

Merkle Science Tracker Guide

Landing Page after Logging in

TRACKER
by MERKLE SCIENCE

tan Lee

FILES AND FOLDERS

- Test2
- michal test
- lan
- Katherine Test
- Vik
- User 1
- User 2
- samples
- Smart
- Smart Contract Analysis

Ukraine Donation Scam

tron bridge example

test12345678910

test12345678

New Folder

New Board

Welcome to Tracker

Search for an address, transaction or paste a hash...

RECENT

WATCHED

tron bridge example
Edited 6 days ago

test12345678910
Edited 7 days ago

test12345678
Edited 8 days ago

Landing Page after Logging in

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FILES AND FOLDERS

- Test2
- michal test
- Ian
- Katherine Test
- Vik
- User 1
- User 2
- samples
- Smart
- Smart Contract Analysis
- Ukraine Donation Scam
- tron bridge example
- test12345678910
- test12345678

Search for an address, transaction or paste a hash...

RECENT WATCHED

tron bridge example
Edited 8 days ago

test12345678910
Edited 7 days ago

test12345678
Edited 8 days ago

Search bar used to begin your investigations

Allows for simultaneous searches of multiple addresses or transactions at the same time

Supports searches across multiple blockchains at the same time

Landing Page after Logging in

TRAKER

FILES AND FOLDERS

Test2

trial test

lan

Katherine Test

Vik

User 1

User 2

template

Smart

Smart Contract Analysis

Ukraine Donation Smart

Iron bridge example

test12345678910

test12345678

New Folder

New Board

TRX ETH

Iron bridge example
Edited 8 days ago

0x5bd185216ec1e38d6458c870992a69e38e03f7ef

ADDRESS (E)

ADDRESS

ENTITY NAME

ENTITY TYPE

BLOCKCHAIN

etherbase (eth) address - Balance: 99.04

arbitrum (arb) address - Balance: 2796.04

mobi (mobi) address - Balance: 0

optimum (opt) address - Balance: 3257.25

Bitget.com

Exchange / Special KMC And hot

ARB

Close

Add all to Search

MATIC OP TRX

Upon searching an address, if the address is compatible with more than 1 blockchain (ie. EVM), Tracker will simultaneously run a search across all the different blockchain that support the address and provide you with any known attribution

Landing Page after Logging in

The screenshot shows the Tracker interface. On the left is a sidebar with 'FILES AND FOLDERS' and a list of folders like 'Test2', 'mitchal test', 'lan', etc. The main area has a blue header with 'Welcome to Tracker'. A modal window is open, displaying details for an address: '0x5bd185216ec1e38d6458c870992a69e38e03f7ef'. The modal has two columns: 'ADDRESS (E)' with a list of addresses and their balances, and 'ADDRESS' with details for '0x5bd185216ec1e38d6458c870992a69e38e03f7ef', including 'ENTITY NAME: Bitget.com', 'ENTITY TYPE: Exchange / General KYC And not', and 'BLOCKCHAIN: ARB'. At the bottom of the modal, there are two buttons: a trash icon and a plus icon, both highlighted with a red box. Below the plus icon is a blue button labeled 'Add all to board'. A red arrow points from the text on the right towards this button.

To start a fresh investigation, user can click "Add all to board" to create a new investigation board with all the addresses across the different chains. Alternatively, user can click the button above in blue to selectively add only 1 address at a time.

New Investigation Board

The screenshot displays the TRAKER investigation board interface. At the top left, the TRAKER logo is visible. The main header shows "Untitled graph" and a "Save" button. The user's name "Ian Lee" is in the top right corner. A toolbar with various icons is located below the header. A modal window is open, showing details for an Ethereum address: "0x3ce700295c69b43512190330da63610dd80ab53e". The modal is divided into two panes. The left pane, titled "ADDRESSES (0)", contains a list with one entry: "0x3ce700295c69b43512190... ethereum (eth) address - Balan...". The right pane displays the following information: "ADDRESS: 0x3ce700295c69b43512190330da...", "ENTITY NAME: Ukraine Donation Scan 5", "ENTITY TYPE: Smart / Malware", and "BLOCKCHAIN: ETH". At the bottom of the modal are "Close" and "Add" buttons. In the background, a graph visualization shows a single pink node labeled "Ukrai...cam 5".

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by HENRI & SCIENCE

Untitled graph Save Ian Lee

0x3ce700295c69b43512190330da63610dd80ab53e

ADDRESSES (0)

0x3ce700295c69b43512190...
ethereum (eth) address - Balan...

ADDRESS
0x3ce700295c69b43512190330da...

