Transactions

All updates to the Sui database happen via transactions. This topic describes the transaction types supported by Sui and explains how their execution changes the ledger. There are only two kinds of transactions on Sui:

All Sui transactions have the following common metadata:

Here's an example showing how objects and transactions are connected to each other in Sui.

In the following example there are two objects:

Tom decides to send 1 SUI coin to Alice. In this case, Object A is the input to this transaction and 1 SUI coin is debited from this object. The output of the transaction is two objects:

At the same time, John decides to send 2 SUI coins to Anna. Because the relationship between objects and transactions is written in a directed acyclic graph (DAG), and both transactions interact with different objects, this transaction executes in parallel with the transaction that sends coins from Tom to Alice. This transaction changes only the owner of Object B from John to Anna.

After receiving 2 SUI coins, Anna sent them immediately to Tom. Now Tom has 6 SUI coins (4 from Object A and 2 from Object B).

Finally, Tom sends all of his SUI coins to John. For this transaction, the input is actually two objects (Object A and Object B). Object B is destroyed, and its value is added to Object A. As a result, the transaction's output is only Object A with a value of 6 SUI.

Sui has some limits on transactions and the data used in them, such as a maximum size and number of objects used. You can find these limits in the sui-protocol-config crate of the Sui repo. The limits are defined in the ProtocolConfig struct and values set in the get_for_version_impl function.

Transaction metadata

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Transactions flow - example

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Limits on transactions, objects, and data

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