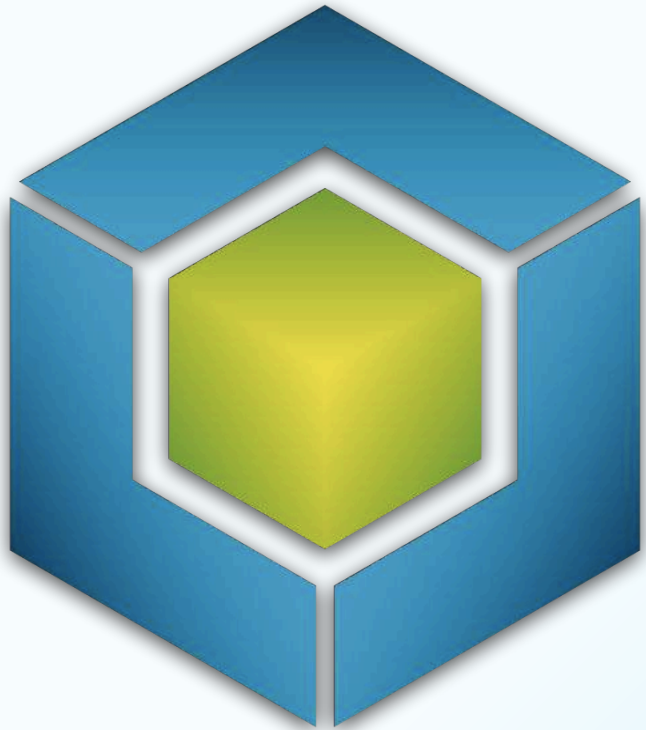


BLUEPAPER



Actinium

Building and Supporting the Lightning Network

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Who We Are

- Actinium began as a hobby project, designed & written by a single developer. This project was created mainly to provide direct competition to the overwhelming influx of scams, shady developers, and blatant abuse of open-source technology.
- The Actinium Network was launched on April 25th, 2018, with no pre-mine, no pre-sale, no founders rewards, and the development team owns *no significant share* of (ACM) coins.
- The Actinium development team has always been—and will always be—publicly visible.
- Actinium leverages the latest Bitcoin and Litecoin codebases with a specific focus on the perpetual development of future technologies and the **empowerment of users** through an intuitive user experience.
- Actinium provides stability against volatile speculation through our highly-motivated development plan that prioritizes **longevity** over short-term price action.
- Actinium was created for **everyone** because we believe that it is **People** who collectively determine the value to things. Therefore, a cryptocurrency must work for **everyone** in order to be of any **value**.
- The Actinium team takes pride in offering a truly ethical, motivated, and technologically advanced cryptocurrency.

Goals

- **Paper** Wallets & Address-Generators
- **Mobile Wallets** for Android & iOS
- **Hardware Wallet** Integration
- **Electrum Servers** & Clients
- **Tor** Integration
- **SegWit** & **Bech32** Addresses
- **Lightning Network**
- **Atomic Swaps**
- **Smart Contracts**
- **Exchanges**
- **Education** in Blockchain Technology, Security, and Lightning Network

Technology

- The Actinium codebase is built using the Litecoin code and follows the Bitcoin development branch.
- The Actinium development team continuously integrates the latest blockchain technology features like **Segregated Witness**, **Bech32 addresses**, **Tor**, and much more.
- Actinium is actively implementing second layer solutions such as **Lightning Network** by developing & porting tools for stable, simple on-boarding and adoption.
- Actinium has successfully integrated **Tor libraries** because we firmly believe **Privacy** and **Anonymity** *must* be available to every cryptocurrency user via user-friendly applications.
- Maintaining the **Safety** and **Security** of all user(s) funds is of the utmost importance. Thus, Actinium has full **Hardware Wallet** compatibility with Ledger Nano and Ledger Blue. (pending the approval of the Ledger HQ Co.)
- Actinium aims to support as many different miners as possible, therefore, we use the GPU-friendly **Lyra2z** algorithm that works effectively with both NVIDIA & AMD cards.
- To further secure the network Actinium utilizes the **LWMA** as our preferred difficulty-adjustment algorithm.

