Quarterly Report Q1 2023

Nighthawk Apps

Mission

Goals

Deliver high quality, easy-to-use, privacy-preserving apps, and high-availability infra for the Zcash network.

We've shipped the first Shielded-by-Default wallet, maintained a Zcash focussed block explorer, and a reliable light wallet service since 2020.

We take great pride in our collaborative approach, actively seeking feedback from a diverse range of privacy-focused user groups to shape the end-user experience of our products.

2023 Nighthawk Team

Project Lead Aditya Bharadwaj

Platform Engineer Vamsi Krishna

Android Lead Mandeep Bhalothia

iOS Lead Matthew Watt

Mobile Apps QA & Documentation @BostonZcash

Overview

Status

Nighthawk grants have been on the lower end of funding, considering the team size of 4 to 7 since 2020 and the scope of our projects. The Nighthawk 2023 roadmap is on track following team reorganization in Q1. The Nighthawk Apps team of 7 was reduced to 5 with pay cuts (due to reduced funding) and continues focussed on building decentralized and freedom-enabling systems for the masses via the Zcash network.

The 2022 spam attack and unexpected delays in getting ZEC integrated with Thorchain resulted in a change in our strategy.

Nighthawk Review

Goal: Accountability Obligations under ZIP-1014

Review 2020

- Thanks to the grant from the Zcash Foundation, Nighthawk delivered the first shielded-by-default wallet to the public, based on ECC's sample wallet.

Review 2021

- With three developers and one designer, Nighthawk Wallet gained traction with ongoing development, new features delivered, UX review, and design deliverables.

Nighthawk Review

Goal: Accountability Obligations under ZIP-1014

Review 2022

- Nighthawk developers pushed forward on the delivery of NU5 compatible wallets for iPhone & Android

- Spam attacks deteriorated user experience for wallets using linear sync

- Nighthawk lead, Aditya was elected to the grants committee to help fund impactful builders on Zcash

- This resulted in our team contributors not being eligible to receive funding in 2022

Q1 Transparency Report

Goal: Accountability Obligations under ZIP-1014

2023 Planned Budget

- $662.4k Team of 7

- $112k Retroactive

- $148k Infra

- $32k Operations

Approved Funding

- $375k for Wallet only

- $28k Retroactive

- $148k for Infra

Q1 Hardware purchases: 2 Macbook Pros with 32GB RAM, Google Pixel, iPhone, and iPad purchased for development & testing. AWS infra for Thorchain development ran out of credits, so a local server alternative deployment is underway.

Transparency Report

Goal: Accountability Obligations under ZIP-1014

2023 Burn Rate Schedule

- $283k for Team of 5 (~$24k/mo after pay cuts)

- $112k Retro payables to contributors in 2022-2023

- $148k Infra expenditure for Lightwalletd & ZBE

- $8k Operations (compliance, legal and hardware)

We aim to bear operational costs with the partial funding as long as possible and delivering the Nighthawk Wallet releases following which we will pursue being the Dev Fund recipient route as a non-US entity to finance our efforts for Zcash.

Progress - Nighthawk Wallet

Goal: Deliver an easy to use, privacy-preserving shielded wallet

Development

- Begin work on TCA and Jetpack architectures with our native app offerings for iPhone and Android

- Dev & testing work on upgrades from Sapling Shielded Address to Unified Address

Tasks

- Work to support Android 14 and iOS 16 platforms

- Design of an auto-shielding experience for UAs and Orchard Pool upgrades for wallet users

Progress - Zcash Block Explorer

Goal: Deliver an accurate, no tracker block explorer for ZEC

Development

- Support resolution of V5 transactions and additional info like block miner and transaction type

- Fix transaction fees accuracy for 5 transactions

- Migrate Tor V3 support

Tasks

- Upgrade instances to cater to increased load

- Migrate backend to new, K8s supporting cloud provider

- Documentation review https://nighthawkapps.gitbook.io/zcash-explorer/

Progress - Lightwalletd.com Infra

Goal: Provide a public main-net and test-net Zcash block server

Development

- Write K8s StatefulScripts to automate deployments

- Begin work to set up a globally distributed and highly available light wallet service

Tasks

- Prepare to open source and audit the scripts for full infra automation

- Monitor, debug issues, and deploy updates to the service for uninterrupted usage by light clients

Progress - Thorchain Integration

Goal: Deliver native DEX swaps for Zcash via Thorchain protocol

Milestone 3

- The Golang-based Bifrost protocol has been under development since 2022

- Chart out work for pending smoke tests and ancillary code to function with the latest zcashd v5.5.0+

