



OECD International Academy for Tax Crime Investigation

*Anti-Money Laundering: Current Trends, Prosecutions,
and the Challenges around Cryptocurrencies*



Discovering Tokens/Assets with Blockchain Explorers

Discovering Assets

- Law enforcement tracing tools like Chainalysis, CipherTrace identify many but not all tokens.
- There are close to 1000 different **ERC20** token projects (Cryptocurrencies). <https://etherscan.io/tokens>
- There are over 100,000 different **ERC721** token projects (NFT). <https://etherscan.io/tokens-nft>
- Thousands of **ERC1155** (configurable) tokens also now exist. <https://eips.ethereum.org/EIPS/eip-1155>
- If you only use tracing tools you may miss assets belonging to a suspect.
- **Solution: Use blockchain explorers.**

Useful blockchain explorers

- Token smart contracts can be created on several different blockchains: Ethereum, BNB Smart Chain, Polygon, Solana, etc.
- Ethereum represents the vast majority of tokens.
- Some useful blockchain explorers:
 - **Trezor Ethereum Explorer** (<https://eth1.bcfm.ca/>)
 - **Zerion** (<https://app.zerion.io/>)
 - **Etherscan** (<https://etherscan.io/>)

Trezor Ethereum Explorer

<https://eth1.bcfm.ca/>

- Allows you to search using:
 - Block numbers
 - Transaction IDs
 - **Addresses (Accounts)**
 - Extended Public Keys (xpub)
 - Deterministic wallet's root key
 - Can be exported from wallets

Trezor Ethereum Explorer:

Useful to get a quick overview

- **Summary of the account's ERC20 (cryptocurrency) token transactions**
- Account ETH balance
- View all the transactions that a an account has conducted
- View transaction information for specific tokens
- **Does not show NFT (ERC721) information**
- **Does not allow you to export the information (although you can print the Web pages)**



Address 0 ETH

Account/Address

0x55A7286F243A44c45A566a6fF5503EeFD944F1FE

Confirmed

Ethereum balance

Balance 0 ETH

Transactions 2421

Total number of sending and receiving transactions

Non-contract Transactions 1568

Transactions conducted by an EOA

Nonce 1509

Number of transactions sent

ERC20 Tokens

Contract

Tokens

Transfers

Tether USD

0 USDT

2305

BadgerDAO.io

800000 BADGER

1

akSwap.io

250000 akSwap.io

1

FF9.io

300000 FF9.io

1

Trezor Ethereum Explorer - Exercise

Examine the following account:

0x50e00Ae08678EBd16b79B84439defa046F18eb76

1. Which ERC-20 tokens has it exchanged?
2. Does the account hold any Tether (USDT)?
3. Does the account hold any USDC?
4. What token does it still hold, how many does it hold, and how much are they worth?

<https://eth1.bcfm.ca/>

<https://bitinfocharts.com/>

<https://coinmarketcap.com/>

Trezor Ethereum Explorer - Exercise

Examine the following account:

0x736b78bD08095461B1de06F4Eec5B505e5C5f96F

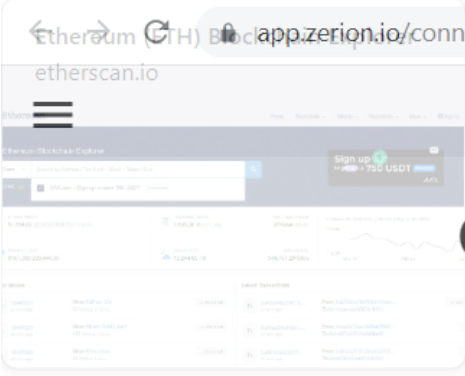
1. Which ERC-20 tokens has it exchanged?
2. Has the account transacted any Tether (USDT)?
3. Has the account transacted any USDC?
4. How many ApeCoins does it hold and how much are they worth?

