Smart contracts

Deploy a smart contract

CosmPy offers the possibility to easily deploysmart contracts using theLedgerContract object. For this, you will need thepath to where the contract is stored (in this casesimple.wasm), aLedgerClient ↗ and aWallet ↗ .

The example below shows how to achieve this:

from cosmpy . aerial . contract import LedgerContract

PATH

"contracts/simple/simple.wasm"

contract

LedgerContract (PATH, ledger_client) contract . deploy ({}, wallet)

Interact with smart contracts

We can now start interacting with any smart contract in different ways by executing one of the following operations.

Retrieve contract address

After deployment, you can obtain the address of the deployed contract on the network using theaddress method in the following way:

print (f "Contract deployed at: { contract.address } ")

Query contract's state variables

We can also query the values of the contract's state variables using thequery method and provide a dictionary specifying the query information:

result

contract . query ({ "get" : { "owner" : wallet}}) print ("Initial state:" , result)

Set contract's state variables

We can update the contract's state variables by using theexecute method and by providing a dictionary specifying the update wanted. Use thewait_to_complete() method to wait for the execution to finish.

The following code sets the state variablevalue tofoobar :

contract . execute ({ "set" : { "value" : "foobar" }}, wallet). wait_to_complete () Once you set a state variable to its updated value, you can query it again to confirm such changes took place effectively. Considering the example above, we can check if changes were set correctly in the following way:

result

contract . query ({ "get" : { "owner" : wallet)}}) print ("State after set:" , result)

Clear state variables

We can clear the contract's state variables using theexecute method in the following way:

contract . execute ({ "clear" : {}}, wallet). wait_to_complete () Then, we can check if the operation was correctly executed by running what follows:

result

```
contract . query ({ "get" : { "owner" : wallet}}) print ( "State after clear:" , result)
```

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