eth namespace

eth_blockNumber

Returns current block number

- Request
- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_blockNumber", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_call

Executes a tx call (does not create a transaction)

- Parameters
- Request

- Response

- transactionCall

- :object

-
  - accessList
-
  - : array ofobject
-
  -
    - address
-
  -
    - :string
-
  -
    - (address)
-
  -
    - storageKeys
-
  -
    - : array ofstring
-
  -
    - (hex integer)
-
  - blobVersionedHashes
-
  - : array ofstring
-
  - (hex data)
-
  - blockHash
-
  - :string
-
  - (hash)
-
  - blockNumber

- - :string
- - (hex integer)
- - chainId
- - :string
- - (hex integer)
- - data
- - :string
- - (hex data)
- - from
- - :string
- - (address)
- - gas
- - :string
- - (hex integer)
- - gasPrice
- - :string
- - (hex integer)
- - hash
- - :string
- - (hash)
- - input
- - :string
- - (hex data)
- - isSystemTx
- - :boolean
- - maxFeePerBlobGas
- - :string
- - (hex integer)
- - maxFeePerGas
- - :string
- - (hex integer)
- - maxPriorityFeePerGas
- - :string
- - (hex integer)

-
  - mint
-
  - :string
-
  - (hex integer)
-
  - nonce
-
  - :string
-
  - (hex integer)
-
  - r
-
  - :string
-
  - (hex integer)
-
  - s
-
  - :string
-
  - (hex integer)
-
  - sourceHash
-
  - :string
-
  - (hash)
-
  - to
-
  - :string
-
  - (address)
-
  - transactionIndex
-
  - :string
-
  - (hex integer)
-
  - type
-
  - :integer
-
  - v
-
  - :string
-
  - (hex integer)
-
  - value
-
  - :string
-
  - (hex integer)
-
  - yParity
-
  - :string
-
  - (hex integer)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized

- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_call", "params": [transactionCall, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string

eth_chainId

Returns ChainID

- Request
- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_chainId", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_createAccessList

Creates anEIP2930 type AccessList for the given transaction

- Parameters
- Request

- Response

- transactionCall

- :object
-
  - accessList
-
  - : array ofobject
-
  -
    - address
-
  -
    - :string
-
  -
    - (address)
-
  -
    - storageKeys
-
  -
    - : array ofstring
-
  -
    - (hex integer)
-
  - blobVersionedHashes
-

- - : array ofstring
- - (hex data)
- - blockHash
- - :string
- - (hash)
- - blockNumber
- - :string
- - (hex integer)
- - chainId
- - :string
- - (hex integer)
- - data
- - :string
- - (hex data)
- - from
- - :string
- - (address)
- - gas
- - :string
- - (hex integer)
- - gasPrice
- - :string
- - (hex integer)
- - hash
- - :string
- - (hash)
- - input
- - :string
- - (hex data)
- - isSystemTx
- - :boolean
- - maxFeePerBlobGas
- - :string
- - (hex integer)
-

- maxFeePerGas
  - :string
  - (hex integer)
- maxPriorityFeePerGas
  - :string
  - (hex integer)
- mint
  - :string
  - (hex integer)
- nonce
  - :string
  - (hex integer)
- r
  - :string
  - (hex integer)
- s
  - :string
  - (hex integer)
- sourceHash
  - :string
  - (hash)
- to
  - :string
  - (address)
- transactionIndex
  - :string
  - (hex integer)
- type
  - :integer
- v
  - :string
  - (hex integer)
- value
  - :string

- (hex integer)
-
  - yParity
-
  - :string
-
  - (hex integer)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-)
- optimize
- :boolean curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_createAccessList", "params": [transactionCall, blockParameter, optimize] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- accessList
- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - storageKeys
-
  - : array ofstring
-
  - (hex integer)
- gasUsed
- :string
- (hex integer)

eth_estimateGas

Executes a tx call and returns gas used (does not create a transaction)