<https://eth1.bcfm.ca/>

<https://coinmarketcap.com/currencies/apecoin-apec/>

Zerion

Connect to Zerion



The screenshot shows the Zerion app interface in a browser. The address bar displays 'app.zerion.io/connect-wallet'. The main content area features a search bar, a 'Sign up' button, and a table of wallets. The table has columns for 'Wallet', 'Address', and 'Balance'. It lists several wallets, including 'Zerion Wallet', 'MetaMask', 'WalletConnect', 'Coinbase Wallet', 'Trust', 'Encrypted Ink', 'Ledger', and 'Fortmatic'. Below the table, there is a 'Connect with email' button and a 'Track any wallet' section with a text input field for pasting an address and a submit button.

Zerion Wallet MetaMask WalletConnect Coinbase Wallet

Trust Encrypted Ink Ledger Fortmatic

Connect with email

Track any wallet

Paste ENS, Ethereum, BSC or Polygon address

<https://app.zerion.io/>

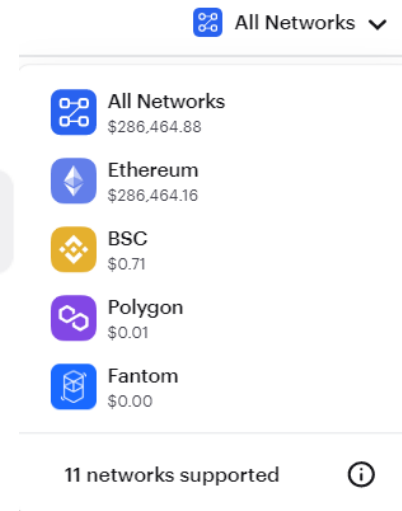
Zerion

- More comprehensive than Trezor Ethereum Explorer
- Shows NFTs
- Supports 11 different blockchains/networks

Track any wallet

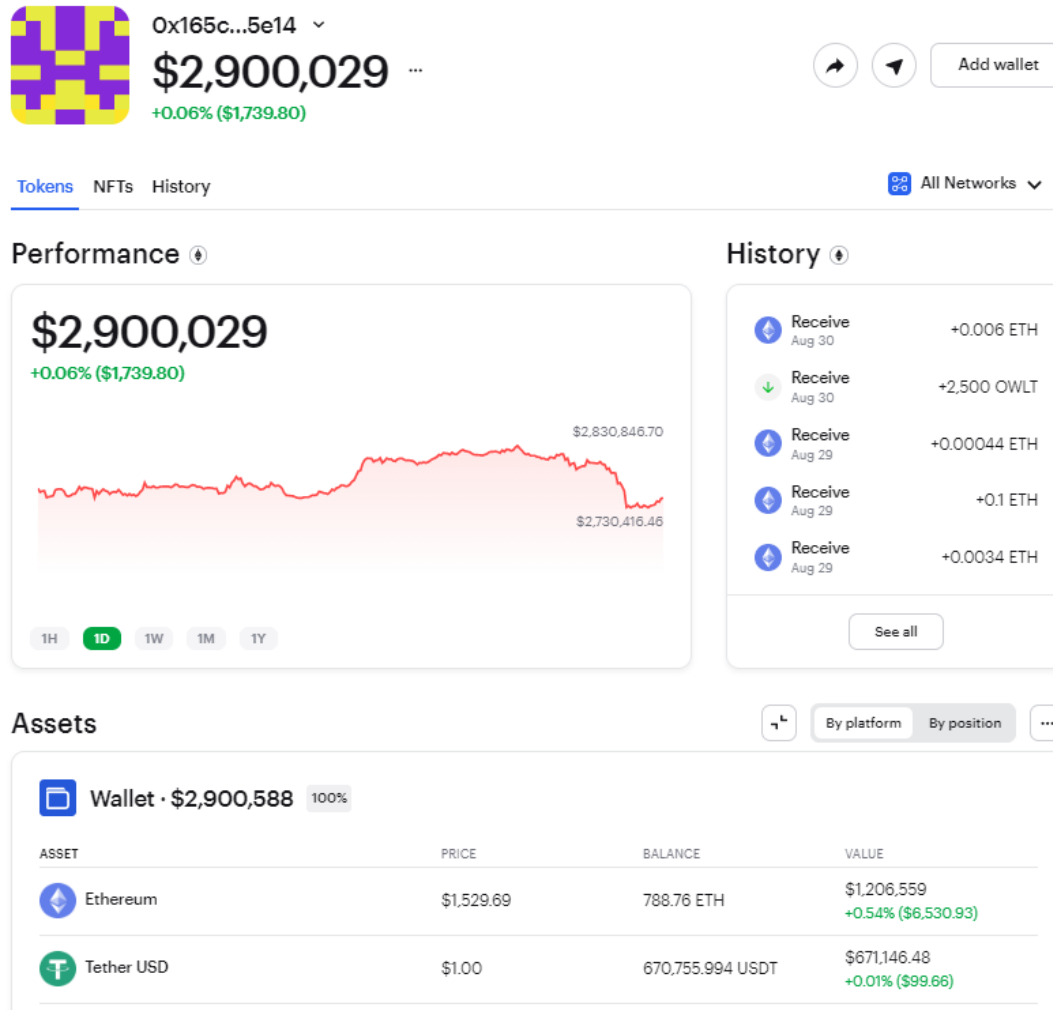
Paste ENS, Ethereum, BSC or Polygon address