Specifications

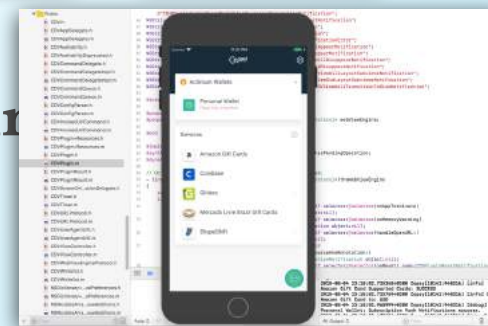
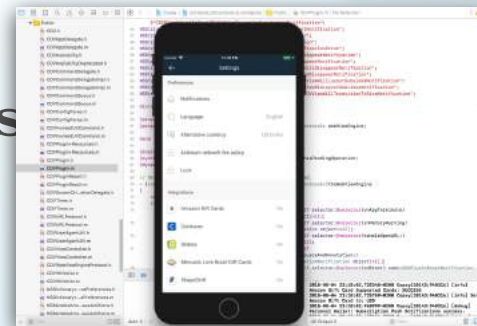
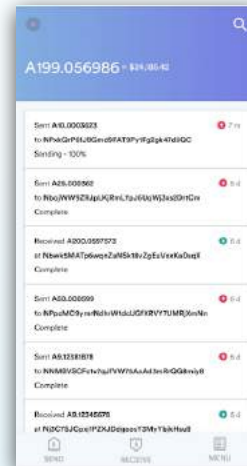
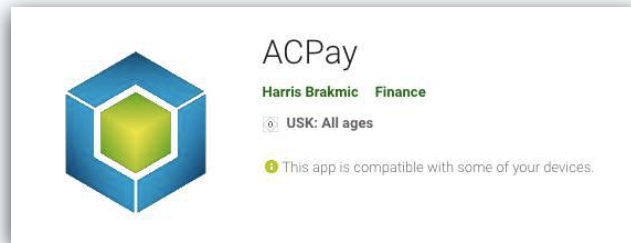
- **Launched:** 25th April 2018
- **Fair Launch:** no premine, no airdrop, no ICO, no “founder rewards“
- **Mining:** PoW with GPU (NVIDIA & AMD)
- **Algorithm:** Lyra2z - since block 55,000
- **Maximum Supply:** 84,000,000 coins
- **Block Reward:** 50 ACM - halving every 840,000 blocks (approx. every 4 years)
- **Block Time:** 2.5minutes
- **SegWit:** active since block 64,512
- **Bech32 Addresses:** supported – prefix **acm1**
- **LWMA** difficulty retargeting adjustment algorithm - since block 85,000
- **Tor Integration:** activated with a single parameter - since version 0.17.5.0

Mining

- Actinium uses **Lyra2z** as a Proof-Of-Work Algorithm.
- Advantages of Lyra2Z:
 - Energy efficient algorithm
 - Keeps GPU cards from overheating
 - Lowers efficiency-gap between AMD and NVIDIA GPUs.
 - Currently ASIC, FPGA, & Botnet resistant
- **LWMA** difficulty readjustment algorithm
- Advantages of LWMA:
 - Proven to be more effective at stabilizing hash-rate than the 2016-block algorithm used by Litecoin & Bitcoin.
 - Readjusts the difficulty every block; taking into account the calculations of the last 60 blocks
 - Reacts quickly to large spikes in hash-rate.

