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### **Alchemy SDK**

- Alchemy SDK Quickstart
  - · How to use Alchemy SDK with Typescript
  - Examples Using the Alchemy SDK
- How to Manage a Multichain Project Using Alchemy SDK Alchemy SDK Surface Overview
- - Alchemy SDK vs. Raw API Methods
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- How do I distinguish between a contract address and a wallet address?
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- eth\_getTransactionByBlockNumberAndIndex Arbitrum post
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- eth\_getUncleByBlockNumberAndIndex Optimism post
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- eth\_getUncleCountByBlockNumber Optimism post
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- eth\_newFilter Optimism post
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  - eth\_getBlockByNumber Base post
  - eth\_getBlockTransactionCountByHash Base post
  - eth\_getBlockTransactionCountByNumber Base post
  - eth\_getCode Base post
  - eth\_getFilterChanges Base post
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- getEpochSchedule post
- getFeeForMessage post
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- getIdentity post
- getInflationGovernor post
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- getInflationReward post
- getLargestAccounts post
- getMaxRetransmitSlot post
- getMaxShredInsertSlot post
- getMinimumBalanceForRentExemption post
- getMultipleAccounts post
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- eth\_getTransactionByBlockNumberAndIndex Astar post
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  - starknet\_getClassAt post
  - starknet\_addDeployAccountTransaction post
  - starknet getClassHashAt post
  - starknet\_addInvokeTransaction post
  - starknet\_getEvents post
- starknet\_blockHashAndNumber post
  - starknet\_getNonce post
  - starknet\_blockNumber post
- starknet\_getStateUpdate post
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  - starknet\_getStorageAt post
  - starknet\_chainId post
- starknet\_getTransactionByBlockIdAndIndex post
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- starknet getTransactionByHash post
- starknet\_getBlockTransactionCount post
- starknet\_getTransactionReceipt post
- starknet\_getBlockWithTxHashes post
- starknet\_pendingTransactions post
- starknet\_getBlockWithTxs post
- starknet\_syncing post
- starknet\_getClass post
- starknet\_estimateMessageFee post

# traceBlock - SDK

Replays a block that has already been mined.

All CSS

margin-bottom: 7px; margin-top: 0px; color: #00000 limportant; } .api\_key\_instruct\_ban\_lft h3:last-child{ margin-bottom: 0; } .api\_key\_instruct\_ban\_lft p{ font-size: 14px; line-height: 1.3; color: #000000; font-family: 'Inter', sans-serif; font-weight: 400; } .gt\_startd\_vbtn{ display: inline-block; color: #FFFFFF limportant; background: linear-gradient(126.33deg, #36BEFF 5.38%, #733FF1 108.32%); border-radius: 6px; font-size: 16px; line-height: 1.3; font-weight: 600; font-family: 'Inter', sans-serif; padding: 9px 16px; } .gt\_startd\_vbtn:hover{ background: #f000; color: #fff; } .api\_key\_instruct\_ban\_lft{ flex-basis: 60%; max-width: 60%; padding-left: 15px; align-self: center; } / dont\_have\_api\_sec\_end/

```
@media(min-width:1025px) {}
@media(max-width:1199px) {
    .api_main {
max-width: 100%;
    .api_main_cont ul li a {
width: 100%;
    .left_icon .evm_part {
       width: 73%;
       margin: 22px auto auto auto:
    api main contullia [
       padding: 10px 18px
border-radius: 12px
    .api_main_cont ul li a:hover::before {
       border-radius: 12px;
    learn box.
    .lear_outer {
height: 100%;
    .navbar-nav>li>a {
       font-size: 15px
      padding: 8px 10px
    .top_header_links ul li a{
font-size: 15px;
    .footer_links_box ul li a{
font-size: 13px;
    /* dont_have_api_sec_start */
    Japi key Instruct ban/
display: block;
text-align: center;
background: linear-gradient(180deg, #EBF9FF 0%, #EEF3FE 100%);
       .api_key_instruct_ban_lft,.api_key_instruct_ban_rtt{
          max-width: 100%:
          padding: 0;
flex-basis: 100%;
       .api_key_instruct_ban_lft{
margin-bottom: 30px;
   /* dont_have_api_sec_end */
@media (max-width: 768px) {
    /* dont_have_api_sec_start */
       .api key instruct ban Ift h3{
          font-size: 30px
        .api_key_instruct_ban_lft p{
font-size: 16px;
       .wrapper_body_cmn_out{
max-width: 100%;
        .api_key_instruct_ban_lft h3 {
          font-size: 40px;
margin-bottom: 16px;
       /* dont_have_api_sec_end */
@media (max-width: 350px){
    /* dont_have_api_sec_start *
.api_key_instruct_ban_lft h3{
font-size: 36px;
    .api key instruct ban-
       padding: 30px
    /* dont_have_api_sec_end */
```

whole\_Section\_wrapperdont\_have\_api\_sec\_start### Don't have an API key?

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# Description

traceBlock replays a block that has already been mined.

### **Parameters**

Name Type Description Example blockIdentifier object The block to debug. Can be a block hash, block number hex string, or a commitment level.