<https://app.zerion.io/>




- Allows you to export the **Transaction History** as a CSV

Zerion – Tokens Tab (ERC20)





Zerion – NFTs Tab



0x165c...5e14 ▾

\$2,900,029 ...

+0.06% (\$1,739.80)



Add wallet

Tokens **NFTs** History

Ethereum

Total value by floor price ↕


\$76.30

Price: high to low


Collections

Collection


List




Art Blocks
Flowers #1754
\$76.46



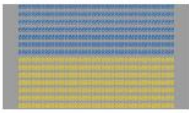
OpenSea Collection
Fish EYE




OpenSea Collection
GuitarFaces #0073




OpenSea Collection
Justin




OpenSea Collection
Слава Україні!



OpenSea Collection
How many pigeons are ...



MoonCollective
MOON COLLECTIVE #163



Sushimi
#9662

Zerion – Transaction History Tab



0x165c...5e14 ▾

\$2,901,498 ...

+0.1% (\$3,042.25)



Add wallet

Tokens NFTs History

Ethereum

Transaction

All Assets

Filter by Address, Protocol, Asset, Type

Download CSV


August 30, 2022

Receive 09:05 AM	+0.006 ETH \$9.43	From 0x0000...e581
Receive 01:44 AM	+2.500 owl N/A ⓘ	From 0x090d...256e

August 29, 2022

Receive 05:35 PM	+0.00044 ETH \$0.69	From 0x0000...e581
Receive 06:27 AM	+0.1 ETH \$145.20	From 0xe4e7...614c
Receive 08:00 AM	+0.0004 ETH \$0.69	From 0x0000...e581

Zerion – CSV File (Ethereum)

 0xe21dc18513e3e68a52f9fcdacfd56948d43a11c6 transactions 08_31_2022 12_51 from Zerion

	A	B	C	D	E	F	G	H					
1	Date	Time	Transaction Type	Status	Application	Accounting Type	Buy Amount	Buy Currency					
2	08/28/2022	3:52	Receive	Confirmed		Income	2	nbayc					
3	08/23/2022	18:32	Receive	Confirmed		Income	182	r.a.c					
4	08/23/2022	4:49	Receive	Confirmed		Income	2	hellfire					
5	08/18/2022	1:29	Receive	Confirmed		Income	3882	bloc					
6	08/12/2022	8:22	Receive	Confirmed		Income	293	homelessfriends					
7	08/11/2022	5:31	Receive	Confirmed		Income	1	blacklisteth.com					
8	08/07/2022	22:45	Receive	Confirmed		Income	0.054395	ETH					

Zerion – Exercise

<https://app.zerion.io/>

Examine the following account:

0x50e00Ae08678EBd16b79B84439defa046F18eb76

1. What is the account's ETH balance?
2. Can you see any ERC-20 token (Assets) information?
3. How many NFTs does the account hold?
4. Which NFT is worth the most?
5. Explore one of the *Mutant Cartel* tokens. What is its purpose?