- Parameters
- Request

- Response

- transactionCall

- :object

-
  - accessList

-
  - : array ofobject

-
  -
    - address

-
  -
    - :string

-

- - - (address)
- - - storageKeys
- - - : array of string
- - - (hex integer)
- - blobVersionedHashes
- - : array of string
- - (hex data)
- - blockHash
- - :string
- - (hash)
- - blockNumber
- - :string
- - (hex integer)
- - chainId
- - :string
- - (hex integer)
- - data
- - :string
- - (hex data)
- - from
- - :string
- - (address)
- - gas
- - :string
- - (hex integer)
- - gasPrice
- - :string
- - (hex integer)
- - hash
- - :string
- - (hash)
- - input
- -

- - :string
- - (hex data)
- - isSystemTx
- - :boolean
- - maxFeePerBlobGas
- - :string
- - (hex integer)
- - maxFeePerGas
- - :string
- - (hex integer)
- - maxPriorityFeePerGas
- - :string
- - (hex integer)
- - mint
- - :string
- - (hex integer)
- - nonce
- - :string
- - (hex integer)
- - r
- - :string
- - (hex integer)
- - s
- - :string
- - (hex integer)
- - sourceHash
- - :string
- - (hash)
- - to
- - :string
- - (address)
- - transactionIndex
- - :string
- - (hex integer)

- - type
  - - :integer
  - - v
  - - :string
  - - (hex integer)
  - - value
  - - :string
  - - (hex integer)
  - - yParity
  - - :string
  - - (hex integer)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_estimateGas", "params": [transactionCall, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_feeHistory

Returns block fee history.

- Parameters
- Request

- Response

- blockCount

- :string
- (hex integer)
- newestBlock
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-)
- rewardPercentiles
- : array ofobject curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_feeHistory", "params": [blockCount, newestBlock, rewardPercentiles] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- baseFeePerGas
- : array ofstring
- (hex integer)
- gasUsedRatio
- : array ofobject
- oldestBlock
- :string
- (hex integer)
- reward
- : array of array ofstring
- (hex integer)

eth_getAccount

Retrieves Accounts via Address and Blocknumber

- Parameters
- Request

- Response

- accountAddress

- :string
- (address)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getAccount", "params": [accountAddress, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- balance
- :string
- (hex integer)
- codeHash
- :string
- (hash)
- nonce
- :string
- (hex integer)
- storageRoot
- :string
- (hash)

eth_getBalance

Returns account balance

- Parameters
- Request

- Response

- address

- :string
- (address)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getBalance", "params": [address, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_getBlockByHash

Retrieves a block by hash

- Parameters
- Request

- Response

- blockHash

- :string
- (hash)
- returnFullTransactionObjects
- :boolean curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getBlockByHash", "params": [blockHash, returnFullTransactionObjects] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- author
- :string
- (address)
- baseFeePerGas
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)
- difficulty
- :string
- (hex integer)
- excessBlobGas
- :string
- (hex integer)
- extraData
- :string
- (hex data)
- gasLimit
- :string
- (hex integer)
- gasUsed
- :string

- (hex integer)
- hash
- :string
- (hash)
- logsBloom
- :string
- (hex data)
- miner
- :string
- (address)
- mixHash
- :string
- (hash)
- nonce
- :string
- (hex data)
- number
- :string
- (hex integer)
- parentBeaconBlockRoot
- :string
- (hash)
- parentHash
- :string
- (hash)
- receiptsRoot
- :string
- (hash)
- sha3Uncles
- :string
- (hash)
- signature
- :string
- (hex data)
- size
- :string
- (hex integer)
- stateRoot
- :string
- (hash)
- step
- :string
- (hex integer)
- timestamp
- :string
- (hex integer)
- totalDifficulty
- :string
- (hex integer)
- transactions
- : array ofobject
- transactionsRoot
- :string
- (hash)
- uncles
- : array ofstring
- (hash)
- withdrawals
- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - amountInGwei
-

- :string
-
  - (hex integer)
-
  - amountInWei
-
  - :string
-
  - (hex integer)
-
  - index
-
  - :string
-
  - (hex integer)
-
  - validatorIndex
-
  - :string
-
  - (hex integer)
- withdrawalsRoot
- :string
- (hash)

eth_getBlockByNumber

Retrieves a block by number

- Parameters
- Request

- Response

- blockParameter

- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-)
- returnFullTransactionObjects
- :boolean curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getBlockByNumber", "params": [blockParameter, returnFullTransactionObjects] }' {
"jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- author
- :string
- (address)
- baseFeePerGas
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)
- difficulty
- :string
- (hex integer)
- excessBlobGas