ENTITY NAME
Ukraine Donation Scan 5

ENTITY TYPE
Smart / Malware

BLOCKCHAIN
ETH

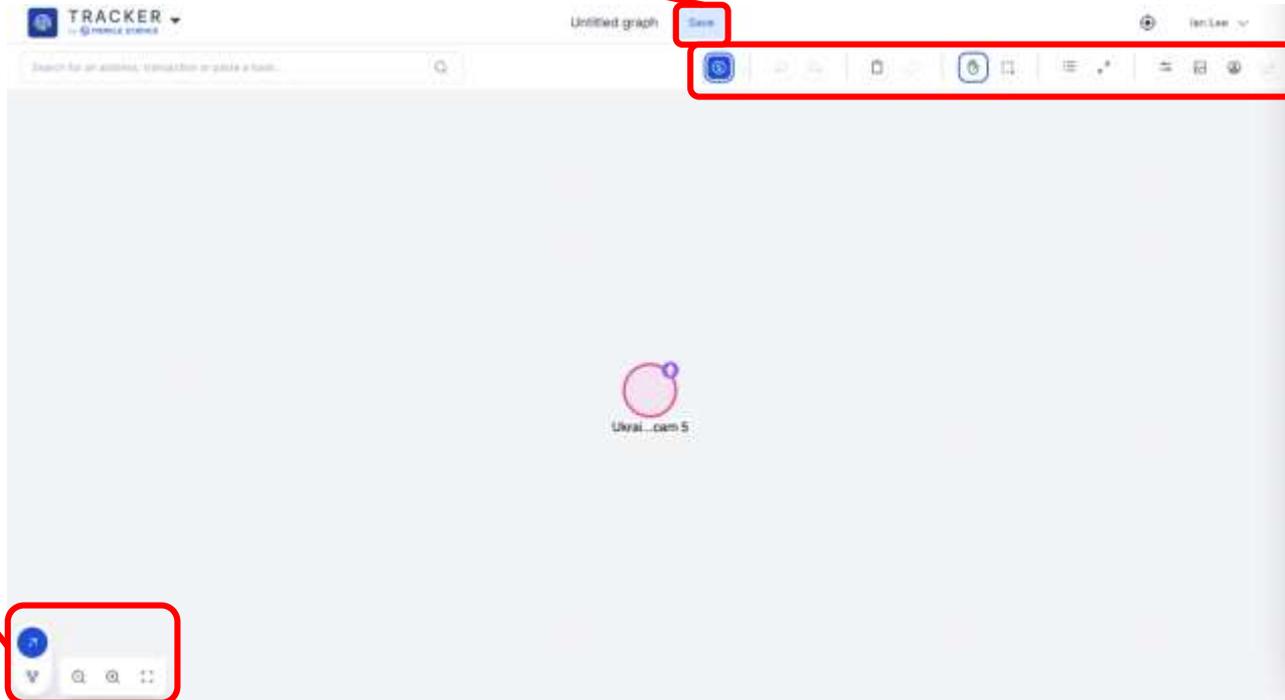
Close Add

Ukrai...cam 5

New Investigation Board

Option to save the board

Toolbar to access different features



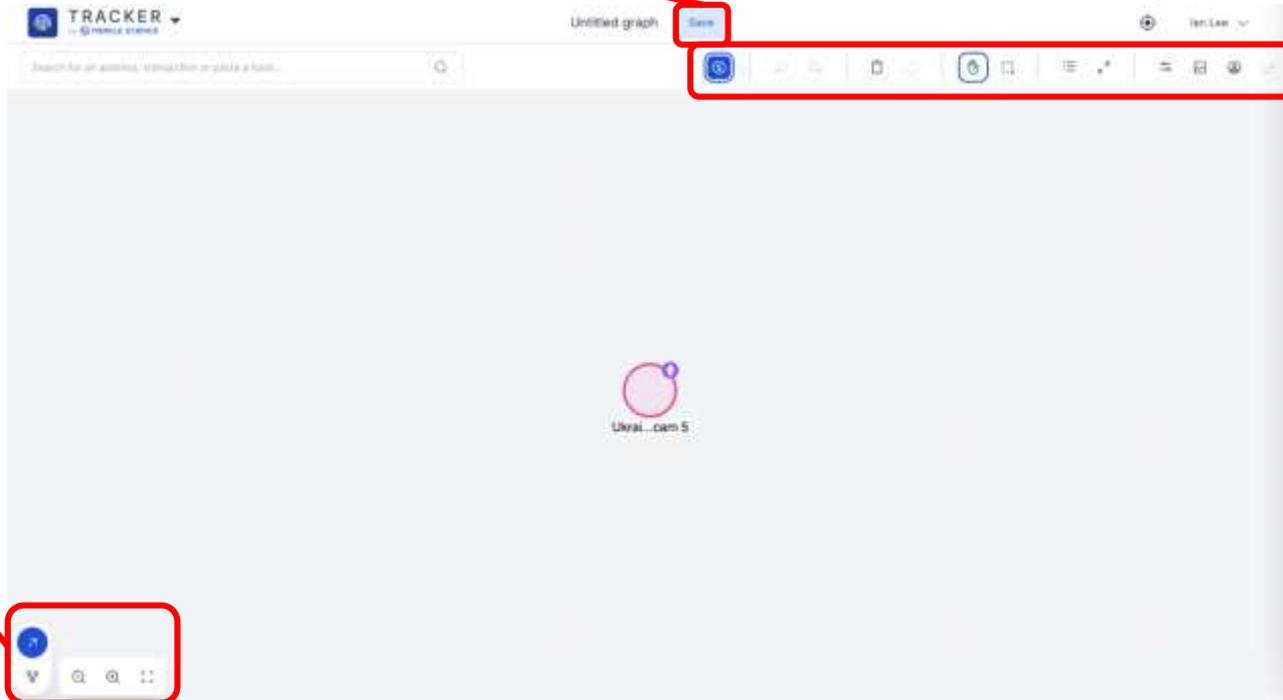
Visualisation options.

