

Transaction Statuses on OP Mainnet

Transactions on OP Mainnet can have a number of different statuses depending on where a transaction is in the process of being included in the blockchain. Understanding these statuses can help you troubleshoot issues, build safer applications, and display more accurate information to your users.

Pending

Instant after sending to Sequencer

A transaction is considered "pending" when it has been sent to the Sequencer but has not yet been included in a block. This is the first status a transaction will have after being sent to the Sequencer. At this point the transaction is not part of the blockchain and there is no guarantee that the transaction will be included in the blockchain.

The list of all pending transactions can be retrieved by calling the standard JSON-RPC method [eth_getBlockByNumber \(opens in a new tab\)](#) with the parameter `pending` as the block number.

Sequencer Confirmed / Unsafe

Typically within 2-4 seconds

A transaction is considered "sequencer confirmed" or "unsafe" when it has been included in a block by the Sequencer but that block has not yet been published to Ethereum. Although the transaction is included in a block, it is still possible for the transaction to be excluded from the final blockchain if the Sequencer fails to publish the block to Ethereum in a timely manner. Applications should make sure to consider this possibility when displaying information about transactions that are in this state.

The latest "sequencer confirmed" block can be retrieved by calling the standard JSON-RPC method [eth_getBlockByNumber \(opens in a new tab\)](#) with the parameter `safe` as the block number and comparing this to the result returned for the latest block. If the `safe` block is behind the latest block, then the earliest "sequencer confirmed" block is the `safe` block plus one.

Published to Ethereum / Safe

Typically within 5-10 minutes, up to 24 hours

A transaction is considered "safe" when it has been included in a block by the Sequencer and that block has been published to Ethereum but that block is not yet finalized. Once a block has been published to Ethereum there is a high likelihood that the block will be included in the final blockchain. However, it is still possible for the block to be excluded from the final blockchain if the Ethereum blockchain experiences a reorganization.

The latest "safe" block can be retrieved by calling the standard JSON-RPC method [eth_getBlockByNumber \(opens in a new tab\)](#) with the parameter `safe` as the block number.

Transactions typically become "safe" within a few minutes of becoming "sequencer confirmed".

Finalized

Typically within 15-20 minutes, up to 24 hours

A transaction is considered "finalized" when it has been included in a block by the Sequencer, that block has been published to Ethereum, and that block has been finalized. Once a block has been finalized it is guaranteed to be included in the OP Mainnet blockchain. Applications that require the highest level of certainty that a transaction will be included in the blockchain should wait until the transaction is "finalized" before considering the transaction to be successful.

The latest "finalized" block can be retrieved by calling the standard JSON-RPC method [eth_getBlockByNumber \(opens in a new tab\)](#) with the parameter `finalized` as the block number.

[Setting Gas Parameters Troubleshooting](#)