- :string
- (hex integer)
- extraData
- :string
- (hex data)
- gasLimit
- :string
- (hex integer)
- gasUsed
- :string
- (hex integer)
- hash
- :string
- (hash)
- logsBloom
- :string
- (hex data)
- miner
- :string
- (address)
- mixHash
- :string
- (hash)
- nonce
- :string
- (hex data)
- number
- :string
- (hex integer)
- parentBeaconBlockRoot
- :string
- (hash)
- parentHash
- :string
- (hash)
- receiptsRoot
- :string
- (hash)
- sha3Uncles
- :string
- (hash)
- signature
- :string
- (hex data)
- size
- :string
- (hex integer)
- stateRoot
- :string
- (hash)
- step
- :string
- (hex integer)
- timestamp
- :string
- (hex integer)
- totalDifficulty
- :string
- (hex integer)
- transactions
- : array ofobject
- transactionsRoot
- :string
- (hash)
- uncles
- : array ofstring
- (hash)
- withdrawals

- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - amountInGwei
-
  - :string
-
  - (hex integer)
-
  - amountInWei
-
  - :string
-
  - (hex integer)
-
  - index
-
  - :string
-
  - (hex integer)
-
  - validatorIndex
-
  - :string
-
  - (hex integer)
- withdrawalsRoot
- :string
- (hash)

eth_getBlockReceipts

Get receipts from all transactions from particular block, more efficient than fetching the receipts one-by-one.

- Parameters
- Request

- Response

- blockParameter

- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getBlockReceipts", "params": [blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result : array ofobject

- blobGasPrice
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)

- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- contractAddress
- :string
- (address)
- cumulativeGasUsed
- :string
- (hex integer)
- effectiveGasPrice
- :string
- (hex integer)
- error
- :string
- from
- :string
- (address)
- gasUsed
- :string
- (hex integer)
- logs
- : array ofobject
-
    - address
-
    - :string
-
    - (address)
-
    - blockHash
-
    - :string
-
    - (hash)
-
    - blockNumber
-
    - :string
-
    - (hex integer)
-
    - data
-
    - :string
-
    - (hex data)
-
    - logIndex
-
    - :string
-
    - (hex integer)
-
    - removed
-
    - :boolean
-
    - topics
-
    - : array ofstring
-
    - (hash)
-
    - transactionHash
-

- :string
  - (hash)
  - transactionIndex
  - :string
  - (hex integer)
- logsBloom
- :string
- (hex data)
- root
- :string
- (hash)
- status
- :string
- (hex integer)
- to
- :string
- (address)
- transactionHash
- :string
- (hash)
- transactionIndex
- :string
- (hex integer)
- type
- :integer

eth_getBlockTransactionCountByHash

Returns number of transactions in the block block hash

- Parameters
- Request

- Response

- blockHash

- :string
- (hash) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getBlockTransactionCountByHash", "params": [blockHash] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_getBlockTransactionCountByNumber

Returns number of transactions in the block by block number

- Parameters
- Request

- Response

- blockParameter

- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending

- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getBlockTransactionCountByNumber", "params": [blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_getCode

Returns account code at given address and block

- Parameters
- Request

- Response

- address

- :string
- (address)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getCode", "params": [address, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex data)

eth_getFilterChanges

Reads filter changes

- Parameters
- Request

- Response

- filterId

- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getFilterChanges", "params": [filterId] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result : array ofobject

eth_getFilterLogs

Reads filter changes

- Parameters
- Request

- Response

- filterId

- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getFilterLogs", "params": [filterId] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result : array ofobject