1. Supports different views.
2. Zoom in/out
3. Fit to screen

New Investigation Board

Option to save the board

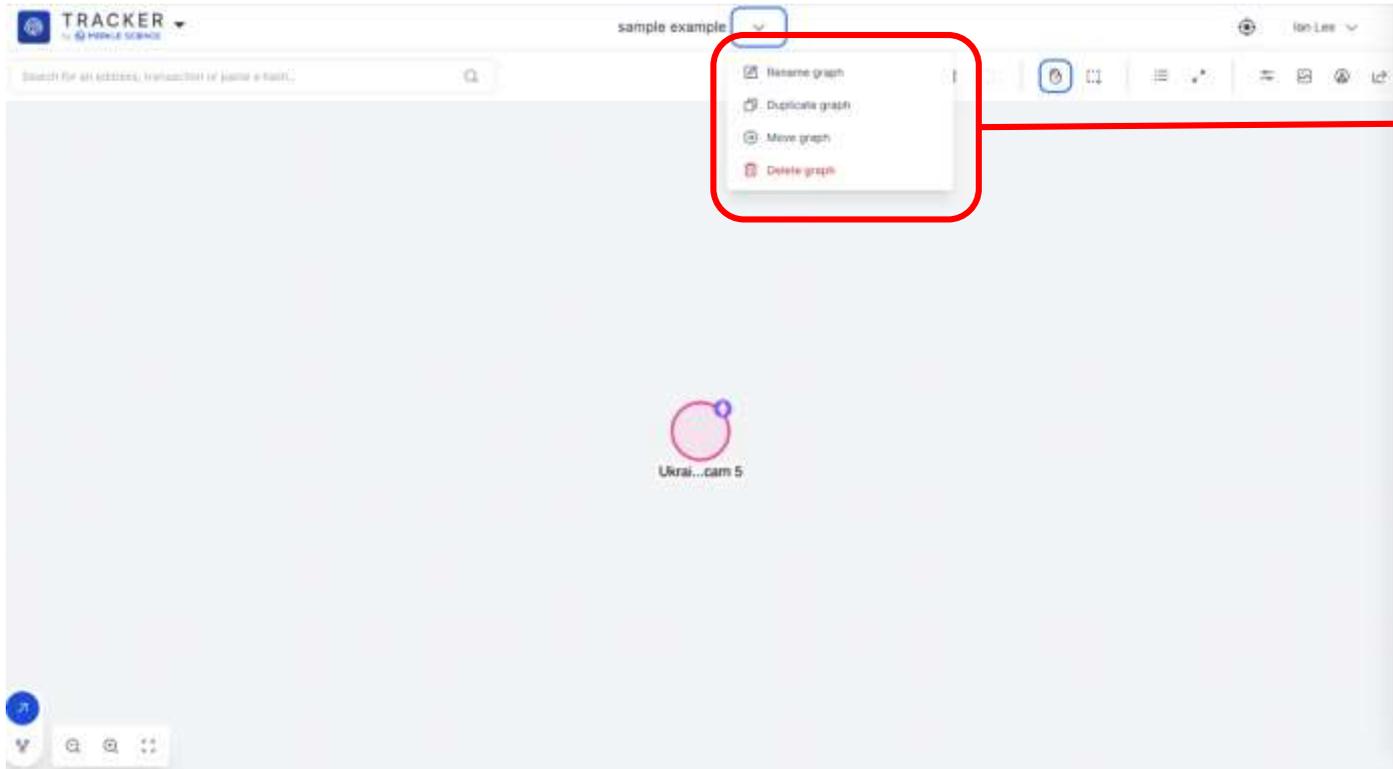
Toolbar to access different features



Visualisation options.

1. Supports different views.
2. Zoom in/out
3. Fit to screen

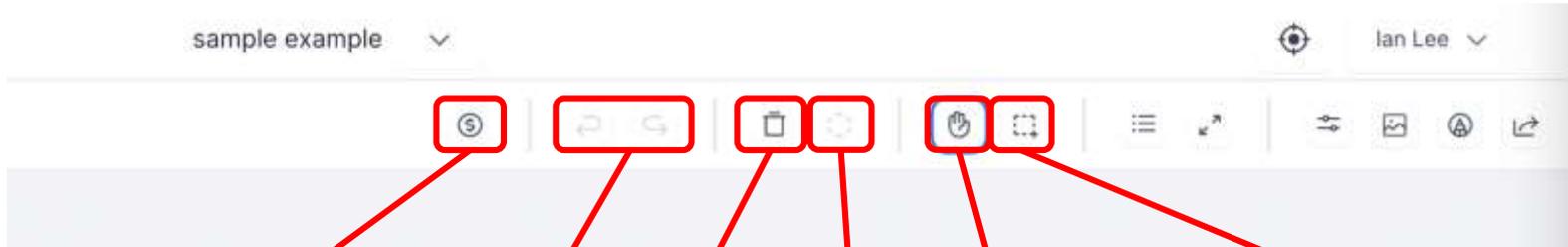
After Saving Board



After a board has been saved, the user has the option to:

1. rename
2. duplicate;
- and/or
3. move the graph

Navigating the Toolbar



Toggle

Allows the user to toggle values in the tool between fiat and crypto

Undo/Redo

Allows the user to undo or redo their last action

Delete

Remove node from the board

Custom Cluster

After selecting multiple nodes, user can group them together and create a custom cluster

Drag Mode

Drag and move nodes around the board

Multi-Select Mode

Enables the selection of multiple nodes on the board at the same time

Navigating the Toolbar



HOW TO READ THE BOARD

Node Types

Address nodes represent a single unique address while cluster nodes are a collection of multiple addresses.



Known and Unknown Entities

Known addresses and clusters are colored based on their entity type. Unknown entities are gray.



Entities and color codes



Legends

Opens up the legends drop down which provides details on how to interpret the information on the board

