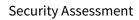


# **Security Assessment**

O2Lab VRust Team

11/02/2022 20:59:26







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### **Summary**

This report has been prepared for O2Lab VRust Team to discover issues and vulnerabilities in the source code of the O2Lab VRust Team project as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Static Analysis and Manual Review techniques. The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Ensuring contract logic meets the specifications and intentions of the client.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- Thorough line-by-line manual review of the entire codebase by industry experts.

The security assessment resulted in findings that ranged from critical to informational. We recommend addressing these findings to ensure a high level of security standards and industry practices. We suggest recommendations that could better serve the project from the security perspective:

- Enhance general coding practices for better structures of source codes;
- Add enough unit tests to cover the possible use cases;
- Provide more comments per each function for readability, especially contracts that are verified in public;
- Provide more transparency on privileged activities once the protocol is live.



## Overview

## **Project Summary**

Project Name	O2Lab VRust Team
Platform	Ethereum
Language	Solana
Crate	solitaire
GitHub Location	https://github.com/parasol-aser/vrust
sha256	Unknown

## **Audit Summary**

Delivery Date	11/02/2022	
Audit Methodology	Static Analysis	
Key Components		

## **Vulnerability Summary**

Vulnerability Level	Total
Critical	0
Major	0
Medium	0
Minor	0
Informational	0
Discussion	0



## **Findings**

Bug Findings

Total Issues: 0

Figure 1: Findings



## **Finding Statistic**

Category Count

ID Category Severity Status

**Security Assessment** 

## **Appendix**

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### **Finding Categories**

### **Gas Optimization**

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

#### **Mathematical Operations**

Mathematical Operation findings relate to mishandling of math formulas, such as overflows, incorrect operations etc.

### **Logical Issue**

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on how block.timestamp works.

#### **Language Specific**

Language Specific findings are issues that would only arise within Solidity, i.e. incorrect usage of private or delete.

#### **Coding Style**

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the codebase more legible and, as a result, easily maintainable.

#### **Checksum Calculation Method**

The "Checksum" field in the "Audit Scope" section is calculated as the SHA-256 (Secure Hash Algorithm 2 with digest size of 256 bits) digest of the content of each file hosted in the listed source repository under the specified commit.

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The result is hexadecimal encoded and is the same as the output of the Linux "sha256sum" command against the target file.



### Disclaimer

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