➤ Mobile Applications

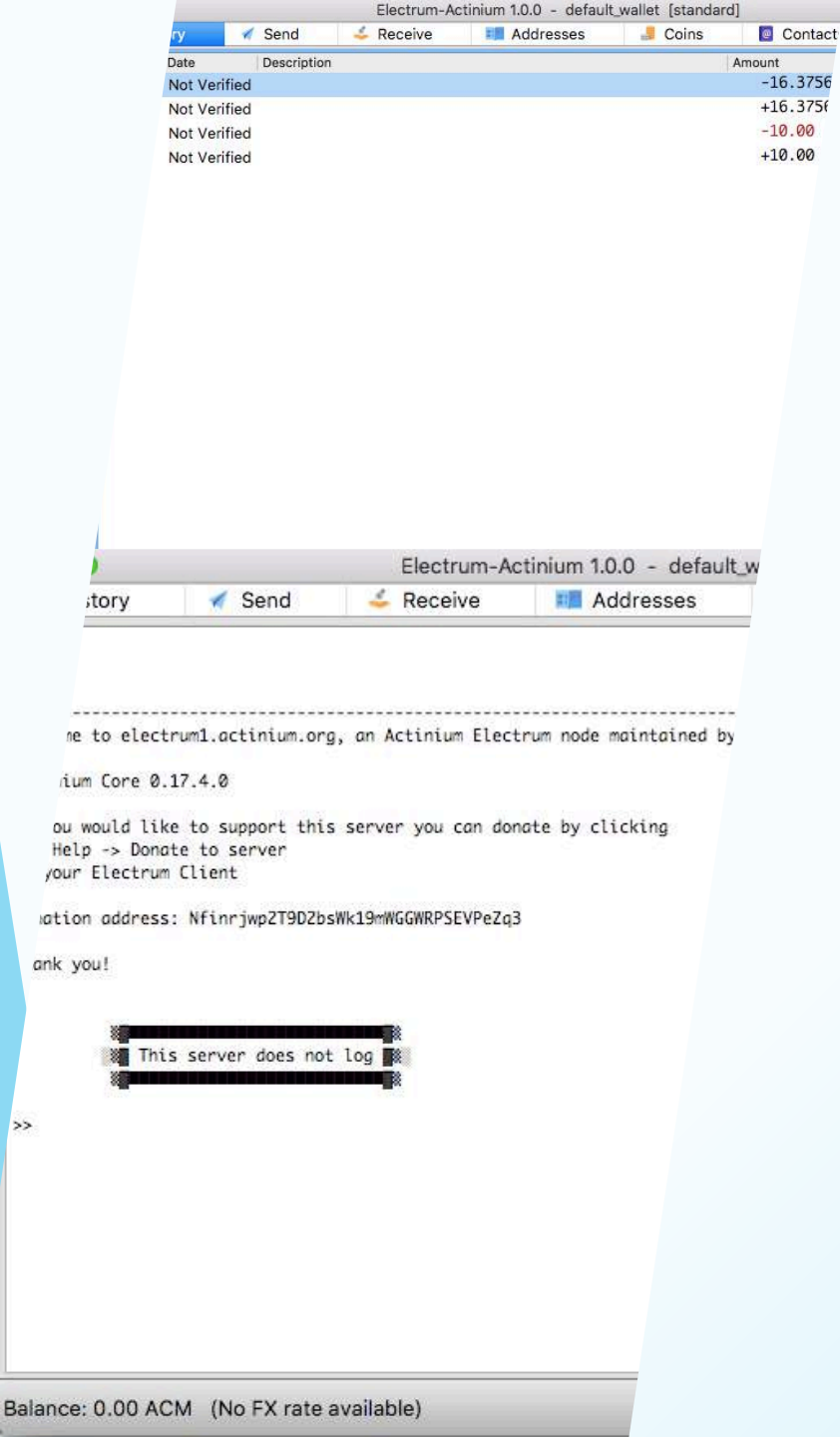
- Actinium Mobile Wallet is available for [Android](#)
- iOS coming soon!



