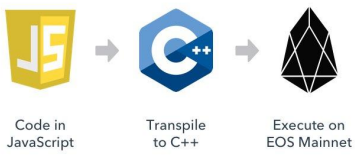
Key Concepts of EOScript

The EOS dApp framework integrated with efficiency and security

What is EOScript?

EOScript is an open-source development framework for decentralized applications (dApp) on the EOS Blockchain, aiming to make life as an EOS developer easier. It uses strong-typing TypeScript syntax with extensions to support blockchain operations. DApps written in EOScript can be transpiled to C++ and deployed to the EOS Mainnet. Through a unified coding, debugging, security auditing and deployment workflows, EOScript can greatly improve the programming efficiency of EOS dApps.



Motivations

Efficiency

In order to ensure optimal performance, EOS chose C++ as the programming language for dApps, but it also increased the development cost. Developers usually prefer a modern programming language such as JavaScript or Python to build applications rapidly. They also use package managers like npm or pip to manage dependent libraries to improve code reliability and maintainability, which also avoids the repetitive work to reinvent the wheel.

Security

In the era of blockchain development, security has become much more important than ever. Due to the irreversible nature of smart contracts, any bugs in a decentralized network are permanent. Developing at the C++ level demands developer to be familiar with every detail of various pitfalls that can cause security holes. However, many security issues are repetitive and most security measures can be integrated into the design of the framework.

EOScript Components & Development Workflow

Developement: EOScript uses the strong typing syntax of TypeScript and an object-oriented programming pattern. EOScript codes can be transpiled into C++ codes that are able to run directly on EOS. At the same time, EOScript provides operations for EOS blockchains, such as signing and verifying, initiating and processing transactions, as well as various smart contract.

Testing: EOScript uses the Mocha testing framework and Chai for assertions to provide a solid framework to write test cases in JavaScript. Developers will also be able to compile the test cases into C++ smart contrats methods and execute tests on deployed dApp. This will further ensure that the codes are executed properly.

Security: EOScript transpiler will only generate safe and secure codes, while vulnerable codes will raise warnings or be directly rejected. In this way, developers only need to think about the product logic they want to implement without spending a lot of extra effort on security concerns.

Deployment: EOScript will provide a scriptable deployment process and deployment API to allow developers to quickly and easily deploy dApps to EOS mainnet, testnet, or local-net. The automated deployment process will also make testing and debugging much faster.executed

Roadmap

Q3 2017	Q4 2018	Q1 2019	Q2 2019
Proof-of-concept version	Beta version ...	Pre-release version	EOScript 1.0 Release