

# EVM RPC Endpoints

Below is a list of EVM-RPC endpoints provided by default on a Sei RPC node. Your RPC provider may offer slightly different/extended specifications.

All endpoints are in the form of JSON-RPC and share the following request/response structure:

- Request\* HTTP method: always "GET".
- - header:accept: application/json
  - header:content-type: application/json
  - body (JSON):\* id: an arbitrary string identifier.
- - - jsonrpc: always "2.0".
- - - method: endpoint name (e.g. "eth\_sendRawTransaction").
- - - params: an array that differs from endpoint to endpoint.
- Response *body (JSON)*: id: the same identifier in request.
- - - jsonrpc: always "2.0".
- - - result: an object that differs from endpoint to endpoint.

## Send Transactions

### eth\_sendRawTransaction

Sends a signed transaction.

- Parameters
- :

Type Description string The hex-encoding of the signed transaction. \* Result \* :

Type Description string The transaction hash.

### sei\_associate

Sends a transaction to establish association between the signer's Sei address and EVM address on-chain.

- Parameters
- :

Type Description object A custom object containing a string message and the v, r, s of the signed message. Object Schema:

{ custom\_message :

// Any string message r: // The R-part of the signature over the Keccak256 hash of the custom message. s: // The S-part of the signature over the Keccak256 hash of the custom message. v: // The V-part of the signature over the Keccak256 hash of the custom message. }

## Transaction Lookup

### eth\_getTransactionReceipt

Gets the receipt of a sent transaction

- Parameters
- :

Type Description string The transaction hash. \* Result \* :

Type Description object The [receipt object\(opens in a new tab\)](#) .

## **eth\_getTransactionByBlockNumberAndIndex**

Gets transaction by the block number and the index of the transaction in the block

- Parameters
- :

Type Description string The block number, which can either be a hexadecimal number, or one of "safe", "finalized", "latest", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. string The transaction index as a hexadecimal number. \* Result \* :

Type Description object The [transaction details\(opens in a new tab\)](#) .

## **eth\_getTransactionByBlockHashAndIndex**

Gets transaction by the block hash and the index of the transaction in the block.

- Parameters
- :

Type Description string The block hash. string The transaction index as a hexadecimal number. \* Result \* :

Type Description object The [transaction details\(opens in a new tab\)](#) .

## **eth\_getTransactionByHash**

Gets transaction by the transaction hash.

- Parameters
- :

Type Description string The transaction hash. \* Result \* :

Type Description object The [transaction details\(opens in a new tab\)](#) .

# **Account Information**

## **eth\_getTransactionCount**

Gets the number of transactions sent by the account

- Parameters
- :

Type Description string The address to look up. string The block number, which can either be a hexadecimal number, or one of "safe", "finalized", "latest", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description string The hexadecimal form of the number of transactions.

## **eth\_getBalance**

Gets the balance in wei (i.e. 10<sup>-12</sup> usei) of the account

- Parameters
- :

Type Description string The address to look up. string The block number or hash, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description string The hexadecimal form of the wei balance.

## **eth\_getCode**

Gets EVM code stored at the account address

- Parameters
- :

Type Description string The address to look up. string The block number or hash, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description string The hexadecimal form of the code binary.

## eth\_getStorageAt

Gets value at given key of the account

- Parameters
- :

Type Description string The address to look up. string The hexadecimal form of the key. string The block number or hash, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description string The hexadecimal form of the storage value.

## eth\_getProof

Gets the IAVL proof (note: not a MPT proof) of the given keys for an account.

- Parameters
- :

Type Description string The address to look up. string[] The hexadecimal form of the keys. string The block number or hash, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description object An object with data from the IAVL proof. Object Schema:

{ address :

// The requested address. hexValues: // An array of the hexadecimal form of the values at the given keys. storageProof: // An array of storage proofs. } Note: The storage proofs in the return object follow this[format\(opens in a new tab\)](#).

## Block Information

### eth\_getBlockTransactionCountByNumber

Gets the count of EVM transactions (i.e. excluding native Cosmos transactions) in a block by its number.

- Parameters
- :

Type Description string The block number, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description string The hexadecimal form of the count.

### eth\_getBlockTransactionCountByHash

Gets the count of EVM transactions (i.e. excluding native Cosmos transactions) in a block by its hash.

- Parameters
- :

Type Description string The block hash. \* Result \* :

Type Description string The hexadecimal form of the count.

