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# traceTransaction - SDK

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.

#### All CSS

/ dont\_have\_api\_sec\_start/ .api\_key\_instruct\_ban{ background: #F5FCFF; border: 1px solid rgba(207, 217, 240, 0.2); border-radius: 12px; -webkit-border-radius: 12px; display: flex; flex-wrap: wrap; padding: 33px; } .markdown-body h3 { color: #00000 limportant; } .api\_key\_instruct\_ban\_lft h3{ font-size: 24px; line-height: 1.3; letter-spacing: -0.03em; font-weight: 700; font-family: 'Inter', sans-serif; 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: #000; color: #fff; } .api\_key\_instruct\_ban\_lft{ flex-basis: 600; max-width: 60%; padding-right: 15px; } .api\_key\_instruct\_ban\_rtt{ flex-basis: 40%; max-width: 40%; padding-left: 15px; align-self: center; } / dont\_have\_api\_sec\_end /

```
/* ======= responsive css ======= */
@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_cont ul li a {
     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 */
   .api_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{
  /* dont_have_api_sec_end */
@media (max-width: 768px) {
     /* dont_have_api_sec_start */
     .api_key_instruct_ban_lft h3{
        font-size: 30px;
     .api key instruct ban Ift p{
        font-size: 16px;
     .wrapper_body_cmn_out{ max-width: 100%;
     .api_key_instruct_ban_lft h3 {
        font-size: 40nx
       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 bank
    padding: 30px;
  ,/* dont_have_api_sec_end */
```

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

Start using this method in your app today. Get started for free dont\_have\_api\_sec\_end

# **Description**

traceTransaction 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.

# **Parameters**

Name Type Description Example transactionHash string The transaction hash of the transaction to trace. 0x60e07437b027t8b64b409137f75e527583f1139741d311c6969d4efc879d94b8 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 } timeout? string A optional duration string of decimal numbers that overrides the default timeout of 5 seconds for JavaScript-based tracing calls. Max timeout is "10s". Valid time units are "ns", "us", "ms", "s" each with optional fraction, such as "300ms" or "2s45ms" "10s", "300ms" etc.

# Response

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

Property (Field) Description type The type of call: CALL or CREATE for the top-level call. from From address of the transaction. to To address of the transaction. value Amount of value transfer as a hex string, gas Gas provided for call as a hex string, gasUsed Gas used during the call as a hex string, input Call data, output Return data. errror? Optional error field. revertReason? Solidity revert reason, if the call reverted. calls? 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 yarn npm install alchemy-sdk yarn add alchemy-sdk

#### Request

Here is an example of how to make a traceTransaction 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 traceTransaction method const main = async ()=> {// The transaction hash of the transaction to trace. let txHash = "0x45c1b4c9685a0a9312e698ad273802c20f0354a2248f3f20bbd3623ef32f9523" ;// Tracer type and configuration. let tracerConfig = {type : "callTracer" ,onlyTopCall :true , };let timeout = "10s" ;// Calling the traceTransaction method let response = await alchemy .debug .traceTransaction (txHash ,tracerConfig ,timeout );// 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:

 $trace Transaction\ response\ \{type\ : \ 'CALL'\ ,from\ : \ '0xe5cb067e90d5cd1f8052b83562ae670ba4a211a8'\ ,to\ : \ '0xdac17f958d2ee523a2206206994597c13d831ec7'\ ,value\ : \ '0xoba4a211a8'\ ,to\ :$ 

,output :'0x' }

#### Code Sandbox

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

### **Use Cases**

Some of the use cases for traceCall are:

- Debugging Contract Issues
- · : Developers can use the
- traceTransaction
- method to diagnose and fix issues with smart contract execution by tracing the flow of execution and the state changes made by the contract in response to a specific transaction.
- Optimizing Contract Performance
- . : Developers can use the
- traceTransaction
- · method to identify and optimize slow or inefficient sections of code by tracing the execution and gas consumption of a specific transaction.
- · Verifying Contract Security
- . : Security auditors can use the

- traceTransaction
- · method to verify the security of smart contracts by tracing the execution of malicious transactions and evaluating the contract's response.

# **Related Methods**

Here are the methods related to traceTransaction :

- traceCall
- : Runs an
- eth\_call
- with the context of the provided block execution using the final state of the parent block as the base.
- traceBlock
  : Replays a block that has already been mined.

Updated 5 months ago

sendPrivateTransaction - SDK simulateExecutionBundle - SDK Did this page help you?Yes No