- address
- :string
- (address)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- data
- :string
- (hex data)
- logIndex
- :string
- (hex integer)
- removed
- :boolean
- topics
- : array ofstring
- (hash)
- transactionHash
- :string
- (hash)
- transactionIndex
- :string
- (hex integer)
- transactionLogIndex
- :string
- (hex integer)

eth_getLogs

Reads logs

- Parameters
- Request

- Response

- filter

- :object
-
    - address
-
    - :object
-
    - fromBlock
-
    - :string

- - (block number or hash or either ofearliest
- - ,finalized
- - ,latest
- - ,pending
- - , orsafe
- -)
- - toBlock
- - :string
- - (block number or hash or either ofearliest
- - ,finalized
- - ,latest
- - ,pending
- - , orsafe
- -)
- - topics
- - : array ofobject curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getLogs", "params": [filter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result : array ofobject

- address
- :string
- (address)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- data
- :string
- (hex data)
- logIndex
- :string
- (hex integer)
- removed
- :boolean
- topics
- : array ofstring
- (hash)
- transactionHash
- :string
- (hash)
- transactionIndex
- :string
- (hex integer)

- transactionLogIndex
- :string
- (hex integer)

eth_getProof

https://github.com/ethereum/EIPs/issues/1186

- Parameters
- Request

- Response

- accountAddress

- :string
- (address)
- hashRate
- : array ofstring
- (hex integer)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getProof", "params": [accountAddress, hashRate, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- address
- :string
- (address)
- balance
- :string
- (hex integer)
- codeHash
- :string
- (hash)
- nonce
- :string
- (hex integer)
- proof
- : array ofstring
- (hex data)
- storageProofs
- : array ofobject
-
    - key
-
    - :string
-
    - (hex data)
-
    - proof
-
    - : array ofstring
-
    - (hex data)
-
    - value

-
  - :string
-
  - (hex data)
- storageRoot
- :string
- (hash)

eth_getStorageAt

Returns storage data at address. storage_index

- Parameters
- Request

- Response

- address

- :string
- (address)
- positionIndex
- :string
- (hex integer)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getStorageAt", "params": [address, positionIndex, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex data)

eth_getTransactionByBlockHashAndIndex

Retrieves a transaction by block hash and index

- Parameters
- Request

- Response

- blockHash

- :string
- (hash)
- positionIndex
- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getTransactionByBlockHashAndIndex", "params": [blockHash, positionIndex] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- accessList
- : array of object
-
    - address
-
    - :string
-
    - (address)
-
    - storageKeys
-
    - : array of string
-
    - (hex integer)
- blobVersionedHashes
- : array of string
- (hex data)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- chainId
- :string
- (hex integer)
- data
- :string
- (hex data)
- from
- :string
- (address)
- gas
- :string
- (hex integer)
- gasPrice
- :string
- (hex integer)
- hash
- :string
- (hash)
- input
- :string
- (hex data)
- isSystemTx
- :boolean
- maxFeePerBlobGas
- :string
- (hex integer)
- maxFeePerGas
- :string
- (hex integer)
- maxPriorityFeePerGas
- :string
- (hex integer)
- mint
- :string
- (hex integer)
- nonce
- :string
- (hex integer)
- r
- :string
- (hex integer)
- s
- :string
- (hex integer)
- sourceHash

- :string
- (hash)
- to
- :string
- (address)
- transactionIndex
- :string
- (hex integer)
- type
- :integer
- v
- :string
- (hex integer)
- value
- :string
- (hex integer)
- yParity
- :string
- (hex integer)

eth_getTransactionByBlockNumberAndIndex

Retrieves a transaction by block number and index

- Parameters
- Request

- Response

- blockParameter

- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-)
- positionIndex
- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getTransactionByBlockNumberAndIndex", "params": [blockParameter, positionIndex] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- accessList
- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - storageKeys
-
  - : array ofstring
-
  - (hex integer)
- blobVersionedHashes
- : array ofstring
- (hex data)

- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- chainId
- :string
- (hex integer)
- data
- :string
- (hex data)
- from
- :string
- (address)
- gas
- :string
- (hex integer)
- gasPrice
- :string
- (hex integer)
- hash
- :string
- (hash)
- input
- :string
- (hex data)
- isSystemTx
- :boolean
- maxFeePerBlobGas
- :string
- (hex integer)
- maxFeePerGas
- :string
- (hex integer)
- maxPriorityFeePerGas
- :string
- (hex integer)
- mint
- :string
- (hex integer)
- nonce
- :string
- (hex integer)
- r
- :string
- (hex integer)
- s
- :string
- (hex integer)
- sourceHash
- :string
- (hash)
- to
- :string
- (address)
- transactionIndex
- :string
- (hex integer)
- type
- :integer
- v
- :string
- (hex integer)
- value
- :string
- (hex integer)
- yParity