### eth\_getBlockByHash

Gets the block metadata and/or its EVM transactions by block hash

- Parameters
- :

Type Description string The block hash. bool Whether to include transactions in the response. \* Result \* :

Type Description string The [block info\(opens in a new tab\)](#) .

## eth\_getBlockByNumber

Gets the block metadata and/or its EVM transactions by block number.

- Parameters
- :

Type Description string The block number, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. bool Whether to include transactions in the response. \* Result \* :

Type Description string The [block info\(opens in a new tab\)](#) .

## eth\_getBlockReceipts

Gets an array of EVM transaction receipt in a block by block number

- Parameters
- :

Type Description string The block number, which can be one of 1. block hash, 2. hexadecimal block number, 3. one of "safe", "finalized", "latest", "pending", or "earliest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. \* Result \* :

Type Description object[] An array of [receipt objects\(opens in a new tab\)](#) .

# Blockchain Information

## eth\_blockNumber

Gets the latest committed block number.

- Parameters
- :
- None
- Result
- :

Type Description string The hexadecimal form of the block number.

## eth\_chainId

Gets the chain ID.

- Parameters
- :
- None
- Result
- :

Type Description string The hexadecimal form of the chain ID.

## eth\_coinbase

Gets the fee collector address.

- Parameters
- :
- None
- Result
- :

Type Description string The address of the fee collector.

## eth\_feeHistory

Gets fee history over the requested block range.

- Parameters
- :

Type Description string The number of blocks to look at, in either decimal or hexadecimal form. string The block number, which can either be a hexadecimal number, or one of "safe", "finalized", or "latest". Note that "safe", "finalized", and "latest" mean the same thing on Sei due to its instant finality. float[] The reward percentiles. \* Result \* :

Type Description object The fee history over the requested block range.

## eth\_gasPrice

Gets the 50% percentile of gas prices in the most recent block.

- Parameters
- :
- None
- Result
- :

Type Description string The hexadecimal form of the gas price.

## net\_version

Gets the version (equal to Chain ID).

- Parameters
- :
- None
- Result
- :

Type Description string The hexadecimal form of the chainID.

## web3\_clientVersion

- Parameters
- :
- None
- Result
- :

Type Description string The RPC node's runtime version.

## Filter Endpoints

Note that log filters are subject to the following limits by default:

- 10000 logs in one response if block range is open-ended
- 2000 blocks to query over if block range is close-ended

Your RPC provider may tweak these limits.

## eth\_newFilter

Creates a new log filter for later queries.

- Parameters
- :

Type Description object The [filter criteria\(opens in a new tab\)](#). \* Result \* :

Type Description string The newly created filter's ID.

## eth\_newBlockFilter

Creates a new block filter for later queries.

- Parameters
- :
- None
- Result
- :

Type Description string The newly created filter's ID.

## **eth\_getFilterChanges**

Gets all the updates since the filter was last queried.

- Parameters
- :

Type Description string The filter ID. \* Result \* :

Type Description string[] OR object[] For block filters, the result would be an array of block hashes; for log filters, the result would be an array of [log objects\(opens in a new tab\)](#) .

## **eth\_getFilterLogs**

Get all logs for a given log filter, including the logs that have been returned before.

- Parameters
- :

Type Description string The filter ID. \* Result \* :

Type Description object[] An array of [log objects\(opens in a new tab\)](#) .

## **eth\_getLogs**

Get all logs for the given filter criteria.

- Parameters
- :

Type Description object The [filter criteria\(opens in a new tab\)](#) . \* Result \* :

Type Description object[] An array of [log objects\(opens in a new tab\)](#) .

## **eth\_uninstallFilter**

Removes a created filter.

- Parameters
- :

Type Description string The filter ID. \* Result \* :

Type Description bool Whether the filter existed.

# **Simulation Endpoints**

## **eth\_estimateGas**

Same as [the official specification\(opens in a new tab\)](#) .

## **eth\_call**

Same as [the official specification\(opens in a new tab\)](#) .

# **Debugging Endpoints**

## **debug\_traceTransaction**

Same as [Alchemy\(opens in a new tab\)](#) .

### **debug\_traceBlockByNumber**

Same as [Alchemy\(opens in a new tab\)](#) .

### **debug\_traceBlockByHash**

Same as [Alchemy\(opens in a new tab\)](#) .

Last updated on May 23, 2024 [Proposals Introduction](#)