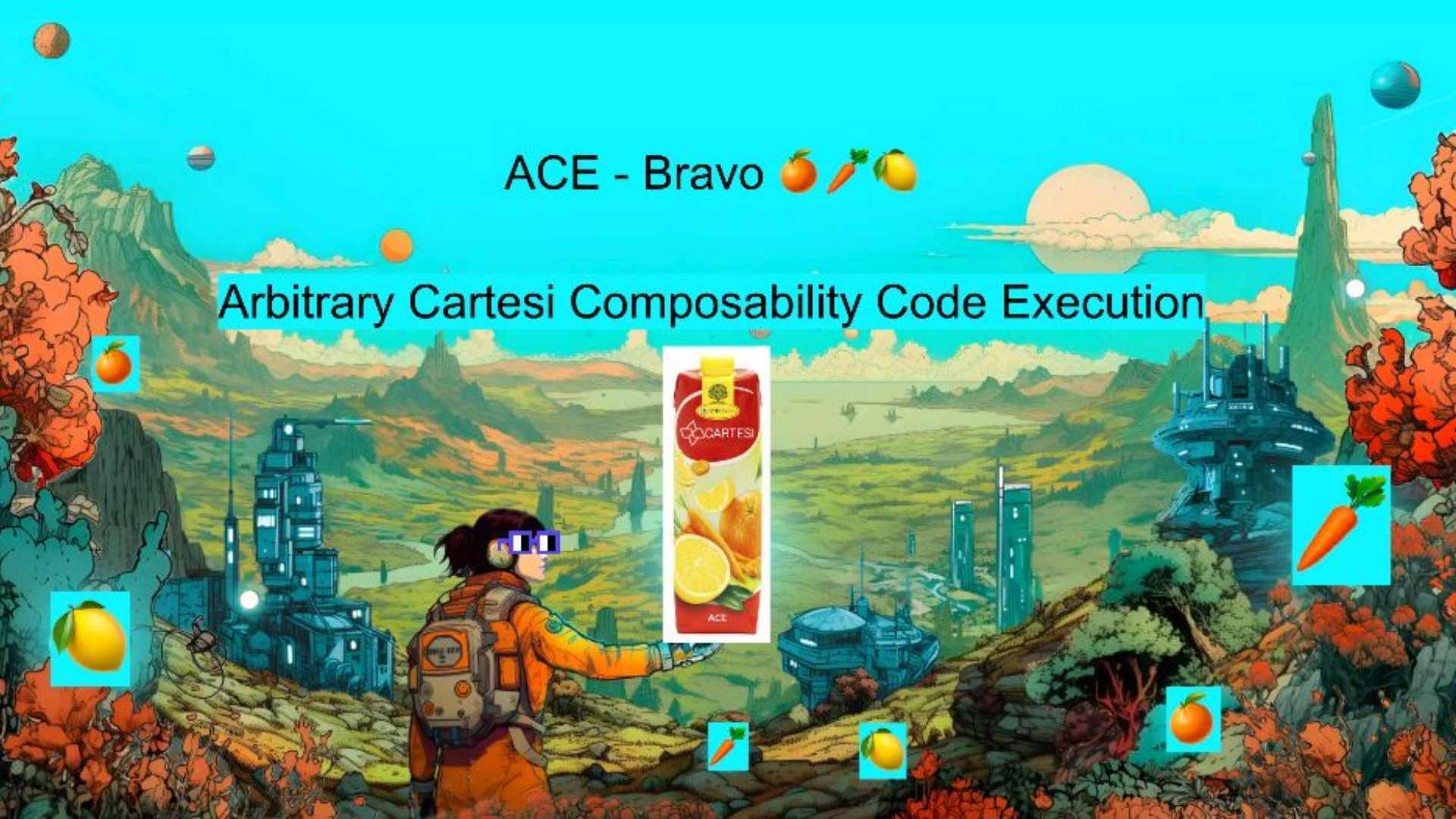
ACE - Bravo 🍊🥕🍋

Arbitrary Cartesi Composability Code Execution



Who are we

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huge disclaimer: we are not designer

What we built

Bravo (ACE)

Arbitrary Cartesi Composability Code Execution

(it’s a just a POC, but will allow you to easily understand the power of Cartesi)