Hardware Wallets

- **Actinium is compatible with Ledger Nano S and Ledger Blue.**
- **We have successfully completed tests of our integration code.**
- **Awaiting Ledger HQ's final approval.**



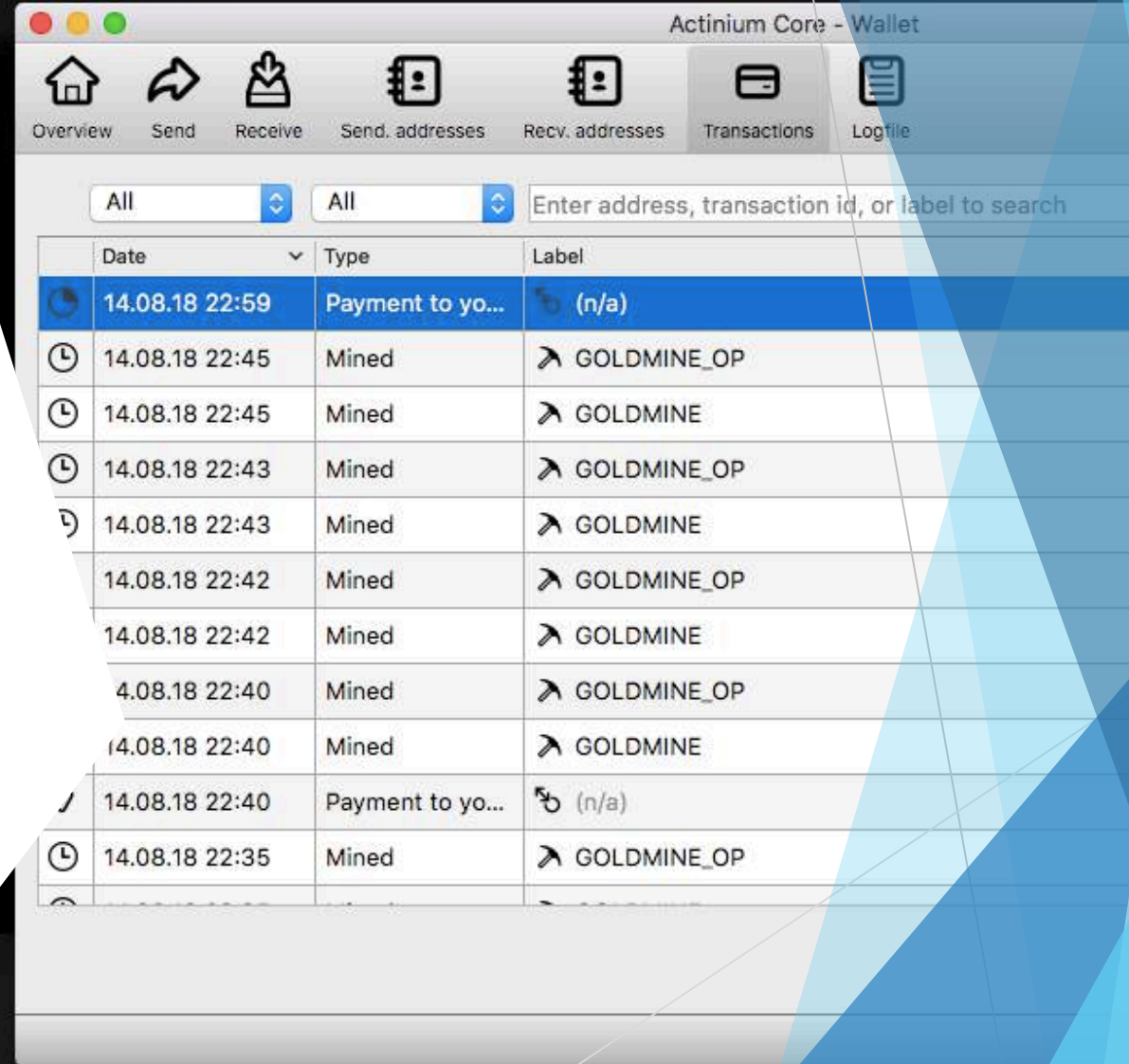


Electrum Support

- To make using blockchains easier for our users we operate specialized **Electrum Servers** that support Actinium
- We also offer an alternative **Electrum SPV Wallet**.

