eth_createAccessList

Creates an [EIP-2930](#) access list that you can include in a [transaction](#) .

Use this method to optimize your smart contract interactions. Access lists are a part of Ethereum's EIP-2930, which aims to improve the network's scalability and reduce gas costs by specifying an explicit list of addresses and storage keys that a transaction intends to access.

Optimizing Ethereum Transactions See the Infura article [Optimizing Ethereum Transactions with eth_createAccessList](#) that describes how eth_createAccessList can help optimize gas costs, reduce out-of-gas errors, and verify clients for infrastructure access. For Growth and Custom service plans This JSON-RPC method allows a request to be forwarded to a partner service provider if Infura should experience a service issue or outage. See [Failover protection](#) and [Enable API request forwarding](#) for complete details.

If you would like failover protection but don't qualify under your current plan, then either self-upgrade to the Growth plan or contact a sales representative to upgrade to a Custom plan.

Parameters

- Transaction call object
- :[Required]
-
    - from
-
    - :[optional]
-
    - 20 bytes. The address of the sender.
-
    - to
-
    - : 20 bytes. Address the transaction is directed to.
-
    - gas
-
    - :[optional]
-
    - Hexadecimal value of the gas provided for the transaction execution.
-
    - gasPrice
-
    - :[optional]
-
    - Hexadecimal value gas price, in Wei, provided by the sender. The default is 0
-
    - . Used only in non-EIP-1559 transactions.
-
    - maxPriorityFeePerGas
-
    - :[optional]
-
    - Maximum fee, in Wei, the sender is willing to pay per gas above the base fee. See [EIP-1559 transactions](#)
-
    - . If used, must specify maxFeePerGas
-
    - .
-
    - maxFeePerGas
-
    - :[optional]
-
    - Maximum total fee (base fee + priority fee), in Wei, the sender is willing to pay per gas. See [EIP-1559 transactions](#)
-
    - . If used, must specify maxPriorityFeePerGas
-
    - .
-

- - value
- - :[optional]
- - Hexadecimal of the value transferred, in Wei.
- - data
- - :[optional]
- - Hash of the method signature and encoded parameters. See Ethereum contract ABI specification
- - .
- block number
- orblock hash
- :[required]
- A string representing a block number, block hash, or one of the string tagslatest
- ,earliest
- ,pending
- ,safe
- , orfinalized
- . See thedefault block parameter
- .

Returns

Access list object with the following fields:

- accessList
- : A list of objects with the following fields:* address
- : Addresses to be accessed by the transaction.
- storageKeys
- : Storage keys to be accessed by the transaction.
- gasUsed
- : A hexadecimal string representing the approximate gas cost for the transaction if the access list is included.

Example

ReplaceYOUR-API-KEY with an API key from yourInfura dashboard .

Request

- cURL
- WSS

curl https://polygon-mainnet.infura.io/v3/YOUR-API-KEY \ -X POST \ -H "Content-Type: application/json" \ -d '{"method":"eth_createAccessList","params":[{"from": "0xaeA8F8f781326bfE6A7683C2BD48Dd6AA4d3Ba63", "data": "0x608060806080608155"}, "pending"],"id":1,"jsonrpc":"2.0"}' wscat -c wss:///polygon-mainnet.infura.io/ws/v3/YOUR-API-KEY -x '{"method":"eth_createAccessList","params":[{"from": "0xaeA8F8f781326bfE6A7683C2BD48Dd6AA4d3Ba63", "data": "0x608060806080608155"}, "pending"],"id":1,"jsonrpc":"2.0"}'

Response

- JSON

{ "accessList": [{ "address": "0xa02457e5dfd32bda5fc7e1f1b008aa5979568150", "storageKeys": ["0x0000000000000000000000000000000000000000000000000000000000000081",] }] "gasUsed": "0x125f8" }

Last updatedonApr 19, 2024 Previous eth_coinbase Next eth_estimateGas