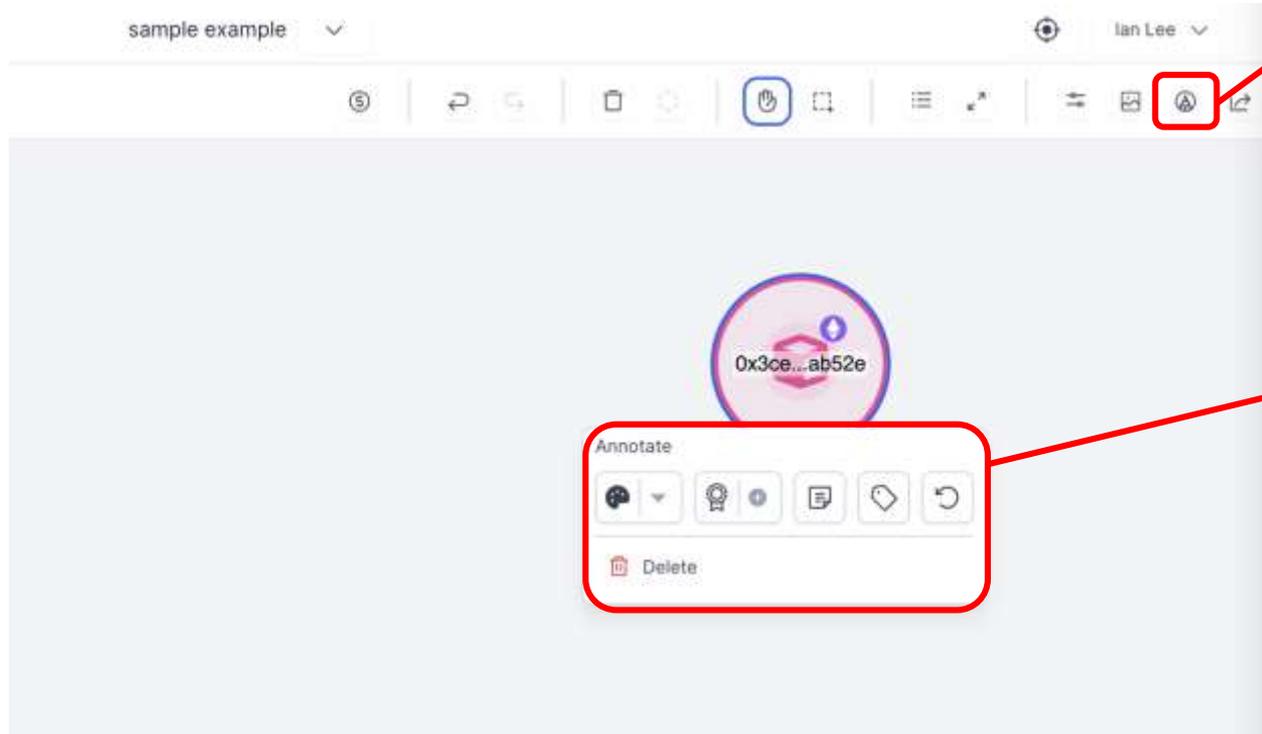
Fullscreen

Enables fullscreen mode

Export Image

Download the board in the form of a SVG

Annotation



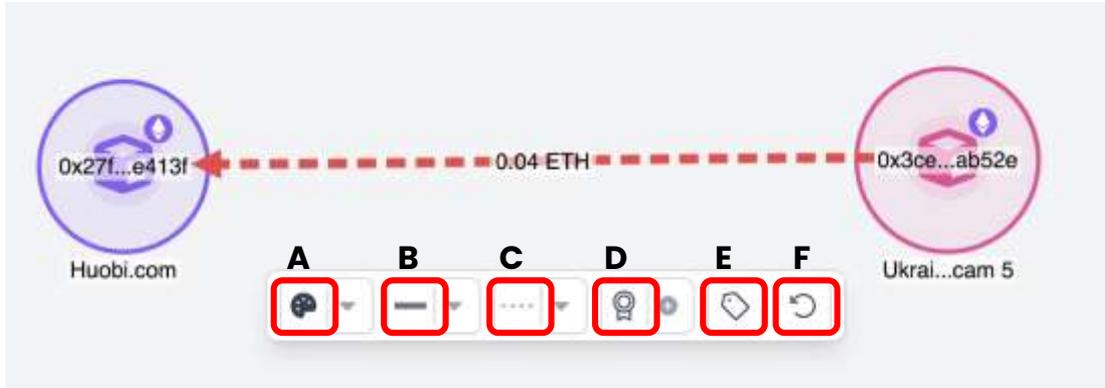
Annotation

Users can select the annotation button to annotate on the nodes and transaction line on the board.

Annotation

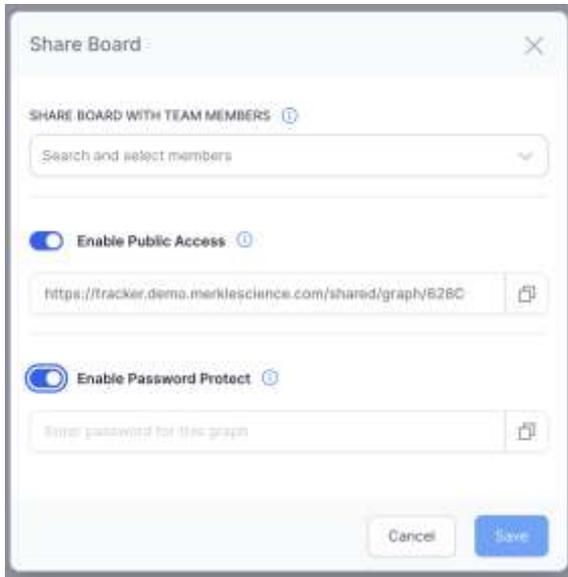
Once a board has been saved, users can also **right click** on nodes and transaction lines in order to access the annotation feature.

Annotation



A	B	C	D	E	F	G
Modify Color	Modify thickness of line	Modify type of line	Add a glyph	Modify the tag	Undo all changes	Add a note

