



Gnolang Transaction Indexer

How tx-indexer transforms raw blockchain data
Into query-friendly structured information

What is a Blockchain Indexer?

Raw Blockchain Data

```
{
  "height": 12345,
  "txs": [
    {
      "hash": "0x3F86 ... D9A1",
      "sender": "g1 ... abc",
      "receiver": "g1 ... xyz",
      "amount": "100ugnot"
    }
  ]
}
```

Indexer Transforms Data

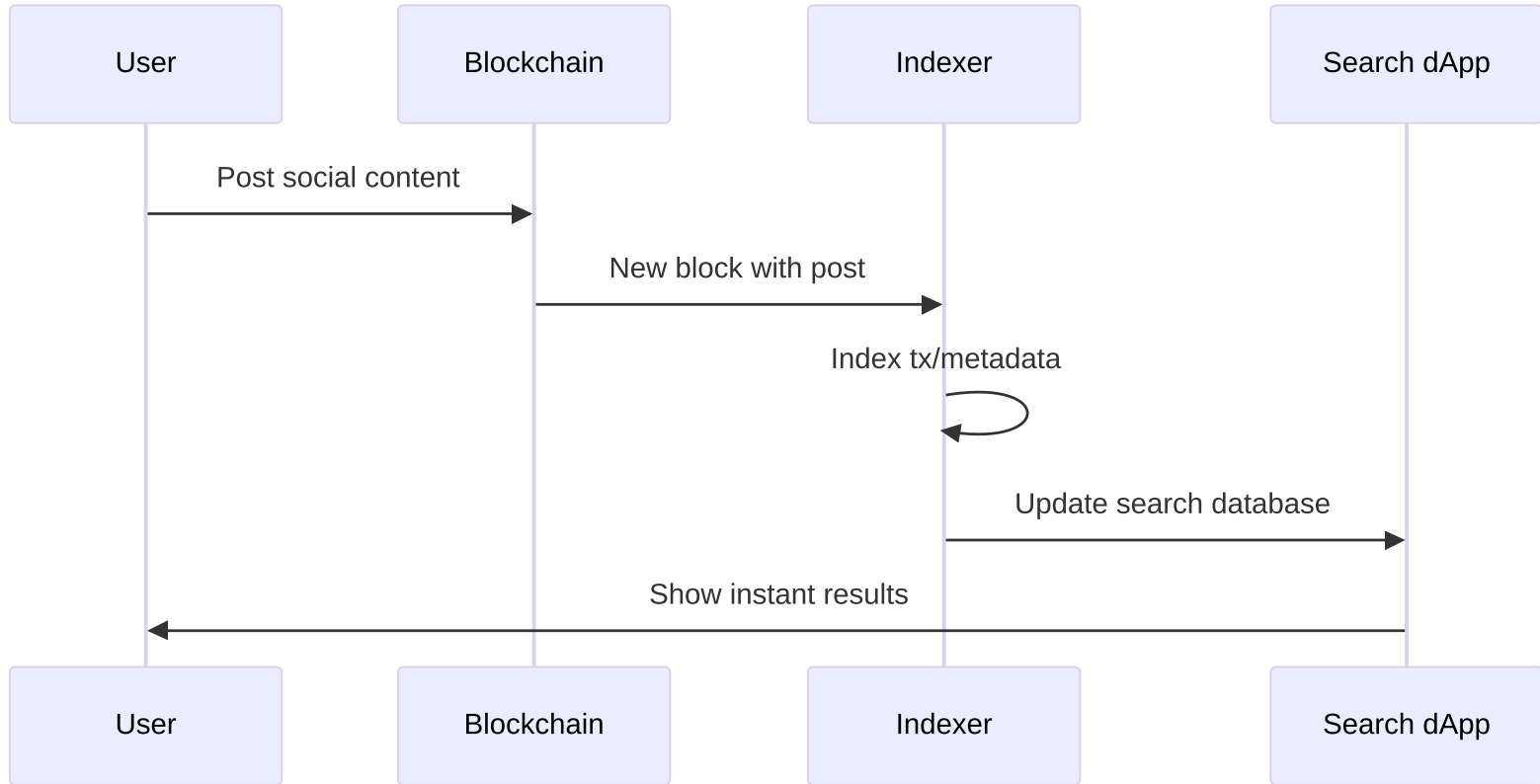
```
{
  "address": "g1 ... xyz",
  "balance": "250ugnot",
  "tx_count": 5,
  "first_seen": "2025-10-01"
}
```

