A Seattle, Washington-based company provides Web3 customers with a seamless end-to-end user communication management experience and a highly customisable platform.
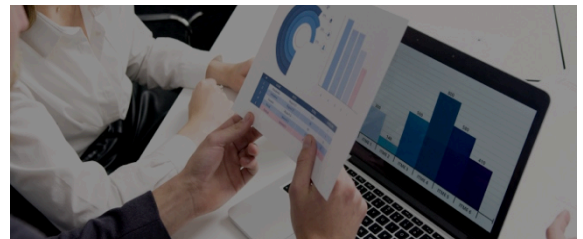
Messaging & Communication Infrastructure for Web3

Engagement Overview

Crownstack partnered with Notifi in 2023 as an end-to-end product engineering provider. The scope included the platform's backend, frontend, and DevOps. We also developed mobile versions for both iOS and Android.

About the Customer

Notifi is a messaging and communication infrastructure platform that simplifies communication across all web3 messaging channels. The company's platform offers a messaging protocol for blockchain with easy integration, customisability, advanced features for decentralised applications, and website third-generation applications, enabling businesses to engage with their users via multichannel communications.

Industry	Software Development

Business Challenges

- Frontend (Admin Portal & Website)
  - Notifi needed to enhance its admin portal by introducing new features, including topic creation, reporting, two-factor authentication (2FA), and a more effortless subscription flow to improve user engagement and management.
  - The Solana-based Smart Link action feature also required a seamless configuration experience within the admin panel.
  - The marketing website also needed optimisation for better performance and dynamic content management to boost visibility and lead generation.
- SDK & Integrations
  - The Notifi SDK had accumulated technical debt, making maintenance and developing new features challenging.
  - Coinbase in-wallet alerts using XMTP were necessary to provide a seamless Web3 notification experience. Developers also required custom integration options, such as React-based hooks, JavaScript functions, and APIs, to accommodate flexible use cases.

- DevOps & Observability
  - The client faced challenges in achieving reliability and performance with their microservices hosted on AWS EKS.
  - A fragmented observability stack prevented visibility into the system, which delayed incident responses and prolonged downtime.
  - Notifi required a centralised solution to monitor system performance effectively and proactively address issues before they impacted end-users.

Business Solution

- Frontend (Admin Portal & Website Enhancements)
  - Implemented new features such as topic creation, reporting dashboards, two-factor authentication (2FA), and an easy subscription flow to enhance the admin experience.
  - A [Solana-based Smart Link action](#) was added to the admin panel to facilitate seamless configurations.
  - Optimised the marketing website for improved performance and incorporated dynamic content updates to enhance SEO and lead generation.
- SDK & Integrations
  - Removed deprecated dependencies and restructured the SDK to reduce technical debt.
  - Introduced React-based hooks, custom JavaScript functions, and APIs for more flexible SDK integrations, enabling developers to create customised solutions efficiently.
- DevOps & Observability Enhancements
  - Implemented a unified observability strategy by integrating Prometheus for metrics collection, Loki for log aggregation, and Tempo for tracing. Configured Grafana dashboards to provide a centralised view of application performance across microservices.
  - Improved incident response times by streamlining alerts and logs, allowing Notifi's engineering team to monitor and resolve issues proactively before they affect end users.

Technology Stack

Frontend	React, TypeScript, Next.js, Tailwind CSS
Backend	C#, .NET
Workflow	Slack, Github
Devops	AWS EKS, Prometheus, Loki, Tempo, Grafana, CI/CD Pipelines
Mobile	Android, Swift (iOS)

CROWNSTACK
Building Sustainable Solutions

Business Outcome

- Frontend & Website Improvements
  - Enhanced the usability of the admin portal, allowing Notifi's internal team to manage topics, subscriptions, and configurations with greater ease.
  - Improved website performance, resulting in increased user engagement and higher conversion rates.
- SDK & Integrations Success
  - Eliminated technical debt and improved SDK stability.
  - Enabled alerts for Coinbase wallet users, ensuring seamless Web3 notifications.
  - Provided developers with custom integration options, including React hooks and JavaScript APIs, making Notifi more accessible for third-party integrations.
- DevOps & Observability Impact
  - Achieved a 50% reduction in incident resolution time due to centralised monitoring.
  - Significantly decreased downtime, leading to a more reliable user experience.
  - Fostered a culture of continuous improvement, granting engineering and DevOps teams better visibility into system performance.

Further Links

Learn More About Crownstack's Offerings
Learn More about Notifi