Tor Integration

- Actinium has supported the **Tor** anonymity protocol since v0.17.5.0.
- To activate **Tor**, users need only enter a single parameter into their configuration file - everything else will be done automatically.
- Additionally, we support **Pluggable Transports** to ensure censorship resistance against high-level **Tor** traffic blocking systems.

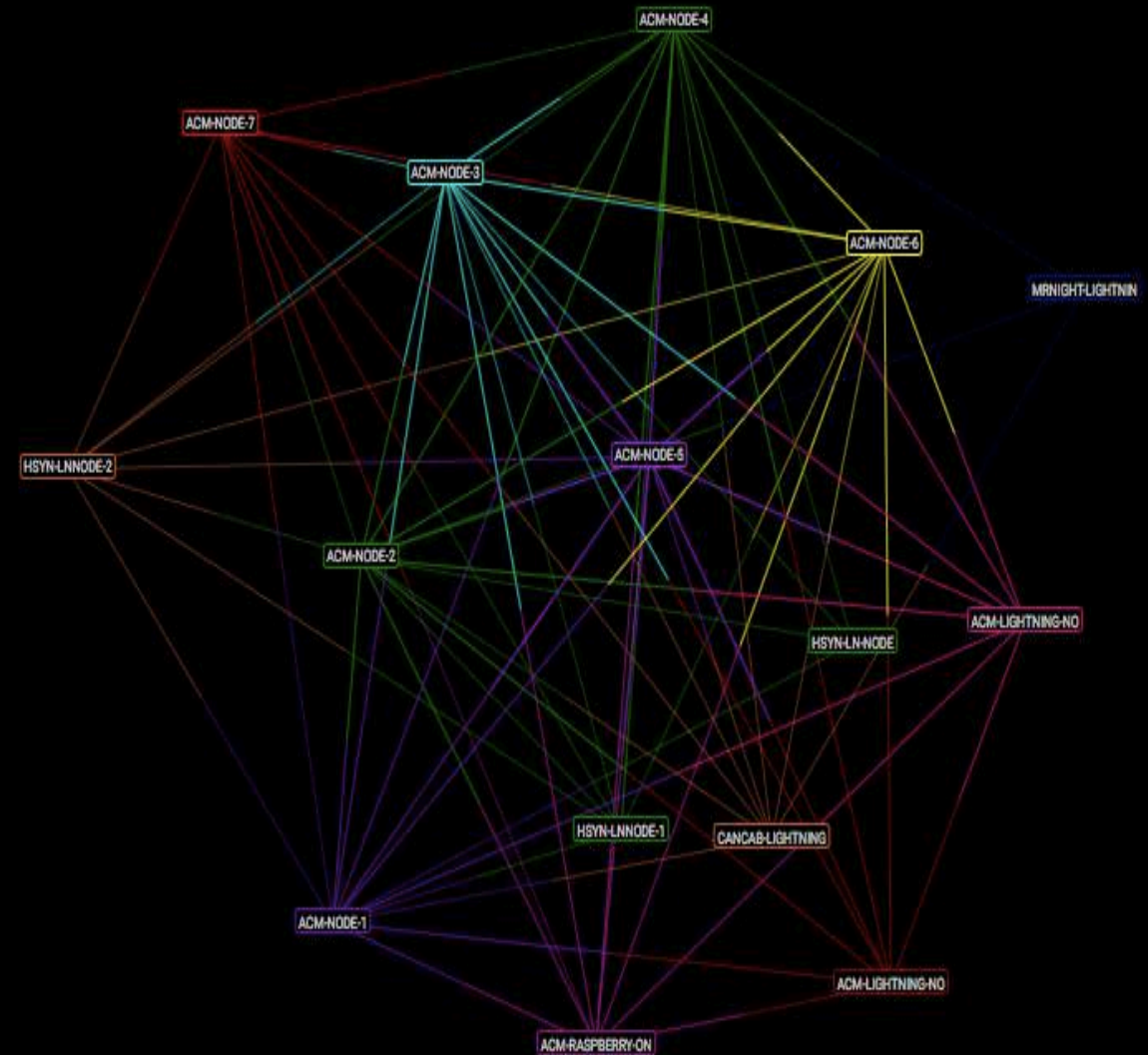


Zerocash, Zerocoin, and Stealth Addresses

- Actinium is currently testing the **Zerocoin, Zerocash, and Stealth Addresses**.
- The **Zerocash & Zerocoin** protocols help anonymize user transactions making the Actinium Blockchain impervious to chain-analysis.
- **Zerocash** enables confidential transactions by creating specialized Actinium coins that obfuscate any-and-all transaction data including transaction amounts, sender/receiver identification information, and more.
- **Zero-Knowledge Proofs** confirm the validity of confidential transactions without revealing any details.
