starknet_simulateTransactions

Simulates the execution of the specified transactions at the specified block.

Parameters

- transactions
- : (array) [Required
-] A sequence of [StarkNet transactions](#)
- to simulate.
- If multiple transactions are provided, each transaction is simulated on the state resulting from
- applying the previous transactions..
- block_id
- : [Required
-] The block parameter object containing one of the following:* block_hash
-
  - : (string) Block hash.
-
  - block_number
-
  - : (integer) Decimal block number.
-
  - One of the string tagslatest
-
  - orpending
-
  - .
- simulation_flags
- : (array) [Required
-] A set of flags used for simulation.
- Available options areSKIP_VALIDATE
- andSKIP_FEE_CHARGE
- .

Returns

A sequence of transaction results, corresponding to the sequence of requested transactions. Each transaction result object contains:

- transaction_trace
- : An execution trace of the transaction.
- fee_estimation
- : An estimate of the fee required for the network to process the transaction.

Example

ReplaceYOUR-API-KEY with an API key from your[Infura dashboard](#) .

Request

- cURL

curl https://starknet-mainnet.infura.io/v3/YOUR-API-KEY \ -X POST \ -H "Content-Type: application/json" \ -d '{ "jsonrpc": "2.0", "method": "starknet_simulateTransactions", "params": { "transactions": [{ "type": "INVOKE", "max_fee": "0xb3a2f1ab6d632", "version": "0x1", "signature": ["0x54c2201c7b9021777389e208e28eafc67e4ba1f1aa7016a1123b61c6ff79c29", "0x58c2d97614e5abfd9668b314f344c945d16ea154cb32a7b08b4445204f1f1d3"], "sender_address": "0x0569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10", "calldata": ["0x3","0x49d36570d4e46f48e99674bd3fcc84644ddd6b96f7c741b1562b82f9e004dc7","0x219209e083275171774dab1df80982e9df2096516f06319c5c6d71ae0a8480c","0x3","0xfff107e2403123c7df78d "nonce": "0x51" }], "block_id": { "block_number": 385940 }, "simulation_flags": ["SKIP_VALIDATE", "SKIP_FEE_CHARGE"] }, "id": 1 }'

