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How to Index KIP7 Transfer on Kaia using Envio + Quicknode

Kaia Foundation · Follow

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Tutorial   kaia

optimized blockchain indexing solution, and demonstrate how you can use it to index smart contracts on Kaia using <u>QuickNode</u> RPC Endpoint as a data source.

Prerequisites

Before we start indexing, you'll need the following <u>prerequisites</u> installed.

Getting Started

In this guide, we will launch a basic KIP7 smart contract on Kairos Testnet and primarily index its transfers. Furthermore, we will utilize Envio to index data via an RPC URL. Though this might be suitable for smaller applications, as in this guide, it is recommended to use the <u>HyperSync</u> feature coming to Kaia for blazing-fast indexing.

Launching a Smart Contract

1. Open your terminal in an empty project and run the command below:

```
envio init
```

2. Give your indexer a name (e.g. "kaia-token-indexer").
3. Choose your preferred language (typescript) and blockchain ecosystem (EVM).
4. Choose an initialization option (Template)
5. Select the preferred template you'd like to use (ERC20)

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1. Modifying config.yaml

```yaml
# yaml-language-server: $schema=./node_modules/envio/evm.schema.json
name: erc20indexer
description: ERC-20 indexer
networks:
  - id: 1001 # Kairos Testnet
    rpc_config:
      url: https://responsive-green-emerald.kaia-kairos.quiknode.pro/ # RPC URL
      initial_block_interval: 10000 # Integer
      backoff_multiplicative: 0.8 # Float
      acceleration_additive: 2000 # Integer
      interval_ceiling: 10000 # Integer
      backoff_millis: 5000 # Integer
      query_timeout_millis: 20000 # Integer
    start_block: 166803165
    contracts:
      - name: Evoor
        abi_file_path: ./abis/evoor-abi.json
        address: "0x1F1D5027A1E5817D807458008Ca6Af5C9AD98354" #EVR
        handler: src/EventHandlers.ts
        events:
```

```
    newOwner: String!
  }
  type TokenTransfer {
    id: ID!
    from: String!
    to: String!
    value: BigInt!
  }
```

Once you have set up your config file and the schema, you are ready to generate the indexing code required to write the event handlers.

Run the following command:

```
envio codegen
```

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```
      context.TokenTransfer.set(entity);
    }
  );
```

Starting the Indexer

To start the indexer, run the command below in your terminal:

```
envio dev
```

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2. Navigate to the "Data" tab in the above column to monitor the indexing

senders, recipients, and values. For this guide, we would make the query be ordered by the amount we would like to appear first (in this case: desc = largest amount), who it's from, and the value being transferred.

Once you have selected your desired events, run the query by clicking the play button (▶) to gain access to the real-time indexed data.

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We're the team spearheading the ecosystem and technological development of the Kaia blockchain.

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