- :string
- (hex integer)

eth_getTransactionByHash

Retrieves a transaction by hash

- Parameters
- Request

- Response

- transactionHash

- :string
- (hash) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getTransactionByHash", "params": [transactionHash] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- accessList
- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - storageKeys
-
  - : array ofstring
-
  - (hex integer)
- blobVersionedHashes
- : array ofstring
- (hex data)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- chainId
- :string
- (hex integer)
- data
- :string
- (hex data)
- from
- :string
- (address)
- gas
- :string
- (hex integer)
- gasPrice
- :string
- (hex integer)
- hash
- :string
- (hash)
- input
- :string

- (hex data)
- isSystemTx
- :boolean
- maxFeePerBlobGas
- :string
- (hex integer)
- maxFeePerGas
- :string
- (hex integer)
- maxPriorityFeePerGas
- :string
- (hex integer)
- mint
- :string
- (hex integer)
- nonce
- :string
- (hex integer)
- r
- :string
- (hex integer)
- s
- :string
- (hex integer)
- sourceHash
- :string
- (hash)
- to
- :string
- (address)
- transactionIndex
- :string
- (hex integer)
- type
- :integer
- v
- :string
- (hex integer)
- value
- :string
- (hex integer)
- yParity
- :string
- (hex integer)

eth_getTransactionCount

Returns account nonce (number of trnsactions from the account since genesis) at the given block number

- Parameters
- Request

- Response

- address

- :string
- (address)
- blockParameter
- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getTransactionCount", "params": [address, blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_getTransactionReceipt

Retrieves a transaction receipt by tx hash

- Parameters
- Request

- Response

- txHashData

- :string
- (hash) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getTransactionReceipt", "params": [txHashData] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- blobGasPrice
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- contractAddress
- :string
- (address)
- cumulativeGasUsed
- :string
- (hex integer)
- effectiveGasPrice
- :string
- (hex integer)
- error
- :string
- from
- :string
- (address)
- gasUsed
- :string
- (hex integer)
- logs
- : array ofobject
-
    - address
-
    - :string
-
    - (address)
-

- - blockHash
- - :string
- - (hash)
- - blockNumber
- - :string
- - (hex integer)
- - data
- - :string
- - (hex data)
- - logIndex
- - :string
- - (hex integer)
- - removed
- - :boolean
- - topics
- - : array ofstring
- - (hash)
- - transactionHash
- - :string
- - (hash)
- - transactionIndex
- - :string
- - (hex integer)
- logsBloom
- :string
- (hex data)
- root
- :string
- (hash)
- status
- :string
- (hex integer)
- to
- :string
- (address)
- transactionHash
- :string
- (hash)
- transactionIndex
- :string
- (hex integer)
- type
- :integer

eth_getUncleByBlockHashAndIndex

Retrieves an uncle block header by block hash and uncle index

- Parameters
- Request

- Response

- blockHashData

- :string
- (hash)
- positionIndex
- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getUncleByBlockHashAndIndex", "params": [blockHashData, positionIndex] }' {
"jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- author
- :string
- (address)
- baseFeePerGas
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)
- difficulty
- :string
- (hex integer)
- excessBlobGas
- :string
- (hex integer)
- extraData
- :string
- (hex data)
- gasLimit
- :string
- (hex integer)
- gasUsed
- :string
- (hex integer)
- hash
- :string
- (hash)
- logsBloom
- :string
- (hex data)
- miner
- :string
- (address)
- mixHash
- :string
- (hash)
- nonce
- :string
- (hex data)
- number
- :string
- (hex integer)
- parentBeaconBlockRoot
- :string