Annotation



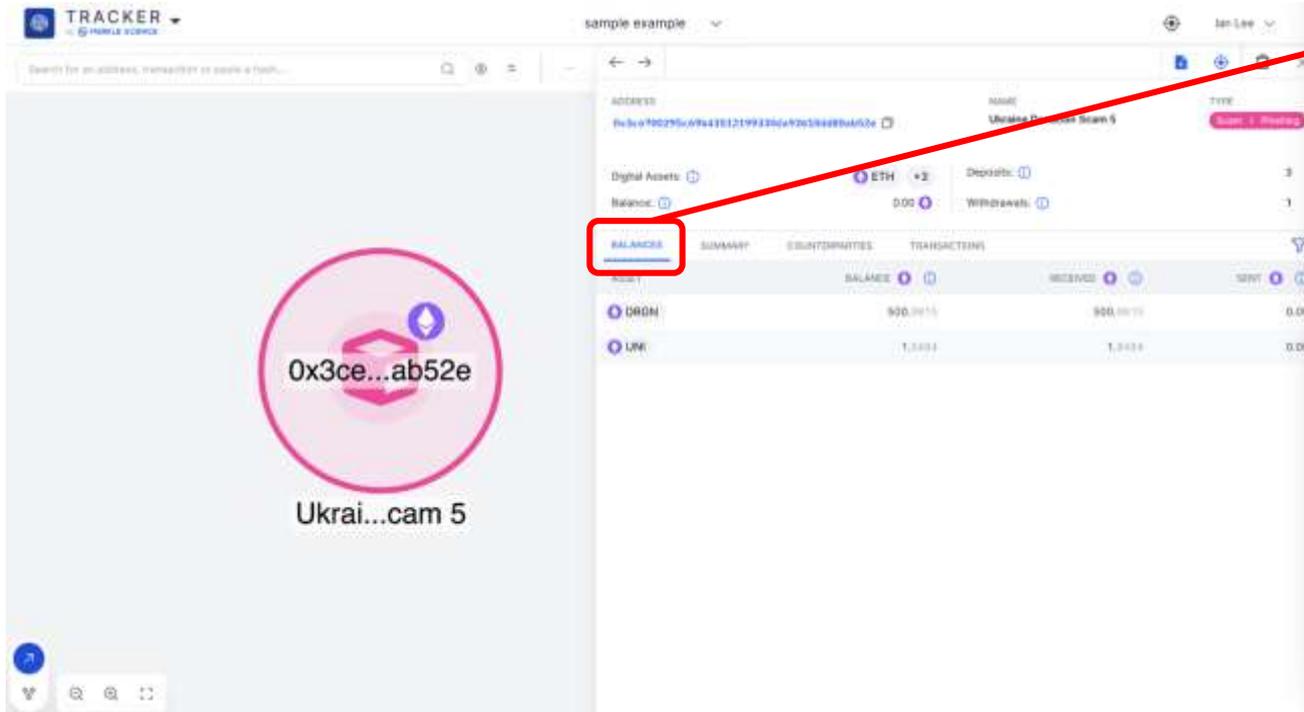
Share Function

Allows for sharing of the board internally and externally

When enabling public access, users are provided a URL which can be shared externally

Users can also password protect the link

Address Details – Balances

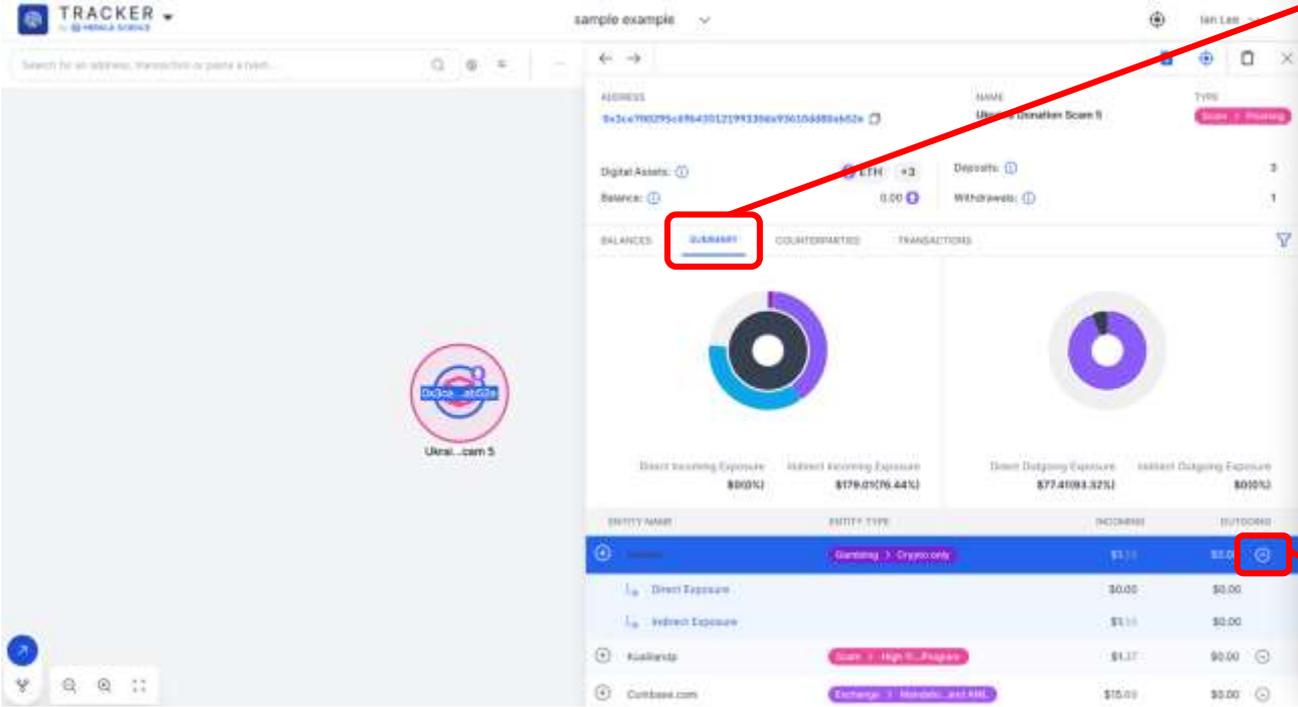


Balances

This tab shows all the tokens (aside from the native token of the blockchain) that the wallet has transacted with in the past.

Please note that the “Sent” and “Received” amounts are calculated based on the token price around the time of the transaction but the balance is calculated based on the current token price.

Address Details - Summary



Summary

This tab shows all the known entities/addresses with direct and indirect exposure to the address in question.

The indirect exposure is calculated up to N number of hops (N is customisable on the backend).