Indexer = Database + Search Engine for Blockchain

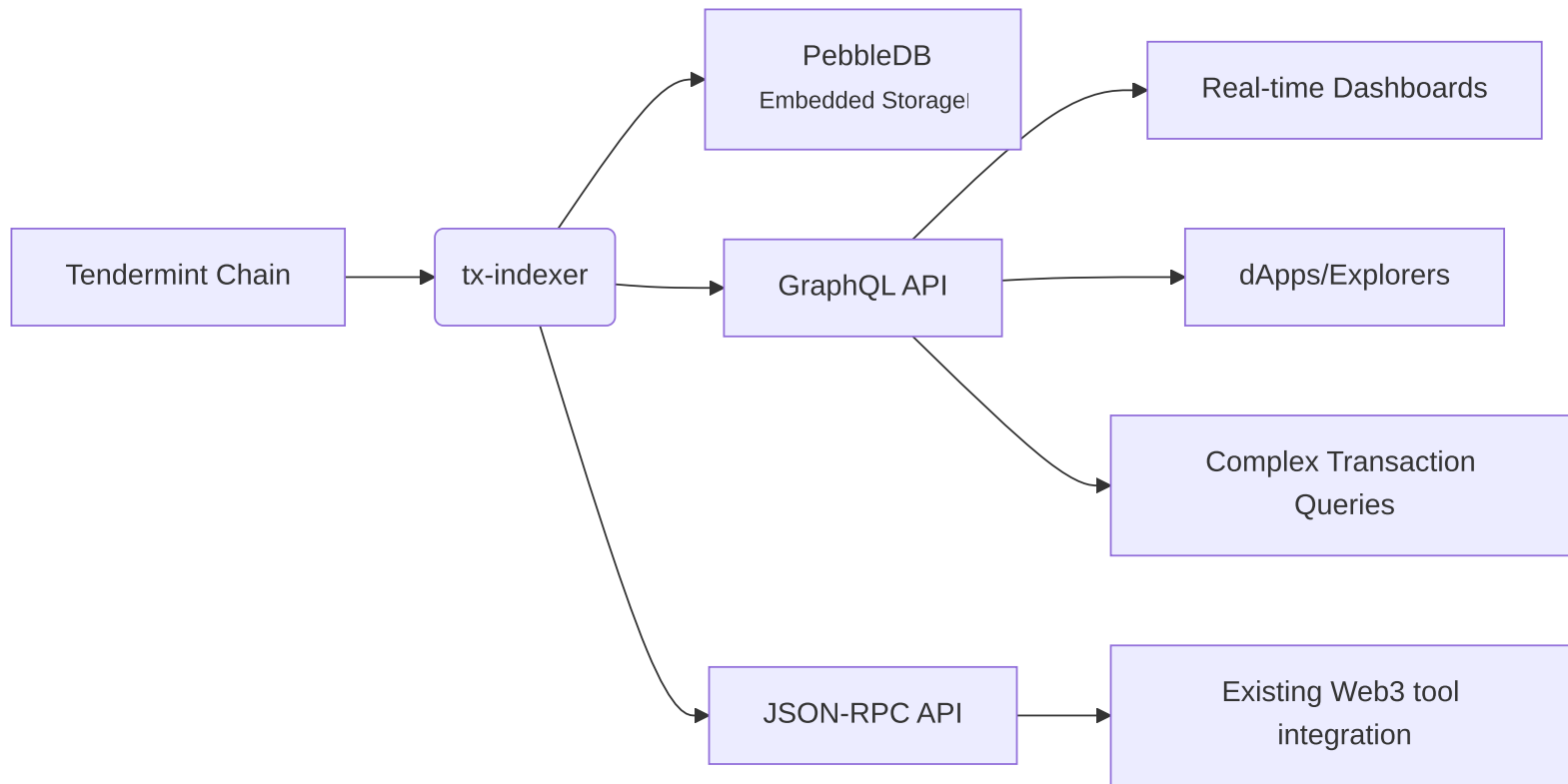
Transforms raw chain data into query-friendly format



Use Case: Decentralized Social Search



tx-indexer the official TM2 minimalist indexer



- **High Performance:** Concurrent block processing pipeline

Implement data visualizer through tx-indexer

Foo20 - GRC20 basic token visualizer

- 1. Create your GraphQL subscription of foo20's transactions
- 2. Parse out useful metrics (amount transfered, block height, ...)
- 3. Pushes those metrics into your data-base (Like Prometheus)
- 4. Your application (Like Grafana) queries that database to display real-time charts

Implement advanced indexer through `tx-indexer`