- (hash)
- parentHash
- :string
- (hash)
- receiptsRoot
- :string
- (hash)
- sha3Uncles
- :string
- (hash)
- signature
- :string
- (hex data)
- size
- :string
- (hex integer)
- stateRoot
- :string
- (hash)
- step
- :string
- (hex integer)
- timestamp
- :string
- (hex integer)
- totalDifficulty
- :string
- (hex integer)
- transactions
- : array ofobject
- transactionsRoot
- :string
- (hash)
- uncles
- : array ofstring
- (hash)
- withdrawals
- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - amountInGwei
-
  - :string
-
  - (hex integer)
-
  - amountInWei
-
  - :string
-
  - (hex integer)
-
  - index
-
  - :string
-
  - (hex integer)
-
  - validatorIndex
-
  - :string
-
  - (hex integer)

- withdrawalsRoot
- :string
- (hash)

eth_getUncleByBlockNumberAndIndex

Retrieves an uncle block header by block number and uncle index

- Parameters
- Request

- Response

- blockParameter

- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-)
- positionIndex
- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getUncleByBlockNumberAndIndex", "params": [blockParameter, positionIndex] }' {
"jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- author
- :string
- (address)
- baseFeePerGas
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)
- difficulty
- :string
- (hex integer)
- excessBlobGas
- :string
- (hex integer)
- extraData
- :string
- (hex data)
- gasLimit
- :string
- (hex integer)
- gasUsed
- :string
- (hex integer)
- hash
- :string
- (hash)
- logsBloom
- :string
- (hex data)
- miner
- :string
- (address)

- mixHash
- :string
- (hash)
- nonce
- :string
- (hex data)
- number
- :string
- (hex integer)
- parentBeaconBlockRoot
- :string
- (hash)
- parentHash
- :string
- (hash)
- receiptsRoot
- :string
- (hash)
- sha3Uncles
- :string
- (hash)
- signature
- :string
- (hex data)
- size
- :string
- (hex integer)
- stateRoot
- :string
- (hash)
- step
- :string
- (hex integer)
- timestamp
- :string
- (hex integer)
- totalDifficulty
- :string
- (hex integer)
- transactions
- : array ofobject
- transactionsRoot
- :string
- (hash)
- uncles
- : array ofstring
- (hash)
- withdrawals
- : array ofobject
-
    - address
-
    - :string
-
    - (address)
-
    - amountInGwei
-
    - :string
-
    - (hex integer)
-
    - amountInWei
-
    - :string
-
    - (hex integer)
-

- - index
  - - :string
  - - (hex integer)
  - - validatorIndex
  - - :string
  - - (hex integer)
- withdrawalsRoot
- :string
- (hash)

eth_getUncleCountByBlockHash

Returns number of uncles in the block by block hash

- Parameters
- Request

- Response

- blockHash

- :string
- (hash) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getUncleCountByBlockHash", "params": [blockHash] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_getUncleCountByBlockNumber

Returns number of uncles in the block by block number

- Parameters
- Request

- Response

- blockParameter

- :string
- (block number or hash or either ofearliest
- ,finalized
- ,latest
- ,pending
- , orsafe
-) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_getUncleCountByBlockNumber", "params": [blockParameter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_newBlockFilter

Creates an update filter

- Request
- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_newBlockFilter", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_newFilter

Creates an update filter

- Parameters
- Request
- Response
- filter
- :object
  - address
  - :object
  - fromBlock
  - :string
  - (block number or hash or either ofearliest
  - ,finalized
  - ,latest
  - ,pending
  - , orsafe
  -)
  - toBlock
  - :string
  - (block number or hash or either ofearliest
  - ,finalized
  - ,latest
  - ,pending
  - , orsafe
  -)
  - topics
  - : array ofobject curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_newFilter", "params": [filter] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_newPendingTransactionFilter

Creates an update filter

- Request
- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_newPendingTransactionFilter", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hex integer)

eth_pendingTransactions

Returns the pending transactions list

- Request
- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_pendingTransactions", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result : array ofobject

- accessList
- : array ofobject
-
    - address
-
    - :string
-
    - (address)
-
    - storageKeys
-
    - : array ofstring
-
    - (hex integer)
- blobVersionedHashes
- : array ofstring
- (hex data)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- chainId
- :string