Users can click the drop down to reveal the specific direct/indirect exposure amount

Address Details – Summary – Auto-Graph – Before

The screenshot shows the Tracker interface for an address: `Bx3ce796295ca9b42612799326c99363bd408ab43e`. The address is identified as "Ukrainian Donation Scan 5". The interface displays digital assets (ETH +3), a balance of 0.00, and a summary of counterparties. The counterparties table is as follows:

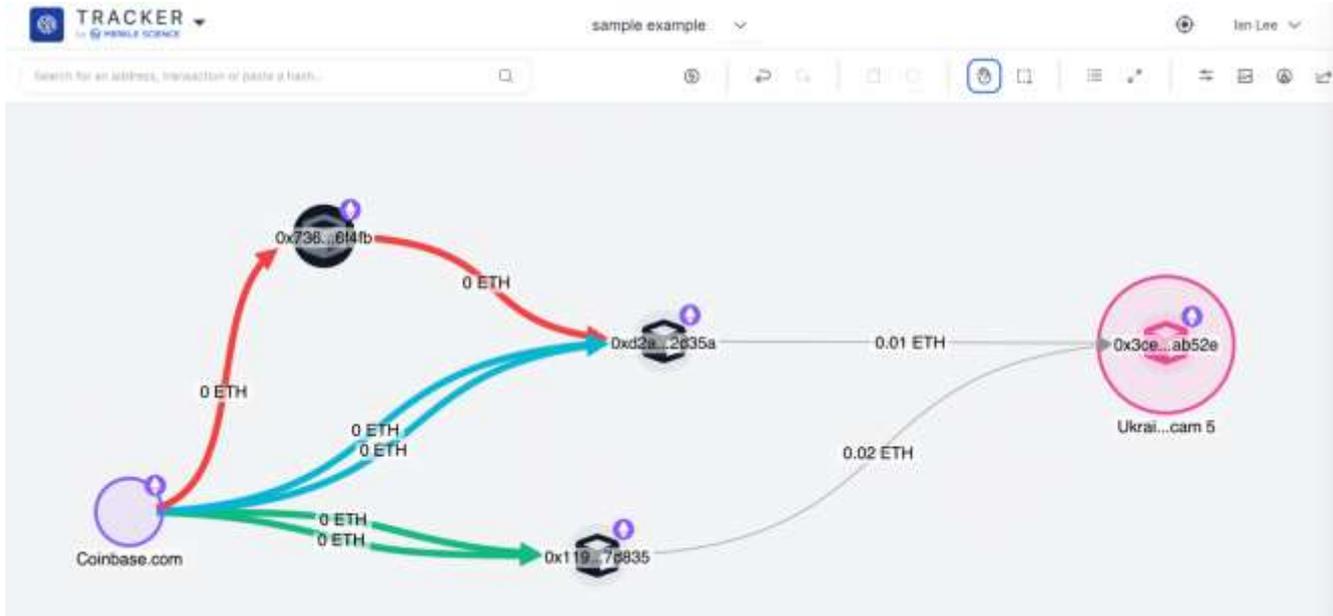
ENTITY NAME	ENTITY TYPE	INCOMING	OUTGOING
Roobit	Gambling - Crypto only	\$1.58	\$0.00
Roobit	Scam - High W. Programs	\$1.37	\$0.00
Ukrainian Donation Scan 5	Exchange - Mandated and AML	\$15.69	\$0.00
Direct Exposure		\$0.00	\$0.00
Indirect Exposure		\$15.69	\$0.00
Ukrainian Donation Scan 5	Defi - Security - AMM	\$8.23	\$0.00
Ukrainian Donation Scan 5	Defi - Security - AMM	\$0.94	\$0.00
Bitstamp	Exchange - Mandated and AML	\$33.23	\$0.00
Avax.com	Defi - Lending - lending	\$7.1	\$0.00
Avax.com	Defi - Lending - lending	\$49.18	\$0.00

Auto-Graph

Clicking on the + sign in the summary tab will execute Tracker's Auto-Graphing capabilities.

Where there are indirect risks identified (see image - there was \$15.69 of indirect exposure coming from Coinbase), Tracker will automatically plot out ALL the different ways in which funds could have originated from Coinbase.

Address Details – Summary – Auto-Graph – After



Auto-Graph

As seen in the expanded graph, the Auto-Graphing features had identified 3 (Red, Blue and Green) different ways in which funds could have originated from Coinbase before finally ending up in the wallet in questions

Address Details – Counterparties

The screenshot displays the TRAKER wallet interface. The search bar at the top contains the text "sample example". The main content area shows the details for the address "0x3ce700295c69b43612199330da93618d080ab52e". The "COUNTERPARTIES" tab is highlighted with a red box. Below the tab, a table lists the counterparties with columns for COUNTERPARTY, TYPE, RECEIVED, SENT, TRANSFERS, ASSETS, and ACTIVITY.

COUNTERPARTY	TYPE	RECEIVED	SENT	TRANSFERS	ASSETS	ACTIVITY
0x27f1...+9135 + Mustt.com	Transaction	0.0372	0.00	1	ETH	05/22 → 05/22
0x115...70835	Token	0.00	500.0015	0	DRDN	08/21 → 08/21
0x02a...2d25a	Token	0.00	1.0410	0	UNI	08/21 → 08/21
0x119...70835	Transaction	0.00	0.016	1	ETH	08/21 → 08/21
0x57f...eae6	Transaction	0.00	0.0139	1	ETH	08/21 → 08/21
0x02a...2d25a	Transaction	0.00	0.01	1	ETH	08/21 → 08/21

Counterparties

This tab shows all the known entities/addresses with direct interaction with the wallet in question.

Address Details - Transactions

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sample example

lan Lee

Search for an address, transaction or paste a hash...