Mutant Cartel #75



Description

Take mutant stamp at <https://mutantstamp.xyz> and receive wears.

Mutant Stamp is a collection granting members-only access and benefits to the Mutant Cartel. Take your seat at the Cartel's table and rise as a Made Mutant.

[Visit site](<https://mutantstamp.xyz>) and do what should do.

Zerion – Exercise

<https://app.zerion.io/>

Examine the following account:

0x736b78bD08095461B1de06F4Eec5B505e5C5f96F

1. How many Bored Ape NFTs does it hold?
2. How much are they worth?
3. How many Mutant Ape NFTs does it hold?
4. How much are they worth?
5. What is the listed price of Bored Ape 4508?
6. What platform is it being listed on?



0x736b...f96f ▾

\$469,681.68 ...

-2.8% (\$13,292.93)



Add wallet

Tokens NFTs History

Ethereum

Total value by floor price

\$226,302.71

☰ Price: low to high

🔍 Collections



Collection

List

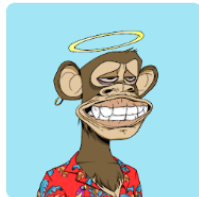
BoredApeYachtClub X

Reset



BoredApeYachtClub
#4508

Floor Price
Ξ63.00



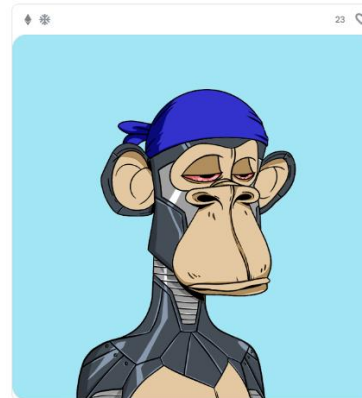
BoredApeYachtClub
#4597

Floor Price
Ξ63.00



🔍 Search items, collections, and accounts

Explore St



23

Bored Ape Yacht Club

#4508

Owned by [iamsad_cold](#)

👁 1.8K views 🤍 23 favorites

Sale ends November 16, 2022 at 6:50 PM GMT-5

07 Hours 51 Minutes 31 Seconds

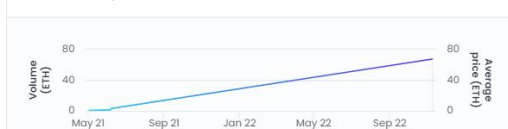
Current price

81.5 ETH \$98,371.32

Add to cart

Make offer

📈 Price History



Etherscan

<https://etherscan.io/>

The screenshot displays the Etherscan website, which serves as a blockchain explorer for Ethereum. The interface includes a navigation bar with links to Home, Blockchain, Tokens, Resources, and More, along with a Sign In button. A search bar is prominently featured, allowing users to search by address, transaction hash, block, token, or ENS. Below the search bar, there is a sponsored advertisement for Winz.io. The main content area is divided into several sections: Ether Price, Market Cap, Transactions, Difficulty, Med Gas Price, and Hash Rate. Each section provides real-time data and trends. At the bottom, there is a section for Ethereum transaction history over the last 14 days, accompanied by a line chart showing transaction volume.

Etherscan

Home Blockchain Tokens Resources More Sign In

The Ethereum Blockchain Explorer

All Filters Search by Address / Txn Hash / Block / Token / Ens

Sponsored: - Winz.io - Best Mobile Crypto Casino With Zero Wagering Bonuses.