- (hex integer)
- data
- :string
- (hex data)
- from
- :string
- (address)
- gas
- :string
- (hex integer)
- gasPrice
- :string
- (hex integer)
- hash
- :string
- (hash)
- input
- :string
- (hex data)
- isSystemTx
- :boolean
- maxFeePerBlobGas
- :string
- (hex integer)
- maxFeePerGas
- :string
- (hex integer)
- maxPriorityFeePerGas
- :string
- (hex integer)
- mint
- :string
- (hex integer)
- nonce
- :string
- (hex integer)
- r
- :string
- (hex integer)
- s
- :string
- (hex integer)
- sourceHash
- :string
- (hash)
- to
- :string
- (address)
- transactionIndex
- :string
- (hex integer)
- type
- :integer
- v
- :string
- (hex integer)
- value
- :string
- (hex integer)
- yParity
- :string
- (hex integer)

eth_protocolVersion

Returns ETH protocol version

- Request

- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_protocolVersion", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string

eth_sendRawTransaction

Send a raw transaction to the tx pool and broadcasting

- Parameters
- Request

- Response

- transaction

- :string
- (hex data) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_sendRawTransaction", "params": [transaction] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hash)

eth_sendTransaction

Send a transaction to the tx pool and broadcasting

- Parameters
- Request

- Response

- rpcTx

- :object
-
  - accessList
-
  - : array ofobject
-
  -
    - address
-
  -
    - :string
-
  -
    - (address)
-
  -
    - storageKeys
-
  -
    - : array ofstring
-
  -

- - (hex integer)
- - blobVersionedHashes
- - : array of string
- - (hex data)
- - blockHash
- - :string
- - (hash)
- - blockNumber
- - :string
- - (hex integer)
- - chainId
- - :string
- - (hex integer)
- - data
- - :string
- - (hex data)
- - from
- - :string
- - (address)
- - gas
- - :string
- - (hex integer)
- - gasPrice
- - :string
- - (hex integer)
- - hash
- - :string
- - (hash)
- - input
- - :string
- - (hex data)
- - isSystemTx
- - :boolean
- - maxFeePerBlobGas
-

- - :string
- - (hex integer)
- - maxFeePerGas
- - :string
- - (hex integer)
- - maxPriorityFeePerGas
- - :string
- - (hex integer)
- - mint
- - :string
- - (hex integer)
- - nonce
- - :string
- - (hex integer)
- - r
- - :string
- - (hex integer)
- - s
- - :string
- - (hex integer)
- - sourceHash
- - :string
- - (hash)
- - to
- - :string
- - (address)
- - transactionIndex
- - :string
- - (hex integer)
- - type
- - :integer
- - v
- - :string
- - (hex integer)
-

- - value
  - - :string
  - - (hex integer)
  - - yParity
  - - :string
  - - (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_sendTransaction", "params": [rpcTx] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :string (hash)

eth_subscribe

Starts a subscription to a particular event over WebSockets. A JSON-RPC notification with event payload and subscription id is sent to a client for every event matching the subscription topic.

info This method is enabled by addingsubscribe to[-JsonRpc.EnabledModules](#) . * Parameters * Request * Response * Notification

1. subscriptionName
2. :string
3. filter
4. :object
5.
   - address
6.
   - :string
7.
   - (address)
8.
   - fromBlock
9.
   - :string
10.
    - (block number or hash or either ofearliest
11.
    - ,finalized
12.
    - ,latest
13.
    - ,pending
14.
    - , orsafe
15.
    -)
16.
    - toBlock
17.
    - :string
18.
    - (block number or hash or either ofearliest
19.
    - ,finalized
20.
    - ,latest
21.
    - ,pending
22.

23. ○ , orsafe

24. ○)

25. ○ topics

26. ○ : array ofstring

○ (hex data) wscat -c ws://localhost:8545 { "jsonrpc" :

"2.0" , "id" :

0 , "method" :

"eth_subscribe" , "params" :

[subscriptionName , args] } { "jsonrpc" :

"2.0" , "id" :

0 , "result" :

"0x..."

// subscription id } result :string { "jsonrpc" :

"2.0" , "method" :

"eth_subscription" , "params" :

{ "subscription" :

"0x..." ,

// subscription id "result" : payload } } See specific subcription topic below forpayload details.

Subscription topics

newHeads

Subscribes to incoming block headers. Fires a notification each time a new header is appended to the chain, including chain reorganizations.

