/> main site for Taler at GLS Bank (**EUR**)

What software exists?

- ▶ libeufin-nexus: PostFinance (EBICS) integration
- ▶ libeufin-bank: regional currency bank
- ▶ merchant backend: REST API with inventory and order management
- ▶ payment plugins: Joomla!, Magento, WooCommerce
- ▶ challenger: address (postal, sms, e-mail) validation (OAuth2 API)
- ▶ exchange: Taler core system with AML/KYC processes for compliance
- ▶ wallets: for Android, Chromium/Chrome, Firefox, iOS, ...

Taler is licensed under LGPL (rarely), GPL (wallets) or AGPL (servers).

What can you do today?

- ▶ Add any Taler provider to your wallet
- ▶ Withdraw digital cash via SEPA transfer
- ▶ Deposit digital cash back into your bank account
- ▶ Make P2P payments
- ▶ Setup your own merchant / e-commerce site to receive payments
- ▶ Setup your regional / event currency

What software is the community working on?

- ▶ Sync: backup service
- ▶ GNU Anastasis: distributed zero-knowledge key backup
- ▶ Mailbox: send payment messages to remote Taler wallets (instead of NFC/QR code)
- ▶ TalDir: map e-mail address or phone number to Taler wallet Mailbox address
- ▶ Donau: issue receipts for tax-deductable donations
- ▶ Adorsys-OBG: automate withdrawal via PSD2
- ▶ EKYC: Electronic KYC process for ID document uploading
- ▶ cashless2ecash: pay with card to withdraw Taler e-cash
- ▶ cash2ecash: pay with cash to withdraw Taler e-cash

What might we do tomorrow?

- ▶ Pay for online news, e-commerce, ...
- ▶ Integrated subscriptions, discount tokens
- ▶ Onboard large merchants (Galaxus, Migros, SBB, ...)
- ▶ Programmable payments (auctions, escrow, ...)
- ▶ M2M/IoT payments (no need for accounts, no 2-FA!)
- ▶ Pay recipient for messaging/e-mail (no more spam!)
- ▶ ...

How to support?

Join: <https://lists.gnu.org/mailman/listinfo/taler>

Learn: <https://tutorials.taler.net/>

Discuss: <https://ich.taler.net/>

Report: <https://bugs.taler.net/>,

Develop: <https://git.taler.net/>

Apply: <https://nlnet.nl/taler>

Translate: <https://weblate.taler.net/>, translation-volunteer@taler.net

Integrate: <https://docs.taler.net/>

Do you have any questions?

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