AdEth:
onboarding advertising industry into web3 allowing partnership through NFTs.

WEB3Weekend

28-30/05/2021

AdEth: why ?

DeFi and NFTs are helping Web3 mass adoption but it is still very slow.
Governments are researching and preparing their own CBDC which will launch a new era for Web3, but they might release them in a long time.

What else could brought huge interest to our community for the public ?
=> onboarding big and famous companies from industries that have already public attention: cloths, food, sports, video games, etc.

AdEth: the idea

The project allows companies to generate an NFT that can be displayed on websites as an ad.

AdEth provides a web app to generate NFT and a library to help NFT display and integration on websites.

Through AdEth website, companies can generate an NFT providing a budget in DAI.

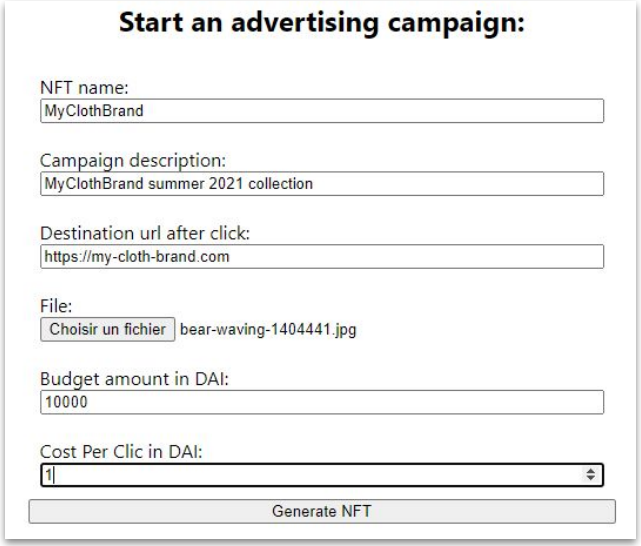
The NFT is then displayed on partner websites and each time a visitor clicks on the ad/NFT, the website gets a reward in DAI.

AdEth will take a fee on the NFT creation and/or on each click.

AdEth: the process

Minting:

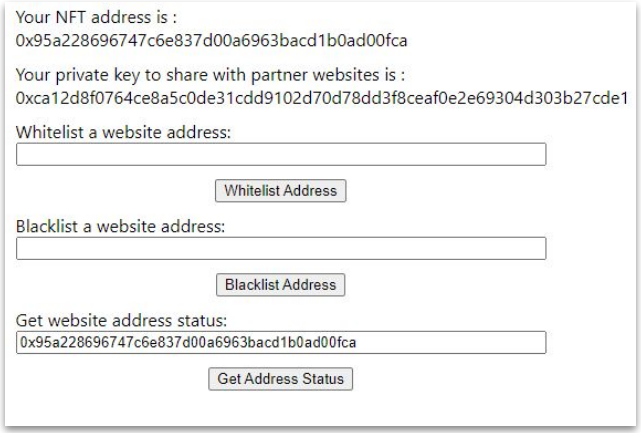
On the web app, the company provides the NFT datas.
They will be ask to sign two transactions: one to approve AdEth Factory contract and the second to mint the NFT.
Companies need to have the DAI amount on their address balance.
The budget will be transferred from the company address to AdEth Factory address.



AdEth: the process

Whitelisting:

After minting, the NFT address is provided as well as a KEY.
The company will have to share them with partner websites who wants to display the NFT.
Once the company wants to partner with a website, it needs to whitelist the website address on their NFT so the website can receive the rewards.



AdEth: the process

Integration:

The website has to display the NFT providing the NFT address, the company KEY and their address into AdEth library.

The NFT comes with an address that will sign the transaction so the process it not visible for the visitor.

The UX is the same as a regular ad on web2.

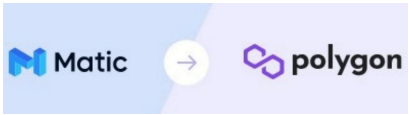
AdEth: behind the scene

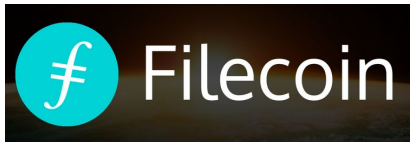
This project requires a very low fee transaction network to be reliable, like Matic/Polygon.

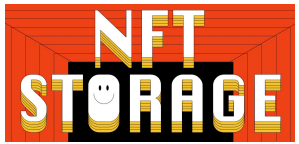
The AdNFT is not a real erc721 but a more complex smart contract that stores a NFT uri string.

They are two contracts: the Fabric contract that host the "mint NFT" function and the adNFT contract that is the NFT template.
This adNFT contains:
- the uri string
- an onClick function
- a list of whitelisted addresses

The uri contains the data of the NFT that are stored on Filecoin thanks to NFT Storage.







AdEth: magic feature

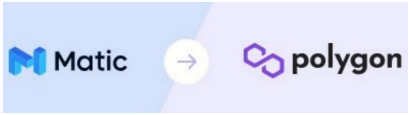
Because the network transaction fees are so low on Polygon,
it allow the use of temporary address/key pairs that are created and funded during the NFT minting process.

The address is stored in the NFT contract and the private key is actually the key provided to the company and shared with the websites.

When visitors click on the ad/NFT, it executes a function signed and send by the temp address with the private key.
Only this address is allow to execute the NFT reward function.

During the minting process, the AdEth Factory contract sent a few amount of native token to that address allowing it to sign thousands of transactions.

That is the trick of this process.



AdEth: potential and improvements

Allowing various receivers can open the possibilities for multi companies partnerships, for example a clothing brand x an NGO x an artist. Each time a user click on the "ad/NFT", stablecoin are shared to the website, the NGO and the artist.

Possibility to add a video to the NFT that will be stored on Filecoin and displayed on websites to improve interests and clicks.

Integration of a Polygon GSN that provides native tokens to the temporary addresses directly.

AdEth: cons

Hackers might want to steal the tokens hold by the temporary kees, even if the reward is low.

To execute the reward function, AdEth needs to provide a node, an Infura access or visitors need to have metamask installed.

=> The above two concerns could be avoided by deploying an AdEth server that received API calls and process the transactions itself.

AdEth: POC

The current POC is in a very early stage and I couldn't finalize a working version on time.
I could get the contracts coded and tested, and part of the front developed with NFT Storage integration.
What needs to be done is front integration, testing of the web3 functions, and testnet deployment on Mumbai (also find a better name XD).
I truly believe in the potential of this market though.

Thanks to the EthGlobal team for this hackathon !

28-30/05/2021