Notificationpayload :object

- author
- :string
- (address)
- baseFeePerGas
- :string
- (hex integer)
- blobGasUsed
- :string
- (hex integer)
- difficulty
- :string
- (hex integer)
- excessBlobGas
- :string
- (hex integer)
- extraData
- :string
- (hex data)
- gasLimit
- :string
- (hex integer)
- gasUsed
- :string
- (hex integer)
- hash
- :string

- (hash)
- logsBloom
- :string
- (hex data)
- miner
- :string
- (address)
- mixHash
- :string
- (hash)
- nonce
- :string
- (hex data)
- number
- :string
- (hex integer)
- parentBeaconBlockRoot
- :string
- (hash)
- parentHash
- :string
- (hash)
- receiptsRoot
- :string
- (hash)
- sha3Uncles
- :string
- (hash)
- signature
- :string
- (hex data)
- size
- :string
- (hex integer)
- stateRoot
- :string
- (hash)
- step
- :string
- (hex integer)
- timestamp
- :string
- (hex integer)
- totalDifficulty
- :string
- (hex integer)
- transactions
- : array ofobject
- transactionsRoot
- :string
- (hash)
- uncles
- : array ofstring
- (hash)
- withdrawals
- : array ofobject
-
  - address
-
  - :string
-
  - (address)
-
  - amount
-
  - :string
-
  - (hex integer)

-
  - index
-
  - :string
-
  - (hex integer)
-
  - validatorIndex
-
  - :string
-
  - (hex integer)
- withdrawalsRoot
- :string
- (hash)

logs

Subscribes to incoming logs filtered by the given options. In case of a chain reorganization, previously sent logs on the old chain will be re-sent with theremoved field set totrue .

Notificationpayload :object

- address
- :string
- (address)
- blockHash
- :string
- (hash)
- blockNumber
- :string
- (hex integer)
- data
- :string
- (hex data)
- logIndex
- :string
- (hex integer)
- removed
- :boolean
- topics
- : array ofstring
- (hash)
- transactionHash
- :string
- (hash)
- transactionIndex
- :string
- (hex integer)
- transactionLogIndex
- :string
- (hex integer)

newPendingTransactions

Subscribes to incoming pending transactions. Returns the transaction hash.

Notificationpayload :string (hash)

droppedPendingTransactions

Subscribes to transactions evicted from the transaction pool. Returns the transaction hash.

Notificationpayload :string (hash)

syncing

Subscribes to syncing events. Returnsfalse (once) if the node is synced or an object with statistics (once) when the node

starts syncing.

Notificationpayload :

- if synced:boolean
- if syncing:object
-
    - currentBlock
-
    - :string
-
    - (hex integer)
-
    - highestBlock
-
    - :string
-
    - (hex integer)
-
    - isSyncing
-
    - :boolean
-
    - startingBlock
-
    - :string
-
    - (hex integer)

eth_syncing

Returns syncing status

- Request
- Response

curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_syncing", "params": [] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :object

- currentBlock
- :string
- (hex integer)
- highestBlock
- :string
- (hex integer)
- isSyncing
- :boolean
- startingBlock
- :string
- (hex integer)
- syncMode
- :integer

eth_uninstallFilter

Creates an update filter

- Parameters
- Request

- Response

- filterId

- :string
- (hex integer) curl localhost:8545 \ -X POST \ -H

"Content-Type: application/json"

\ --data

'{ "jsonrpc": "2.0", "id": 0, "method": "eth_uninstallFilter", "params": [filterId] }' { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :boolean

eth_unsubscribe

Unsubscribes from a subscription.

info This method is enabled by addingsubscribe to -JsonRpc.EnabledModules . * Parameters * Request * Response

1. subscriptionId
2. :string wscat -c ws://localhost:8545 { "jsonrpc" :

"2.0" , "id" :

0 , "method" :

"eth_unsubscribe" , "params" :

[subscriptionId] } { "jsonrpc" :

"2.0" , "id" :

0 , "result" : result } result :boolean (true if unsubscribed successfully; otherwise,false)Edit this page Last updatedonMar 26, 2024 Previous debug Next net