ADDRESS: 0x3c9700295c69b43512199330da9363dd88ab52e

NAME: Ukraine Donation Scam 5

Digital Assets: ETH +3 Deposits: 3

Balance: 0.00 Withdrawals: 1

BALANCES SUMMARY COUNTERPARTIES **TRANSACTIONS**

TXN HASH	TYPE	DIRECTION	COUNTERPARTY	VALUE	ASSETS	DATE (GMT+8:00)
0x557...dcf23	Transaction	To →	0x271...e411f Huobi.com	0.0373	ETH	May 13, 2022 10:01 PM
0x971...5d217	Transaction	From ←	0x87f...eae5e	0.0138	ETH	Aug 28, 2021 5:33 AM
0x1c1...8419c	Transaction	From ←	0xd2a...2d75e	0.0100	ETH	Aug 26, 2021 2:24 PM
0x5f2...38c9c	Token	From ←	0xd2a...2d75e	1,8484	UNI	Aug 26, 2021 2:24 PM
0xb4d...36813	Token	From ←	0xb119...7d835	500.8615	DRGN	Aug 26, 2021 2:05 PM
0x8b6...74e5b	Transaction	From ←	0xb119...7d835	0.0160	ETH	Aug 26, 2021 1:57 PM

Ukrain...cam 5

Transactions

This tab shows the entire transaction history of a given address.

Address Details – Filters

The screenshot displays the TRAKER blockchain tracker interface. On the left, a graph shows two ETH addresses connected to a central node labeled 'Ukrain...cam 5'. The main panel shows the address details for 'sample example' (0x3ce700295c4b4351219930da93615d880ab52e), identified as 'Ukraine Donation Scam 5'. The 'TRANSACTIONS' tab is active, showing a list of transactions with columns for 'FROM', 'TO', and 'TYPE'. A red box highlights the filter icon in the top right corner of the transactions list. Below the list, there are filter options: 'MINIMUM' and 'MAXIMUM' values (both set to 0), 'FILTER BY DIRECTION' (Incoming, Outgoing, Both), 'FILTER BY TXN TYPE' (Transaction, Internal, Token, Rewards, Failed), and 'FILTER BY ACTIVITY' (From: Select from date, To: Select to date). A 'Reset Filter' button and an 'Apply' button are at the bottom right.

Filters

Filters can be applied at each tab in order to obtain more targeted results.

Transactions can also be filtered based on transaction type to help filter out irrelevant transactions.

Address Details - Watchlist

The screenshot displays the Tracker application interface. At the top, the logo 'TRACKER by HIRUKA SCIENCE' is visible. The main header shows 'sample example' and a user profile 'Ian Lee'. A search bar is present with the placeholder text 'Search for an address, transaction or peer's IP...'. The central area shows details for a specific address: '0x3ce700295c6fb42512199338da93630bd080ab52e'. Below this, there are sections for 'Digital Assets' (showing ETH with a balance of 0.00) and 'BALANCES'. A modal window titled 'WATCH THE ADDRESS' is open, allowing users to configure watchlist settings for 'Incoming' and 'Outgoing' transactions, with fields for 'Minimum' and 'Maximum' values. A 'Start Watching' button is located at the bottom of this modal. Below the modal, a table lists transactions with columns for 'TXN HASH', 'TYPE', 'DIRECTION', 'COUNT', and 'DATE'. The table contains several rows of transaction data, including transactions for ETH and UNI. A red circle highlights a watermark 'Ukrain...com 5' in the bottom left corner of the interface.

TXN HASH	TYPE	DIRECTION	COUNT	DATE
0x0b7...d1f77	Transaction	To →	0.0372	May 13, 2022 10:01 PM
0x091...58117	Transaction	From ←	0.0139	Aug 29, 2021 5:33 AM
0x1c1...8419c	Transaction	From ←	0.0100	Aug 26, 2021 2:24 PM
0x54c...50c0c	Token	From ←	1.3488	Aug 26, 2021 2:24 PM
0x04d...3d8f3	Token	From ←	500.3815	Aug 26, 2021 2:05 PM
0x08b...74e5b	Transaction	From ←	0.0160	Aug 26, 2021 1:57 PM

Watchlist

User can enable the watchlist feature which will enable Tracker to send near real time notifications when monitored addresses execute a new transaction based on the user's customisation.

Address Details - Export Data

The screenshot displays the TRAKER interface for an address. The address is `0x3cc...1b52e` and the name is "Ukraine Donation Scan 5". A red box highlights the "Export" button in the top right corner of the address details panel. Another red box highlights the "Export Address" dialog box, which is open and shows the following options:

- Select the sections to be included in the report:
 - Summary
 - Token Balances
 - Transactions
 - Counterparties
- Select the data in the report:
 - Download filtered data only
From selected tables with filters applied.
 - Download all data
From selected tables capped to 10,000 rows.

