

Bounty Explanations for ETH Denver

Cognoscenti

March 2023

1 Introduction

Cognoscenti is a business intelligence platform that brings together researchers with domain expertise and organizations with a thirst for knowledge to answer the toughest questions of our time and fund innovative research.

Cognoscenti would not be possible without the incredible tools of some of the sponsors. In the following, our usage of those tools are described in more detail.

2 OKX - Smartmoney address label

On our platform we embrace the participation of every users by enabling them to vote in line with some of there favorite researchers with our copy trading feature. As insights into the ability of a voter is key, we created multiple dashboards to highlight the best votes. For our economics section which is aimed at improving finance research, we plan to feature financial products, including crypto, for which smart labels provide. The labels and dashboard were created based on the data from OKX products, namely OKC explorer and OKC DEX and the OKX NFT Marketplace. The methodology for the generated labels is described below in Table 1 and Table 2.

Label	Methodology
NFT newcomer	Addresses under 5 NFT transactions
NFT OG	Addresses over 5 NFT transactions
Unique collector	Addresses owning only 1 collection
Diverse collector	Addresses owning several collections
Second-class PNL	Addresses with a PNL under \$ 5000
PNL star	Addresses with a PNL over \$ 5000
NFT amateur	Addresses under \$ 1500 in transaction volume
NFT Trader	Addresses over \$ 1500 in transaction volume

Table 1: Methodology to get NFT marketplace labels for the smart money dashboard

Label	Methodology
Amateur Trader	Addresses under 50 DEX transactions
Expert Trader	Addresses over 50 DEX transactions
Fees Optimiser	Addresses having burnt less than in gas
Fees Degen	Addresses having burnt more than in gas
Gas Saver	Addresses having a gas used/usdfees under
Gas Burner	Addresses having a gas used/usdfees over
Low frequency Trader	Addresses trading less often than daily
High frequency Trader	Addresses trading more often than daily

Table 2: Methodology to get DEX labels for the smart money dashboard

Data Source	# Data Points	Data Type
OKC Explorer and OKC DEX	c. 300,000	Liquid Token
OKX NFT Marketplace	c. 1.5m	Non-fungible Tokens

Table 3: Included data sources from OKX for the smart money dashboard

Unfortunately, there were no API available to easily gather the data therefore we reverse engineered the front end API and spun up multiple IP addresses to obtain sufficient data. An overview of data set can be found in Table 3.

3 Chainlink - Functions

Since Cognoscenti is using a prediction market as voting mechanism, we utilise Chainlink’s functions oracle to resolve the market. We used Chainlinks new oracle functions and implemented them in our Solidity contracts. The currently live consumer contract can be found at address 0x2Ab18A0Bd5a09401FaD9dee59894ce26E895247c on Sepolia and is integrated with our prediction contract. However, we were not able to fully integrate the npx commands into our application which is currently outstanding and needs to be tested with our contracts. Experimental transactions can be found under the EOA 0xf2B719136656BF21c2B2a255F586afa34102b71d.

4 Cypher Wallet - Push Notifications SDK

Regarding the Cypher Wallet - Push Notifications SDK, the team worked on Polygon and implemented the SDK on the two underlying contracts emitting events. We use the Notifications SDK in order to send transaction confirmations to the user. We firmly believe that such a feature is very important in the case of prediction markets. Indeed, prediction markets can have bets of very high value. In this context having a confirmation of transaction is necessary. Moreover, in the context of prediction markets for science, the users are not necessarily familiar with web3 and will very likely not be able to check their transaction on block explorers. Including this SDK with a very easy to down-

load app, allowing users to get notifications directly on their phone seems to be a must have feature.

Technically, we have integrated the events listeners within the web3-event-parser to listen to the events emitted by our contracts. Extending the BaseEventHandler allows us to make the best use of the Cypher Notifications SDK and to customise it for our needs.

5 Cypher Wallet - Onboarding SDK

Another very important feature deployed by Cypher Wallet is Cypher - Onboarding SDK. This onboarding SDK is also a feature allowing us to reach more people, including non-web3 researchers. This API allows us to automate a series of operations to make it easy to interact with our application. If the user doesn't have the right currency to bet, the SDK will offer all the required services to make the user aware of the issue and to offer him swap options directly from the UI of our platform. Whether the user has to bridge or to swap tokens, everything is directly done by the SDK.

Technically, we have added a script tag in the head of our static html file and added the required code snippet around every transaction buttons in order to make it easy for the the user to successfully make transactions on cognoscenti.

6 Best Use of Polygon

We use Polygon as our preferred production chain due to the battle tested network and low gas fees. Our contracts are live under 0x51382620e7419552Dd8CC7B047eddef6C5808De8 and 0x7492dD70FB2978CA3F3b4003A8FB00Ffd38E0454.

7 Integrate Tenderly Web3 Gateway

For our RPCs in the dApp we used Tenderly's Web3 Gateway to connect to multiple testnets and mainnet.

8 Used Testnets

Cognoscenti is deployed on multiple testnets to make playing around with the dApp easy and accessible for everyone. Also, we wanted to try out a few of the newer networks such as Mantle, Scroll, and Base. Below are the listed contracts on the corresponding networks.

Network	Deployed Contracts
Mantle	0x51382620e7419552Dd8CC7B047eddef6C5808De8, 0x7492dD70FB2978CA3F3b4003A8FB00Ffd38E0454
Scroll	0x51382620e7419552Dd8CC7B047eddef6C5808De8, 0x7492dD70FB2978CA3F3b4003A8FB00Ffd38E0454
Base	0x71C2468664b8c0c7d0ad0eA59C1fc1ddA15CDA7c, 0xe402419B3135dE5416537189F71469133c5E1b6C

Table 4: Used testnets.