How does it look like

```sol
pragma solidity =0.8.19;

import "./BravoLib.sol";
import "./IBravoCallee.sol";

contract Example is IBravoCallee {
    address constant cartesiDapp = 0xF8C694fd58360De278d5fF2276B7130Bfdc0192A;
    string public value;

    event ItWorks(string message);

    function cartesiCallback(string calldata result) override external { //the CartesiVM will use this callback to notify the contract with the evaluated result
        value = result;
        emit ItWorks(result);
    }

    // 
    function execute() external {    infinite gas
        Bravo.eval(
            Bravo.Backend.PYTHON3,
            address(this),
            "sum([x**2 for x in range(10) if x % 2 == 0])" //this is generic python code that the CartesiVM will evaluate, the ouput is 120
        );
    }
}
```

How it works

Bravo leverages Cartesi composability to execute arbitrary code inside an existing smart contract.

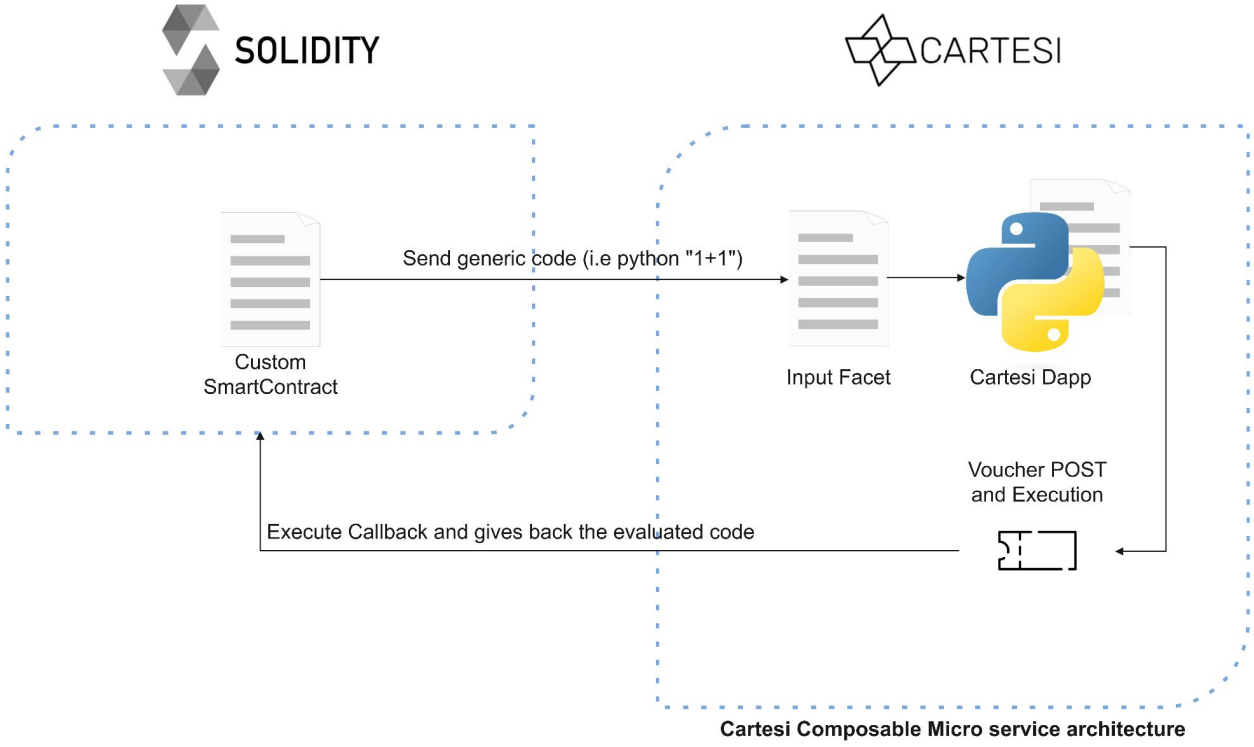
1) Through the provided library the smart contract can call the Cartesi VM to execute “any” piece of code

2) The Cartesi VM interpret the code and generate an answer that is sent back to the contract using a “Voucher” through a generic callback function

3) The smart contract is now able to execute any code you want! From a SQL Query or access your favorite library!

Architecture Overview

it's a semplified version :)



Cartesi Composable Micro service architecture

Demo

https://github.com/slavni96/bravo

CARTESI

See you next time!

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