ETHER PRICE \$1,554.82 @ 0.07738 BTC (+4.52%)	TRANSACTIONS 1,695.20 M (12.3 TPS)	MED GAS PRICE 26 Gwei (\$0.85)
MARKET CAP \$187,088,909,444.00	DIFFICULTY 12,244.69 TH	HASH RATE 944,787.29 GH/s

ETHEREUM TRANSACTION HISTORY IN 14 DAYS

1 140k

Etherscan

- Most extensively used Ethereum blockchain explorer.
- Provides extensive transaction details
- Exports transaction CSV files (within specific date ranges)
- Has tabs listing:
 - **ERC 20** token transactions
 - **ERC 721** token transactions
 - **ERC 1155** token transactions
- Indicates whether the ETH address is used on other blockchains.

[Download **CSV Export** ]



Eth: \$1,549.94 (+4.06%) | 44 Gwei

Click to view address on 9 other chains.

 Address 0xE21DC18513e3e68a52F9cDaCfD56948d43a11c6



Address 0xe21dc18513e3e68a52f9cdacfd56948d43a11c6 found in 10 different chains. (0.006 secs)

Etherscan

 <https://etherscan.io> > address > 0xe21dc18513e3e68a52f9cdacfd56948d43a11c6

Ethereum

BscScan

 <https://bscscan.com> > address > 0xe21dc18513e3e68a52f9cdacfd56948d43a11c6


Binance Smart Chain

PolygonScan

 <https://polygonscan.com> > address > 0xe21dc18513e3e68a52f9cdacfd56948d43a11c6

Polygon (Matic)

FtmScan

 <https://ftmscan.com> > address > 0xe21dc18513e3e68a52f9cdacfd56948d43a11c6

Fantom

GnosisScan

 <https://gnosisscan.io> > address > 0xe21dc18513e3e68a52f9cdacfd56948d43a11c6

Gnosis Chain




Transactions

Erc20 Token Txns

Erc721 Token Txns

Erc1155 Token Txns

Latest 25 from a total of 49 transactions

Txn Hash	Method 	Block 	Date Time (UTC)
 0x52593d654db858caa7...	Transfer	15299032	2022-08-08 2:45

Some Known Accounts

Vitalik Buterin:

0xAb5801a7D398351b8bE11C439e05C5B3259aeC9B

Snoop Dog:

0xce90a7949bb78892f159f428d0dc23a8e3584d75

Justin Bieber:

0xE21DC18513e3e68a52F9fcDaCfD56948d43a11c6

Madona:

0x8ea95Bdc5cDddC0b7EbAd841F0c1f2cA6168b6a9

Ukraine Govt. Crypto Donation Address:

0x165CD37b4C644C2921454429E7F9358d18A45e14

Etherscan – Exercise

<https://etherscan.io/>
<https://app.zerion.io/>

1. How many blockchains is **Vitalik Buterin's** address active on?

0xAb5801a7D398351b8bE11C439e05C5B3259aeC9B

2. What NFT was sent to **Madonna** at 2022-09-17 3:13:47 – and what does it look like (follow the links)?

0x8ea95Bdc5cDddC0b7EbAd841F0c1f2cA6168b6a9

3. Examine one of the two addresses on Zerion as well as Etherscan. What differences do you see between Zerion and Etherscan when it comes to information about the address' NFTs?

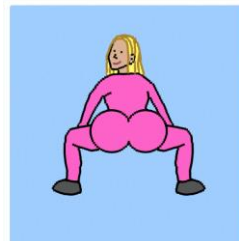
Eth: \$1,190.87 (-5.73%) | 24 Gwei

Click to view address on 21 other chains.

Address 0xAb5801a7D398351b8bE11C439e05C5B3259aeC9B



0xb531577878604cd035... 2022-09-17 3:13:47 Null Address: 0x000...000 IN 0x8ea95bdc5cdddc0b7e... 133 ERC-721: Boo.....ers View NFT >



Booty Bouncers #133

Booty Bouncers

Min Price: N/A Last Sale: N/A

Details

- Owner
- Contract Address
- Creator
- Classification
- Token ID
- Token Standard

Description