

Explore the Chain – Using a Blockchain Explorer

Blockchain Explorer?

A **Blockchain Explorer** is a web-based application that acts as a search engine, window, and analytics tool for a blockchain. Think of it as the "Google for blockchains."

A blockchain is a public, digital ledger that records all transactions. This ledger is transparent and immutable, meaning anyone can view it, and once data is added, it cannot be changed. A Blockchain Explorer takes the raw, complex data from the blockchain and presents it in a human-readable way.

Key things you can do with a Blockchain Explorer:

- **View Transaction Details:** Check the status, amount, sender, and receiver of any transaction.
- **Inspect Blocks:** See the list of recent blocks added to the chain, the transactions they contain, and the fees paid.
- **Check Wallet Addresses:** Look up the balance and transaction history of any public wallet address.
- **Monitor Network Health:** See data like network hash rate, transaction volume, and mempool size (unconfirmed transactions).
- **Verify Data:** Confirm that a specific transaction has been included in the blockchain and is considered final.

Step-by-Step Procedure: Using a Blockchain Explorer

For this guide, we'll use the **Bitcoin blockchain** and the popular **Blockstream Explorer** as our example. The steps are very similar for other blockchains (like Ethereum, which you would explore using [Etherscan.io](https://etherscan.io)).

Goal: We will look up a famous, historic Bitcoin transaction: the "Bitcoin Pizza Transaction," where a programmer paid 10,000 BTC for two pizzas.

Step 1: Choose a Blockchain and Its Explorer

- **Blockchain:** Bitcoin
- **Explorer:** We'll use **Etherscan Explorer**. You can access it here: <https://etherscan.io/>
- **Step 2: Understand the Homepage**

When you land on the etherscan.io homepage, you'll see:

- A **search bar** at the top.
- A list of the **latest blocks** (the most recent pages added to the ledger).
- A list of the **latest transactions** (pending and confirmed payments).

The screenshot shows the Etherscan.io homepage. At the top, there's a navigation bar with links for Home, Blockchain, Tokens, NFTs, Resources, Developers, More, and Sign In. Below the navigation is a search bar with placeholder text "Search by Address / Txn Hash / Block / Token / Domain Name". To the left of the search bar is a dropdown menu labeled "All Filters". Above the search bar, it says "ETH Price: \$3,854.86 (+0.66%)". Below the search bar, there's a message about "Sponsored Ads Slots Available! Book your slot here!". The main content area has several cards: one for Ether Price (\$3,854.86 @ 0.035064 BTC), another for Market Cap (\$465,273,170,530.00), and a third for Transactions (3,066.68 M (14.5 TPS)). There's also a chart titled "TRANSACTION HISTORY IN 14 DAYS" showing transaction volume over time. At the bottom, there are buttons for "Latest Blocks", "Latest Transactions", and "Customize".

Step 3: Search for a Specific Transaction

We will search for the famous pizza transaction using its unique ID, known as a **Transaction ID (TxID)** or hash.

1. Copy the following TxID:
0x8ABCe56534cAEDea4C3F6469a73E0C03b7560101
2. Paste the TxID into the search bar at the top of the Etherscan Explorer and press **Enter**.

Step 4: Analyze the Transaction Details Page

You will now be taken to a detailed page for that specific transaction. Let's break down the key information you'll see:

- **Transaction ID (TxID):** The unique hash that identifies this transaction. It's like a receipt number.
- **Status:** This shows how many **confirmations** the transaction has. A confirmation means it has been included in a block. The more confirmations, the more secure and irreversible the transaction is. For the pizza transaction, this will be a very high number (over 800,000+).
- **Timestamp:** The exact date and time the block containing this transaction was mined.
- **Inputs (From):** This section shows where the funds came from. It will show one or more addresses and the amount of sepolia they sent.
- **Outputs (To):** This section shows where the funds went.
- **Fee:** The amount paid to the miner to include this transaction in a block. For this old transaction, the fee was negligible.

Demonstration

1. Go to your Metamask wallet and search for any transaction and click on 'view on block explorer' :

The screenshot shows a 'Contract deployment' screen from Metamask. It displays a transaction for a 'New contract'. The 'From' field shows the address 0x12C7A...a25F8. The 'To' field is empty. The 'Transaction' section shows a nonce of 69 and an amount of -0 SepoliaETH. There are buttons for 'View on block explorer' and 'Copy transaction ID'.

2. You will able to every activity and information about that transaction on the Etherscan Explorer:

The top screenshot shows the 'Transaction Details' page for the transaction 0xb61a2fec3b... on the Sepolia Testnet. It provides comprehensive details including the transaction hash, status (Success), block number (9399832), timestamp (Oct 13 2025 01:59:12 AM UTC), and the call data (Method by 0x12C7A6Ef...). It also lists the tokens transferred: 1,000,000 ERO-20 Indiana (INDI) from 0x00000000...00000000 to 0x12C7A6Ef...5274a25F8. A transaction fee of 0.001422513698554054 ETH was paid.

The bottom screenshot shows the 'Contract' page for the deployed contract at address 0x8ABCe5653cAEDea4C3F6469a73E0C03b7560101. It displays the contract's overview, including its balance (0 ETH), creator (0x12C7A6Ef...5274a25F8), and token tracker (Indiana (INDI)). The 'Transactions' tab is selected, showing a table with columns: Transaction Hash, Method, Block, Age, From, To, Amount, and Tax Fee. The table is currently empty.

The screenshot shows the Etherscan interface for a specific Ethereum contract. The address is 0x8ABCe56534cAEDea4C3F6469a73E0C03b7560101. The page is titled "Contract" and includes sections for Overview, More Info, and Multichain Info. The Overview section shows an ETH BALANCE of \$0.00. The More Info section provides details about the contract creator (0x12C7a6Ef...), the creation date (19 days ago), and token tracking information for Indiana (INDI). The Multichain Info section indicates N/A. At the bottom, there are tabs for Transactions, Token Transfers (ERC-20), Contract, and Events, with Events being the active tab. A table below lists the latest contract event, which is a transfer from index_topic_1 to index_topic_2, involving 100000 tokens.