- **Stealth Addresses** prevent any possible public association of a transaction with a recipient's wallet address. They conceal actual destination addresses thereby hiding the receiver's identity on Actinium's network.

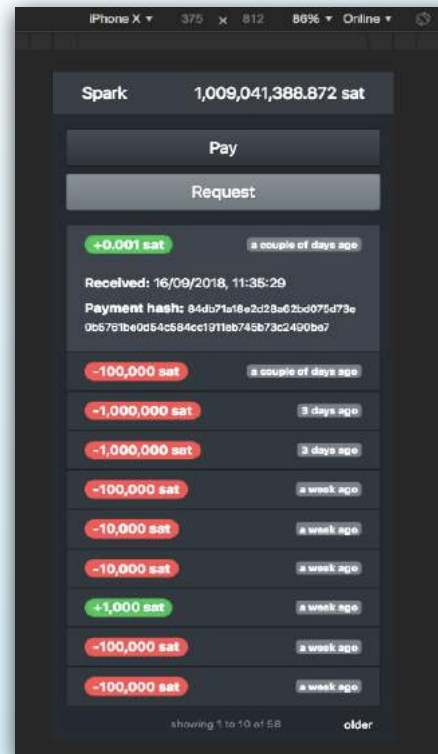
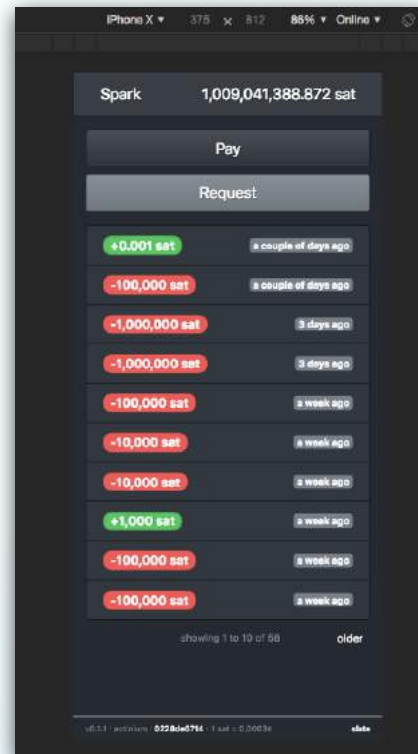
Lightning Network

- Actinium's main priority is facilitating the adoption of the Lightning Network.
- We support **SegWit**, a necessary protocol for Lightning Network.
- We also have activated our own Lightning Network that is based on **c-lightning** BOLT implementation.
- <https://ln-explorer.actinium.org>



Lightning Network Mobile Wallets

- We support the Spark-Wallet, a mobile wallet available for Web, Android, and iOS.
- Visit [our Wiki](#) for detailed information on how to install it on your device.



Links

- <https://actinium.org>
- <https://github.com/Actinium-project>
- <https://github.com/Actinium-project/Actinium/wiki>

- <https://paperwallet.actinium.org>
- <https://faucet.actinium.org>

- <https://explorer.actinium.org>
- <https://explorer2.actinium.org>
- <https://ln-explorer.actinium.org>