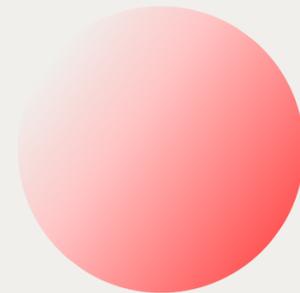


Validating Lightning Signer



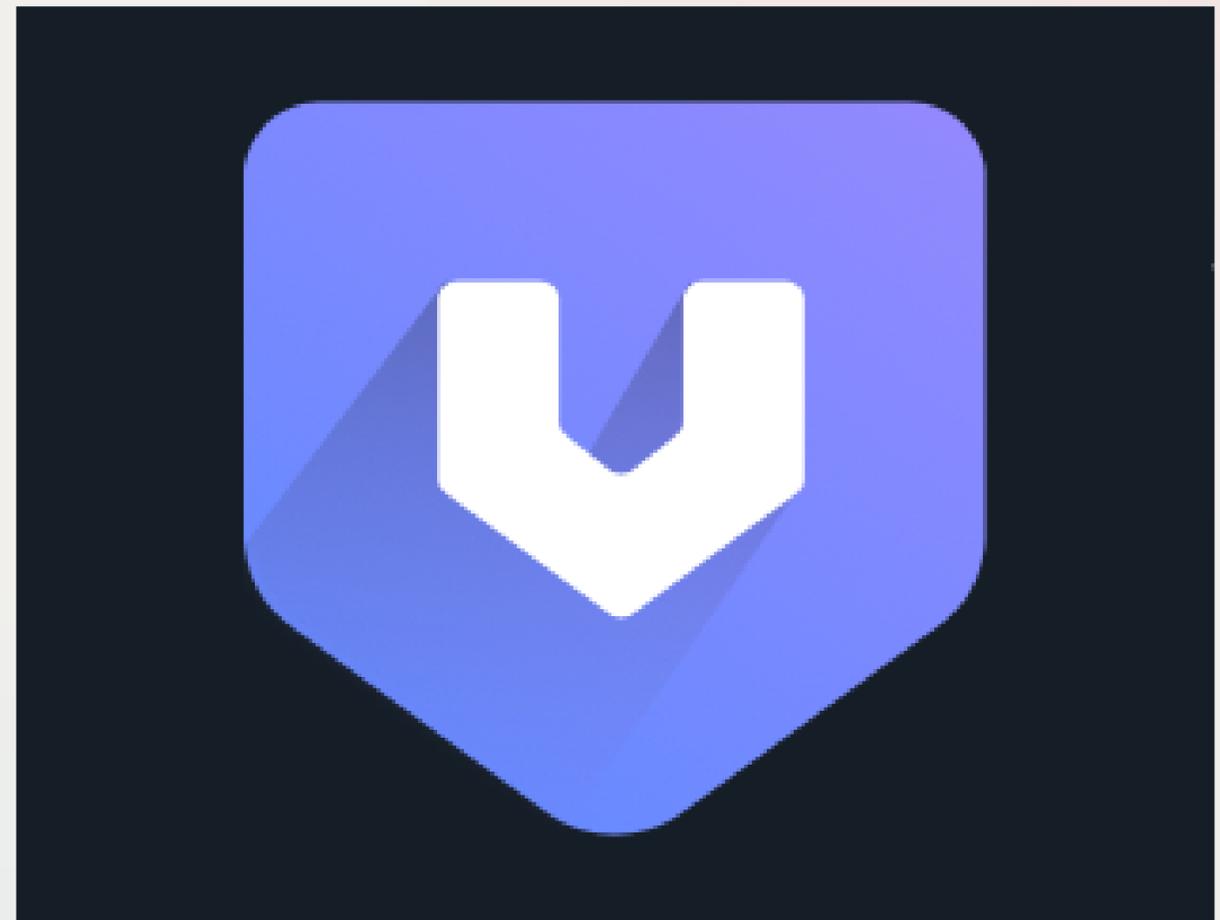
VLS

What is VLS?

We're an open-source project, not a company.

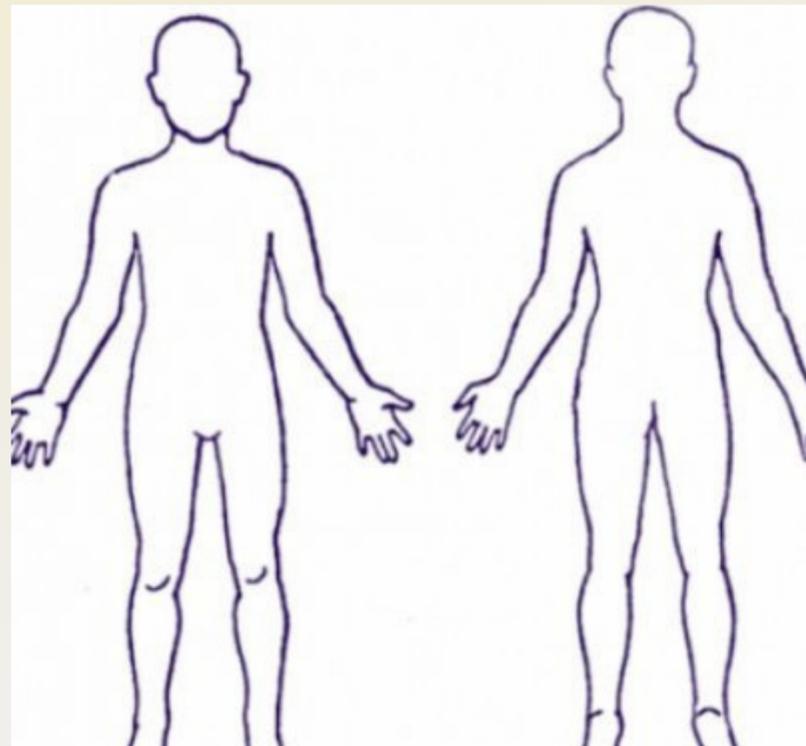
Software can be run in a wide variety of use cases:

