API of EOSIO and third parties

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nodeos API

- API requests are handled by multiple plugin modules. Typically only **`chain_api_plugin`** is enabled on public nodes. It presents methods implemented by **`chain_plugin`**

- **`history_plugin`** and its API counterpart **`history_api_plugin`** are deprecated, but are still in use in small chains. It doesn't scale, and EOS Mainnet is too big for it.

chain_plugin **methods**

- **get_info** is retrieving the head block number, last irreversible block number and its hash, chain ID, and few other elements.

- **get_account** is displaying account permissions, resources, and system token balance

- **get_abi** retrieves ABI from a contract in JSON format

chain_plugin **methods (2)**

- **get_table_rows** queries rows of a multi-index table in a contract

- **get_table_by_scope** walks through available scopes in a multi-index table

- **get_currency_balance** retrieves balance value for a standard-compliant token

- **push_transaction** sends a transaction to the node for evaluation and broadcasting

Time limit

- Table rows and scopes API response is limited by 10ms of server time. If more rows need to be delivered, "**more**" attribute tells the lower bound to start with in the next query.

Lower and upper bounds

- Table rows request can be limited by **lower_bound** and **upper_bound** parameters.

- "**more**" attribute in results indicates that there are more rows.

cleos

- cleos is the primary command-line tool for interacting with nodeos.

- cleos implements most of methods provided by **chain_plugin** and some other plugins.

```
$ jcleos get table -L 3652218745770213360 eosio eosio rexbal
```

System contract actions

- **`eosio`** is the name of a privileged account that runs the system contract. It's responsible for setting permissions, resource allocation, creating new accounts, buying/selling RAM.

- All its important actions are accessible via **`cleos system`** command.

Important system actions

- **`cleos system newaccount`** creates an account with given permissions, stake and RAM

- **`cleos system delegatebw`** stakes system token for CPU and Network resources for self or for another account

- **`cleos system buyram`** buys RAM for self or for another account

Third party API

- **Hyperion** is an alternative to history plugin.

- **LightAPI** shows current balances, permissions and resource for accounts.

- **Light History** by Greymass is a customization of history plugin that keeps only recent history in memory.