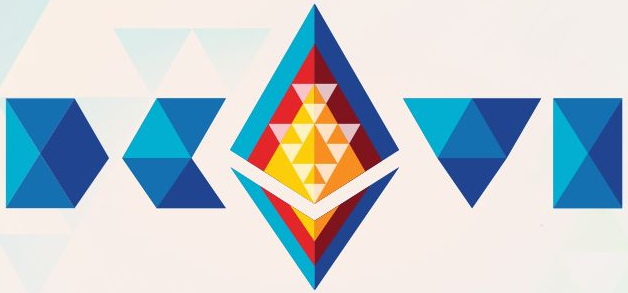

The Challenges and Learnings of Implementing Wallet Connection on Mobile

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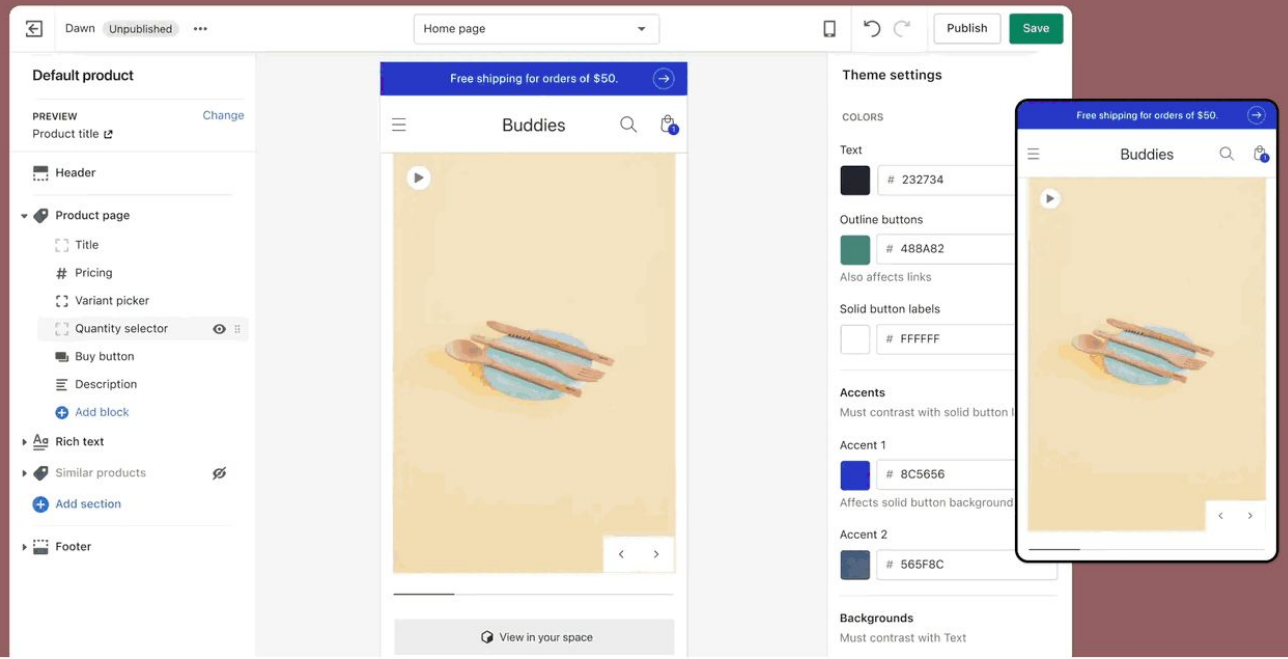
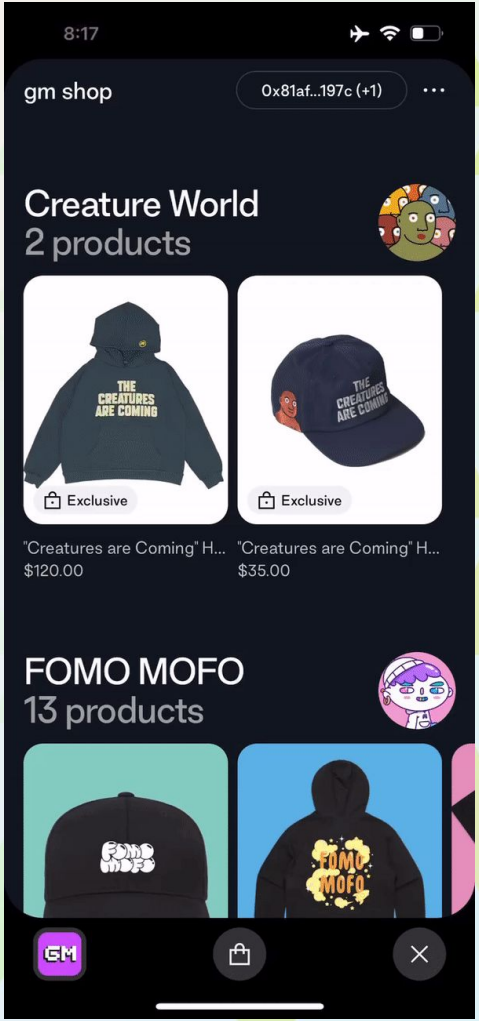


gm shop

What is gm shop?

gm shop is our take on tokengated commerce

What if we could unite brands with their most loyal fans, granting those fans access to exclusive products, gated by the NFTs they already own?