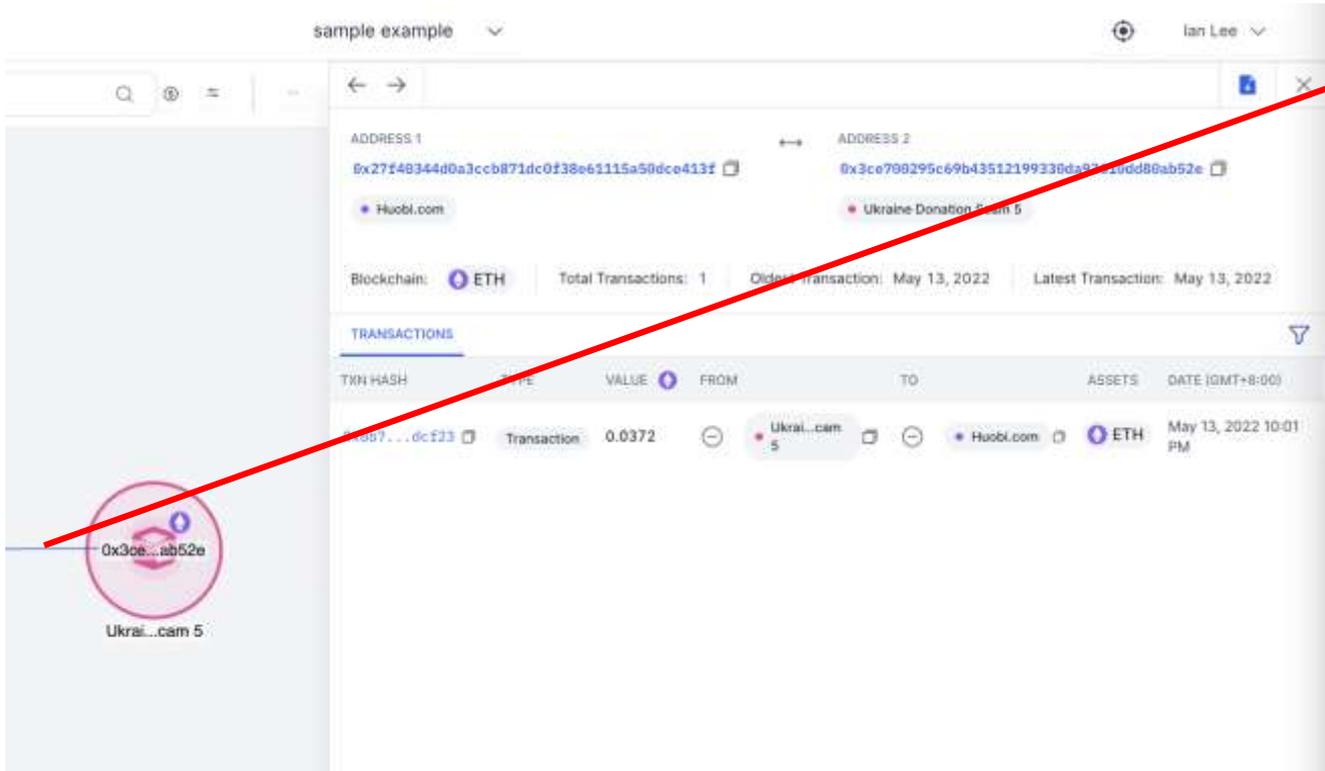
Buttons for "Cancel" and "Export" are visible at the bottom of the dialog box.

Export Data

Users have the option to export address or transaction data in the form of CSV which will be sent to their mailbox.

For large addresses, the tool will only download up to 10,000 rows of data. User can contact Merkle Science for the full report.

Transaction Details



Transaction Details

Users can click on lines on the graph in order to pull up the transaction details.

Users will open by the side panel as seen in the image and be able to obtain more details about a specific transaction.

Smart Contract Support – Similar Smart Contracts

The screenshot shows the TRAKER interface for a smart contract. The main contract is 'Tomado Cash - OFAC Sanctioned - 08/08/2022'. Below the contract details, there are tabs for 'BALANCE', 'SUMMARY', 'COURT REPORTS', 'TRANSACTIONS', and 'RELATED SMART CONTRACTS'. The 'RELATED SMART CONTRACTS' tab is active, showing a list of similar contracts. A red box highlights the 'Similar Contracts' button, and a red arrow points from it towards the text on the right.

SMART CONTRACT ADDRESS	CREATION TXN HASH	CREATED DATE
0x18d...385a	0x18d...385a	Dec 26, 2018 2:37 AM
0x18d...385a	0x18d...385a	Dec 26, 2018 2:37 AM
0x18d...385a	0x18d...385a	Dec 26, 2018 2:36 AM
0x18d...385a	0x18d...385a	Dec 26, 2018 2:35 AM
0x18d...385a	0x18d...385a	Dec 26, 2018 2:29 AM
0x18d...385a	0x18d...385a	Dec 26, 2018 2:29 AM
0x18d...385a	0x18d...385a	Dec 26, 2018 2:26 AM

Similar Contracts

Allows the user to identify other smart contracts which have a similar code base. This can be very useful in identifying other potentially malicious smart contracts or smart contracts with certain vulnerabilities.

Smart Contract Support – Created by this Address

The screenshot shows the TRAKER interface for a specific address: 0x169ed77e470d064d4d4e56a2d3ff727986615d52b. The address is associated with the name 'Tomado Cash - OFAC Sanctioned - 08/08/2022'. The interface displays digital assets (ETH x2), balances (\$0.00), and deposits (334). The 'RELATED SMART CONTRACTS' tab is active, showing a list of smart contracts created by this address. A red box highlights the 'Created by this address' button, and a red arrow points from this button to the text 'Created by this address' in the right-hand text block.

SMART CONTRACT ADDRESS	CREATION TXN HASH	CREATED DATE
0x18d...38f5a	0x18d...38f5a	Dec 26, 2018 2:37 AM
0x0e7...8542a	0x0e7...8542a	Dec 26, 2018 2:37 AM
0x083...a872f	0x083...a872f	Dec 26, 2018 2:36 AM
0x18d...5d52b	0x18d...5d52b	Dec 26, 2018 2:35 AM
0xa0d...27a0d	0xa0d...27a0d	Dec 26, 2018 2:29 AM
0x135...22f0a	0x135...22f0a	Dec 26, 2018 2:29 AM
0x0aa...07a0e	0x0aa...07a0e	Dec 26, 2018 2:26 AM

Created by this address

This tab allows you to quickly look up other smart contracts which were created by the address in question.

This may allow users to quickly identify other potentially malicious smart contracts or smart contracts with certain code vulnerabilities.

Additional Training Resources

Users can also access Tracker training videos using the link provided below

https://drive.google.com/drive/folders/1wE6qjeXIYrRJ0M3YtHtUkn9cpRd69gYp?usp=drive_link

Thank you



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