- in HSMs to secure enterprise scale lightning nodes
- ensure custody on an inexpensive consumer device



VLS

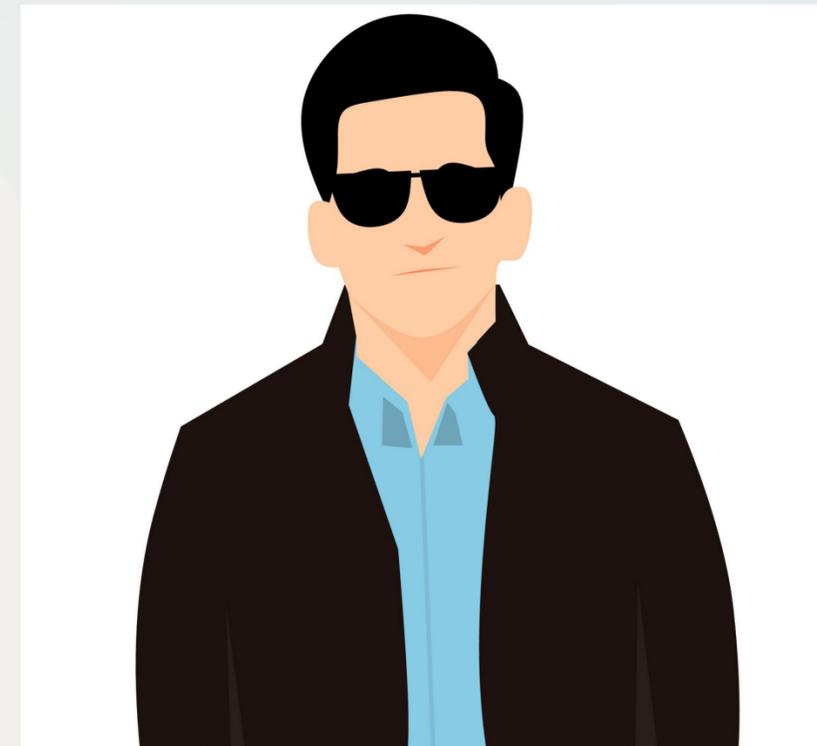
Our Team



DEVRANDOM
CO-FOUNDER



KEN SEDGWICK
CO-FOUNDER



JACK RONALDI
PRODUCT MANAGER

VLS

Unmet Need

Lightning nodes more challenging to secure than Bitcoin wallets:

- lightning funds must be "hot", with network connected private key
- large attack surface with lots of code and rapid feature development

Signing

More challenging for lightning. If remote signer is not carefully considering channel state, can be tricked into approving a transaction which steals funds from the node. See [Blind Signing Considered Harmful](#) for more ...

Policy Controls

VLS software enforces a comprehensive set of [policy controls](#) which protect the node's funds even if the node is entirely compromised.

Custody

VLS = secrets + state --> Protect lightning funds & Simple way to provide custody:

On an inexpensive consumer device it is sufficient to run VLS to maintain custody of the funds; the node itself can be run in the cloud as a Lightning Service Provider (LSP).

Embedded Device Requirements

Code

- VLS written in rust
- Core VLS code is built using no_std to facilitate running on embedded hardware.

Current Devices

- [Wasm](#)
- [STM32F412,413](#)
- [ESP32-C3](#)

Requirements

Base Requirements:

- Flash: 828.00 KiB (release build for STM32F413)
- RAM: Estimated 1KB per active channel
- NVStorage: Same as RAM, (excluding historical payment hashes)
- Capable of secp256k1 ECDSA and Schnorr

VLS can be used by integrating developers in a wide range of solutions:

- Tamper-proof hardware might be needed
- Boot and firmware update security might be needed
- Supply chain security might be needed
- A wide range of cost sensitivity is likely (consumer <-> enterprise)

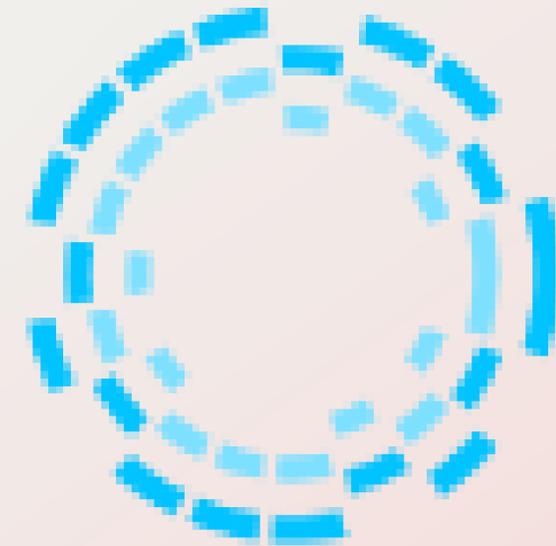
VLS

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Blockstream



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VLS

 <https://vls.tech/>

 [Main Code Repository](#)

Chat with us on Matrix