To build that, we need to allow users to connect their wallets and know which NFTs they own

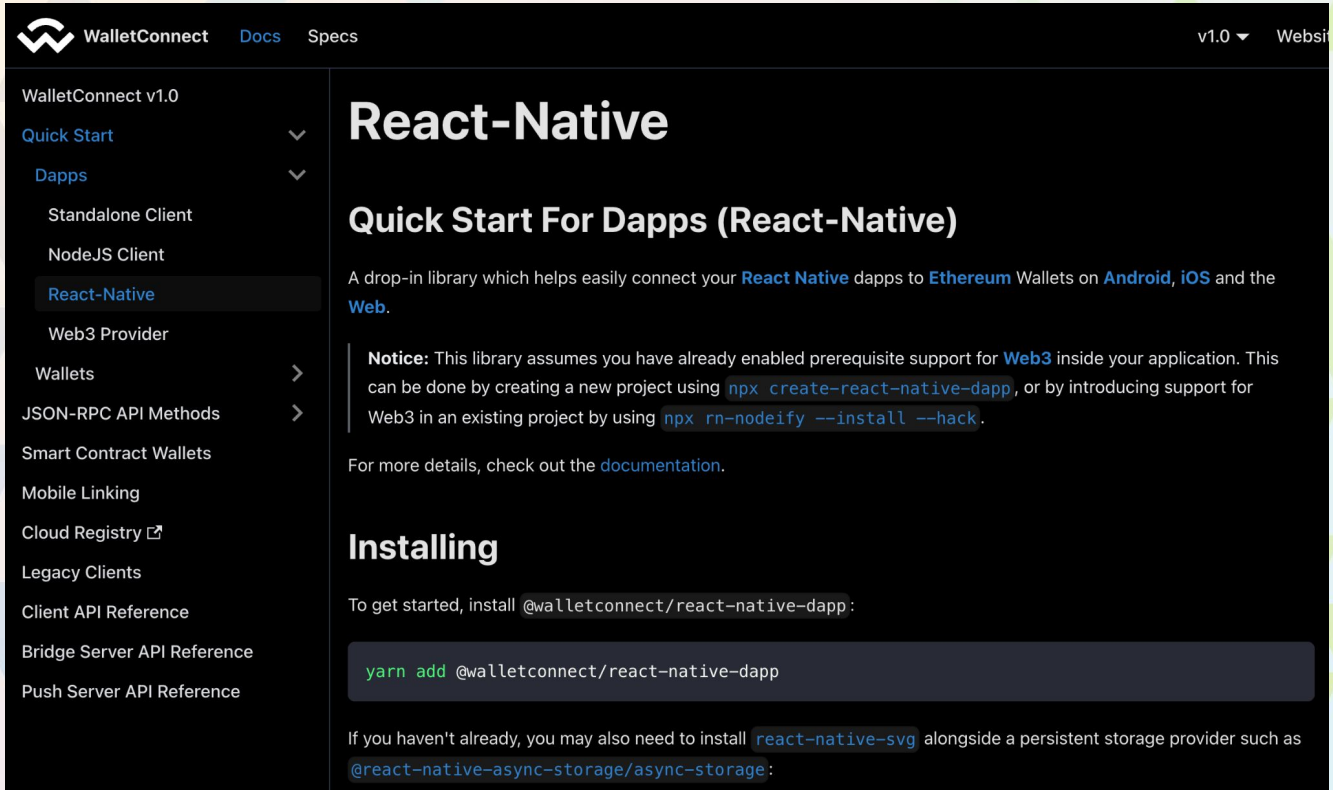
proof of ownership in *as few steps* as possible

In a seamless fashion.

WalletConnect

How did we support wallet connections?

MVP - Metamask and Rainbow



Metamask
+
Coinbase
Wallet

Deeplinking

> **Tip**
>
> Click here to create deeplinks for your application.

Deeplinks enable instant invocation of the user's preferred wallet application with correctly parameterized transactions.

Only the (authenticated) user can confirm the transaction, and the wallet can be a web, mobile or desktop app.

URLs embedded in QR codes, hyperlinks in web pages, emails, or chat messages enable robust, cross-application signaling between otherwise loosely coupled applications.