There are the following commitment levels:

- 1. pending: Sample next block inferred by Alchemy built on top of the latest block.
- 2. latest: The most recent block in the canonical chain observed by Alchemy.
- 3. safe : The most recent crypto-economically secure block that cannot be re-orged outside of manual intervention driven by community coordination. This is only available on Goerli testent.
- 4. finalized: The most recent secure block that has been accepted by >2/3 of validators. This block is very unlikely to be re-orged. This is only available on Goerli testnet.
- 5. earliest: The lowest numbered block available that is usually the first block created. 0x5568A, latest, 0x04e19fc95ec33e65c667d26a69d66d024732891c13742a345f5001ff900bd60a etc. tracer object Tracer type and configuration.

This tracer tracks all call frames executed during a transaction, including depth 0. The returned result is a nested list of call frames executed as part of the call.

It is an object with the following options:

- 1. type : The type of tracer to use during the execution. The options areallTracer and prestateTracer
- 2. onlyTopCall? : Whether to only trace the main (top-level) calls and ignore sub-calls. It is a boolean and defaults to false . { type: callTracer, onlyTopCall: true }

# Response

The traceTransaction method returns a Promise response object with the following properties

Property Type Description type string The type of call: CALL or CREATE for the top-level call. from string From address of the transaction. to string To address of the transaction. value string Amount of value transfer as a hex string. gas string Gas provided for call as a hex string. gasUsed string Gas used during the call as a hex string. input string Call data. output string Return data. error? string Optional error field. revertReason? string Solidity revert reason, if the call reverted. calls? array of response object Array of sub-calls executed as part of the original call.

# **Example Request and Response**

Prerequisite: You will need to install the Alchemy SDK before making requests with it.

The commands for installing it usingnpm oryarn are given below:

npm varn npm install alchemy-sdk@latest varn add alchemy-sdk@latest

#### Request

Here is an example of how to make a traceBlock request using the Alchemy SDK:

getTransaction.js // Imports the Alchemy SDK const {Alchemy .Network }= require ("alchemy-sdk" );// Configures the Alchemy SDK const config = {apiKey :"demo" ,// Replace with your API key network :Network .ETH\_MAINNET\_ // Replace with your network };// Creates an Alchemy object instance with the config to use for making requests const alchemy = new Alchemy (config );// Example of using the traceBlock method const main = async ()=> {// The block to debug. let block = "latest" ;// Tracer type and configuration. let tracerConfig = {type :"callTracer" ,onlyTopCall :true , };// Calling the traceCall method let response = await alchemy .debug .traceBlock (block ,tracerConfig );// Logging the response to the console console .log (response ); };main ();

```
Response
And here is an example of what a successful response to this request might look like:
. SANDESSON FORESTALLING AND TO SUBJECT OF THE PROPERTY OF THE
  \frac{1}{2} \frac{1}
} }, {"result" : {"type" :"CALL" ,"from" :"0x560a2edd994f2ba4883cdf8e0d164558d8c803ac" ,"to" :"0x44e94034afce2dd3cd5eb62528f239686fc8f162" ,"value" :"0x2386f26fc10000" ,"gas" :"0x16dcb' ,"qasUsed" :"0x1654f" ,"input"
```

 $\frac{1}{2}$   $\frac{1}$ "tuatuo". :"0x" }}, ("result" : ("Type" :"CALL", "from" :"0x215a800eb51dd612f75618b892601ddcbee911e8" ,"to" :"0x7a250d5630b4cf539739df2c5dacb4c659f2488d" ,"value" :"0x16345785d8a0000" ,"gas' :"0x2a97c" ,"gasUsed" :"0x22dbd" ,"input" ."output' }, ("result" : ["type" :"CALL", "from" :"0x951d5aac7edc356dbf3cddba53ba8573642b4f55", "to" :"0xef1c6e67703c7bd7107eed8303fbe6ec2554bf6b", "value" :"0x0", "gas" :"0x32369", "gasUsed" :"0x282c4", "input" : {"type" :"CALL" ,"from" :"0x8931ec04113c2485964eebaaa7f08d434e0b22a3" ,"to" :"0xef1c6e67703c7bd7107eed8303fbe6ec2554bf6b" ,"value" :"0x26db992a3b18000" ,"gas" :"0x33dc7" ,"gas Used" "0x29ae4" ,"input"  $\frac{1}{2}$ 

#### Code Sandbox

You can test the traceBlock method using the code sandbox below:

### **Use Cases**

Here's a potential use case for traceBlock :

- · Analyzing Network Performance
- traceBlock
- method can be used to analyze the performance of the EVM networks by tracing the execution of all transactions within a specific block and evaluating gas usage and other metrics.

### **Related Methods**

Here are the methods related to traceBlock :

- : Runs an
- with the context of the provided block execution using the final state of the parent block as the base.
- : Attempts to run the transaction in the exact same manner as it was executed on the network. It will replay any transaction that may have been executed prior to this one before it and will then attempt to execute the transaction that corresponds to the given hash.

Updated 5 months ago

traceTransaction - SDK SDK Notify Methods Did this page help you?Yes No