Response

- JSON

{ "jsonrpc": "2.0", "id": 1, "result": [{ "fee_estimation": { "gas_consumed": "0x9ad6", "gas_price": "0x5569d8d85", "overall_fee": "0x33a912ed64f2e" }, "transaction_trace": { "execute_invocation": { "call_type": "CALL", "calldata": ["0x3", "0x49d36570d4e46f48e99674bd3fcc84644ddd6b96f7c741b1562b82f9e004dc7", "0x219209e083275171774dab1df80982e9df2096516f06319c5c6d71ae0a8480c", ...], "caller_address": "0x0", "calls": [{ "call_type": "CALL", "calldata": ["0xfff107e2403123c7df78d91728a7ee5cfd557aec0fa2d2bdc5891c286bbfff", "0x984e103a8acd6", "0x0"], "caller_address": "0x569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10", "calls": [{ "call_type": "DELEGATE", "calldata": ["0xfff107e2403123c7df78d91728a7ee5cfd557aec0fa2d2bdc5891c286bbfff", "0x984e103a8acd6", "0x0"], "caller_address": "0x569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10", "calls": [], "class_hash": "0x2760f25d5a4fb2bdde5f561fd0b44a3dee78c28903577d37d669939d97036a0", "contract_address": "0x49d36570d4e46f48e99674bd3fcc84644ddd6b96f7c741b1562b82f9e004dc7", "entry_point_selector": "0x219209e083275171774dab1df80982e9df2096516f06319c5c6d71ae0a8480c", "entry_point_type": "EXTERNAL", "events": [{ "data": ["0x569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10", "0xfff107e2403123c7df78d91728a7ee5cfd557aec0fa2d2bdc5891c286bbfff", "0x984e103a8acd6", "0x0"], "keys": ["0x134692b230b9e1ffa39098904722134159652b09c5bc41d88d6698779d228ff"], "order": 0 }], "messages": [], "result": ["0x1"] }], "class_hash": "0xd0e183745e9dae3e4e78a8ffedcce0903fc4900beace4e0abf192d4c202da3", "contract_address": "0x49d36570d4e46f48e99674bd3fcc84644ddd6b96f7c741b1562b82f9e004dc7", "entry_point_selector": "0x219209e083275171774dab1df80982e9df2096516f06319c5c6d71ae0a8480c", "entry_point_type": "EXTERNAL", "events": [], "messages": [], "result": ["0x1"], ...], "class_hash": "0x1a736d6ed154502257f02b1ccdf4d9d1089f80811cd6acad48e6b6a9d1f2003", "contract_address": "0x569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10", "entry_point_selector": "0x15d40a3d6ca2ac30f4031e42be28da9b056fef9bb7357ac5e85627ee876e5ad", "entry_point_type": "EXTERNAL", "events": [{ "data": ["0x3", "0x1", "0x1", ...], "keys": ["0x1dcde06aabdbca2f80aa51392b345d7549d7757aa855f7e37f5d335ac8243b1", "0x24cfba646f79dd32c47a61d6de300f2ab1c9e2aff2e92f790c1368cd177d69c"], "order": 10 }], "messages": [], "result": ["0x3", "0x1", "0x1", ...] }, "state_diff": { "declared_classes": [], "deployed_contracts": [], "deprecated_declared_classes": [], "nonces": [{ "contract_address": "0x569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10", "nonce": "0x52" }], "replaced_classes": [], "storage_diffs": [{ "address": "0xfff107e2403123c7df78d91728a7ee5cfd557aec0fa2d2bdc5891c286bbfff", "storage_entries": [{ "key": "0x2bc92130481261ac8ebf05490c8f1799f651a4ebd2d64f0101f2a3f41bb441", "value": "0x569b13e8164bc8000c0bbcf4887856516643af123c5bc3b01e229e92f9cfd10" }, { "key": "0x180cda4fd6c0599dc8ed498cc36eb9cab3ecad0efb3ccfd59043fbdd692374b", "value": "0x49d36570d4e46f48e99674bd3fcc84644ddd6b96f7c741b1562b82f9e004dc7" }, ...] }, { "address": "0x1114c7103e12c2b2ecbd3a2472ba9c48ddcbf702b1c242dd570057e26212111", "storage_entries": [{ "key": "0x3fa65d6912e7d8d82b149d0cc034a285d8c33ae49e659642a4fd2e380937b7", "value": "0x74272944c439" }, { "key": "0x3fa65d6912e7d8d82b149d0cc034a285d8c33ae49e659642a4fd2e380937b8", "value": "0x648be4d87207" }, ...] }, { "address": "0x49d36570d4e46f48e99674bd3fcc84644ddd6b96f7c741b1562b82f9e004dc7", "storage_entries": [{ "key": "0x14b36f2f827c4728ecac41e90cf996e64c4b20c345087b6be56bbe680051a1f", "value": "0x70e0d9aa29d9c159a" }, { "key": "0x367c2ac2e63b88cb4382f26a49c62b1dfecb966e92138c574cfbec611723cce", "value": "0x11ba205d123d0fb" }, ...] }, { "address": "0x68f5c6a61780768455de69077e07e89787839bf8166decfbf92b645209c0fb8", "storage_entries": [{ "key": "0x14b36f2f827c4728ecac41e90cf996e64c4b20c345087b6be56bbe680051a1f", "value": "0x1860959920" }, { "key": "0x367c2ac2e63b88cb4382f26a49c62b1dfecb966e92138c574cfbec611723cce", "value": "0x11b0dac6" }, ...] }], "type": "INVOKE" } }] }