You can use deeplinks for things like:

- Creating a URL so your users can open your app directly in MetaMask Mobile to interact with your application with their Ethereum account.
- Providing a one-click experience such that users can easily make payments to another account (with pre-filled parameters like recipient address, amount, network, etc.)
- Let your users make gasless and instant transactions with Connext payment channel requests
    - This requires that the user opts in for the InstaPay experimental feature.

Bring your own connector

We were not seeing the success rate we wanted

We still had failures for no apparent reason

Our hypothesis:

WalletConnect's library assumes a persistent connection, and that was getting in the way

After a connection and signature:

Our backend could could check whether the wallet had the NFT to unlock the products, and the client could drop the session.

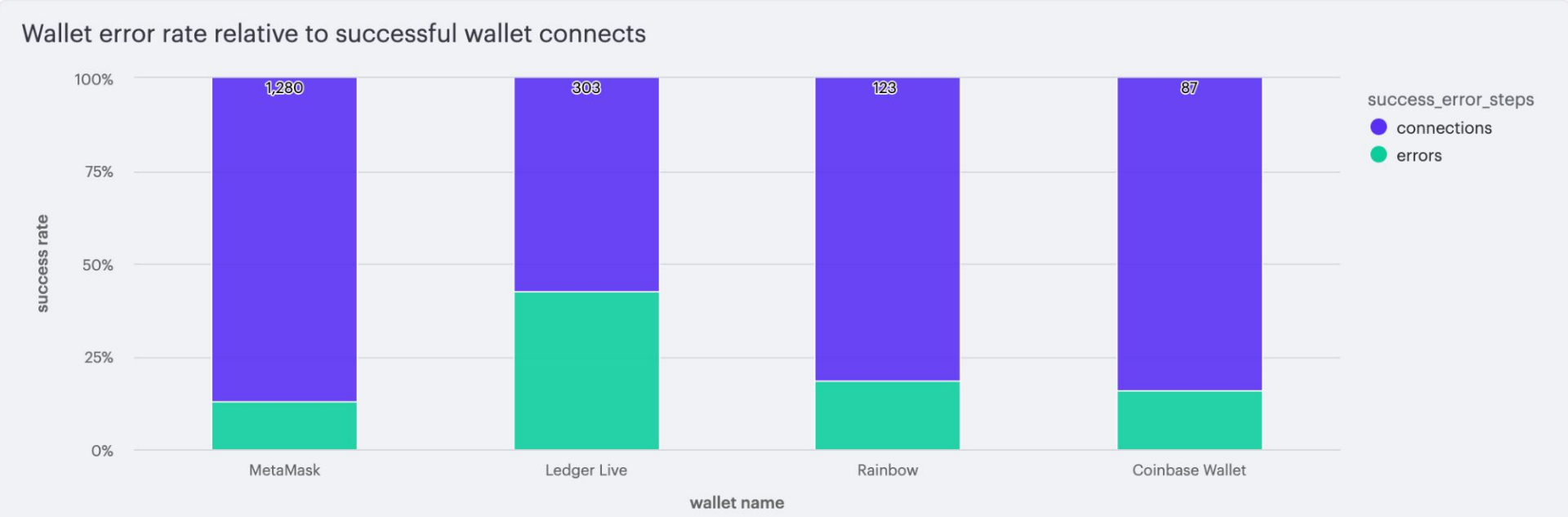
Remember: our use case was to establish **proof of ownership** in *as few steps* as possible

We rewrote our wallet connector code

Getting rid of WalletConnect's React Native dapps library and using their primitives to build our own connector.

The results were **good**!

User feedback, internal feedback and our numbers were significantly better! This version shipped to our users.



Users with really valuable NFTs prefer them

- They are way more security-conscious than the average user.
- We wanted to incentivize good behavior
- So we implemented support for Ledger wallets

But some users wanted support for more hardware wallets

Unfortunately, not all of them have mobile support.

So as a *last resort*, let the user connect via desktop*

And propagate that connection to the app.

*Still not implemented, so take with a grain of salt

WalletConnect on the **desktop** is built as a first-class citizen

There's still a long way to go.

What we learned

- Rainbow - WalletConnect Core
- Ledger - WalletConnect Core
- Coinbase Wallet - Deeplinking
- Metamask
  - Android: WalletConnect Core
  - iOS: Deeplinking
- Desktop fallback as a last resort for all other wallets

We needed a robust solution. However, your mileage could vary depending on **the use case, the size of your team and the expected reliability.**

“We shape our tools and thereafter our tools shape us”

John Culkin

If we want Ethereum to reach the next billion, it needs to be easily accessible on the platforms people use

Thank you!

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Bounty up for grabs!

Check **gitcoin** for more details