Transaction Boost

Wallets and Dapps can seamlessly integrate Blocknative's Transaction Boost, enabling users to send private transactions to multiple RPC endpoints simultaneously while conveniently monitoring transaction statuses. This integration offers complete customization to adapt to specific preferences.

The table below outlines the supported networks:

Network Endpoint Mainnet https://rpc.blocknative.com/boost Goerli https://rpc.blocknative.com/boost?network=goerli

Setting up and customizing the endpoint

If no builder or OFA is explicitly defined, Transaction Boost automatically forwards transactions to the following RPC endpoints by default: MEV-Share , MEV-Blocker , MeowRPC , Merkle , Titan , Beaverbuild.org , Builder0x69 , rsync-builder , Flashbots , Bloxroute .

Users can customize the entities that receive their private transactions and program the privacy of their order flow by configuring their RPC URL using the query parameters provided below.

RPC Query Parameters

Name Description Default rpc Include only specific comma-separated RPC endpoints. For example, in the following URL https://rpc.blocknative.com/boost?rpc=MEV-Blocker,MoewRPC,Titan , transactions will only be sent to MEV-Blocker, MeowRPC and the Titan builder. all exclude Defaults to false, when set to true it will exclude the RPC endpoints defined in the RPC query parameter. For example in https://rpc.blocknative.com/boost?rpc=Builder0x69&exclude=true , transactions will be forwarded to all RPC endpoints except Builder0x69. false originID This specifies the private ID of the transaction originator. For example: https://rpc.blocknative.com/boost?rpc=Titan&originID=Donquixote . It's recommended to keep the ID private , since it allows you to later visualize all the history of your order flow. None norevert If set to true the private transaction is converted to a single-transaction bundle targeting the next 25 blocks. If the transaction has not been confirmed after 25 blocks, the transaction will be dropped and the transaction status will be updated to DROPPED . Example:https://rpc.blocknative.com/boost?norevert=true false maxBlockNumber Specify the max block number (as an Int) for transaction inclusion.

Example:https://rpc.blocknative.com/boost?maxBlockNumber= .

The maximum delta between current block is 25 blocks. If a block number is specified greater than 25 blocks from current block number, the maxBlockNumber will default to current block number + 25. current_block+25 privacyhints Specify privacy hints used by MEV-Share and Merkle OFAs.

Example:https://rpc.blocknative.com/boost?privacyhints=calldata,logs

If privacyhints are specified, we will forward to MEV-Share and Merkle ONLY (unless you specify one of them). If you specify privacy hints and other RPCs, we will honor the privacy hints and not forward to the other RPCs specified.

Read more on hints here and here . None mevsharerefunds If sending to MEV-Share, allows specifying of refunds parameters. For example:https://rpc.blocknative.com/boost?rpc=MEV-Share&mevsharerefunds=address0:perc0,address1:perc1 . The refund can include 1 or more addresses with an associated percentage refund. Total percentage refunds must be less than 100. Remaining percentage goes to the validator. Read more on refunds here . None mevsharebuilders If sending to MEV-Share, allows for specifying which builders within MEV-Share can receive the transaction. For example https://rpc.blocknative.com/boost?rpc=MEV-Share&mevsharebuilders=rsync,Titan will only send transactions to rsync and Titan builders on MEV-Share. None

Checking Transaction Status

You can check the live status of your private transaction by using the Blocknative Explorer or by simply using the following URLs:

- Mainnet:https://rpc.blocknative.com/boost/tx/YOUR_TX_HASH
- Goerli:https://rpc.blocknative.com/boost/tx/YOUR_TX_HASH?network=goerli
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After sending the request, you will receive a JSON response in the following format:

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Copy { "txHash":"0x284ff37c96c65579249e11337ccb3f54a4148d98a2638d5a2984e8da6e785478", "status":"CONFIRMED", "pendingBlockNumber":9266497,// the pending block where the tx was first received "maxBlockNumber":9266498,// max block number for the tx to be included, in this example we set it to CURRENT_BLOCK+1 "forwardedTo":[ { "endpoint":"MEV-Blocker", "receivedAt":"2023-07-17T15:25:23.218343Z", "status":"RECEIVED", "endpointMsg":{} }, { "endpoint":"Titan", "receivedAt":"2023-07-17T15:25:23.218343Z", "status":"RECEIVED", "endpointMsg":{} } ], "transaction":{
```

"from":"0x48bdc4Ed4b6c6a0E32bD2D7075c99eD5F917DDA0",
"to":"0x99F18940Cb6396FE9233EAFc61D1187Fe86eb43D", "gasLimit":21000, "maxFeePerGas":1651273110,
"maxPriorityFeePerGas":1650000000, "gasPrice":1650000005, "nonce":12, "value":20000000 }, "gasUsed":21000,
"blockNumber":9266498, "builder":"Titan", "confirmedAt":"2023-07-17T15:25:23.218343Z", "seenInMempool":false,
"firstSeenInMempool":"",//shows timestamp of when the tx entered mempool (if seen in mempool) "refund":[{
"refundRecipient":"0x56C8F2...Bf415a", "refundAmount":"10000000",//(in wei) "refundTxHash":"0x6a37ff...b8aeb", }],
"norevert":"true",// is norevert tx "reorged":false,// set to true if the tx was included in a forked block "forkedBlockNumber":0,//
the forked block number "forkedBlockHash":"0x..."// the forked block hash }

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Thetransaction fields are only revealed for CONFIRMED/FAILED transactions in order to ensure the privacy of pending and rejected transactions. Example of anendpointMsg response (varies depending on what each builder/OFA returns on their status API endpoint):

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Copy { "error":"invalid sender", }

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Fetching Transactions By OriginID

You can retrieve the entire history of your transactions using youroriginID on the following URL:

https://rpc.blocknative.com/boost/txs?originID=Donquixote

query param type default limit integer 100 The maximum number of transaction entries to return. If the value exceeds the maximum (100), then the maximum value will be used. page integer 1 The page number of transactions to retrieve.

Understanding RPC responses

When an RPC receives the transaction, the RPC responds in one of two ways:

Without Error

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Copy { "jsonrpc": "2.0", "id": 1, "result": "0xa129dc71038c20bd5cc58f08836c8616d2201581f203691d888878c734da189b" }

```
```

With Error

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Copy { "id": 1, "error": { "code": -32603, "message": "invalid nonce" }, "jsonrpc": "2.0" }

```
```

Transaction Boost takes these responses and provides a human-readable status for each endpoint:

Endpoint Status

Status Definition RECEIVED RPC acknowledged the receipt of the transaction either without an error or with an error as perabove . If there is an error message, you can find it inendpointMsg . NOT RECEIVED RPC did not acknowledge the receipt of the transaction.

Transaction Status

Status Definition PENDING At least one endpoint received the transaction and none of the endpoints that received the transaction responded with an error message. CONFIRMED The transaction was detected on-chain. FAILED The transaction was detected on-chain and it failed. REJECTED All endpoint statuses showNOT RECEIVED OR one of the endpoint's nodes rejected the transaction with an error (invalid nonce, invalid sender, underpriced replacement...). DROPPED When using the RPC parameternorevert , a transaction will be moved to statusDROPPED if the transaction has not been confirmed after 25 blocks.

Was this helpful?