Milestone 4

- The TypeScript-based xchain.js wallet for Zcash has been under development, with ZIP-317 support in progress

User Information Requests

Goal: Transparency in law enforcement and government requests

Status

- We have received no requests from any law enforcement or other government agency in any capacity since the inception

- Our no-logging policy continues to be enforced

Update

- Our monthly lightwalletd.com and Zcash Block Explorer warrant canary was replaced with the quarterly report of User Information Requests
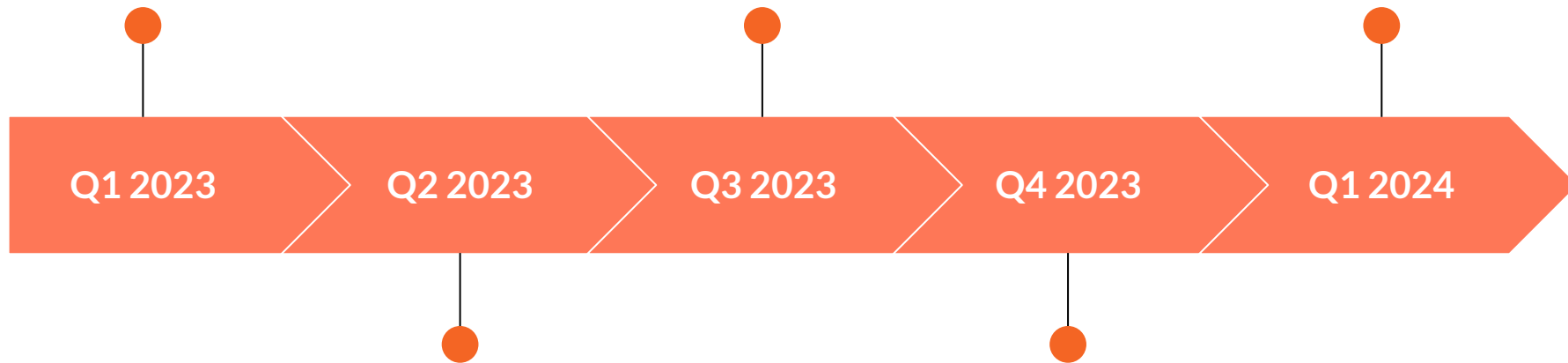
Schedule

Restructure team, migrate infra, and resume wallet development after October '22

Block Explorer security audit, implement updated wallet UX with UA & Orchard pool support

New initiatives and collaborations with partners

| Q1 2023 | Q2 2023 | Q3 2023 | Q4 2023 | Q1 2024 |

Upgrade lightwalletd infra and security audit, adopt TCA and JetPack Compose architecture for wallets

Third-party SDK integrations and wallet security audits

May 2023

Attention Areas

Caveats to keep in mind with regards to our scope

Mobile Wallet Risks

- ZIP-317 enforcement at the node level and adoption by wallets in the ecosystem to combat dusting attack

- Partial funding affecting limited design scope & third-party integrations

Thorchain Integration

- Delays due to changes in Bifrost architecture and scope increase well beyond initial estimates in 2021

- Zcash integration with Thorchain/Rune protocol is dependent on nodes voting to do so

Next steps

Wallet

Shipping app updates and reviewing alternatives to the MoonPay integration for buying ZEC, following their dropping of Zcash support.

Funding

Financing operations, hardware costs, and new initiatives.

Thorchain

Keeping Thorchain integration PRs updated with upstream changes and Zcash xchain.js wallet adopting ZIP-317 fee calculations.

New Initiatives

Wallet

Integrating with cross-chain privacy-preserving technologies to enhance Nighthawk users' experience is underway, we are hiring experienced developers to join our globally distributed team.

Infra

Zcash network infrastructure needs attention as the node count is on the lower spectrum. We are working on open-sourcing scripts to automate spinning up and maintaining new nodes. Additional partnerships with organizations in the Zcash ecosystem are underway.

We deeply appreciate the contributions, feedback, and encouragement we have received from individuals, organizations, and privacy advocates who recognize the significance of our work. Your support has been instrumental in driving us forward and enabling us to deliver innovative solutions that empower users to protect their privacy in the digital realm. Together, we are shaping a future where Zcash is not only accessible for all but also indispensable.

@nighthawkapps
@NighthawkWallet
@lightwalletd
@ZcashExplorer

May 2023