

Stobix - Audit

Security Assessment

CertiK Assessed on May 15th, 2025





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The security assessment was prepared by CertiK, the leader in Web3.0 security.

Executive Summary

TYPES	ECOSYSTEM	METHODS		
Vault	EVM Compatible	Formal Verification, Manual Review, Static Analysis		
LANGUAGE	TIMELINE	KEY COMPONENTS		
Solidity	Delivered on 05/15/2025	N/A		
CODEBASE		COMMITS		
https://github.com/stobix-com/stobix-c	ontracts	bf5f06bce43c5a6a150afe21887a79447e0edfac		
View All in Codebase Page		1557fb1a62c423671cdf2b7f67b78b57b2c92ceb		
		View All in Codebase Page		

Highlighted Centralization Risks

• Withdraws can be disabled

① Transfers can be paused

Vulnerability Summary

C	2 Total Findings		1 Resolved	1 Multi-Sig	0 Partially Res	solved	O Acknowledged	D Declined
1	Centralization	1 Multi-Sig				Centralization fil functions and th project takes cu	ndings highlight privileged leir capabilities, or instance stody of users' assets.	roles & es where the
0	Critical				C a s r	Critical risks are t a platform and m should not invest isks.	those that impact the safe is ust be addressed before la in any project with outstar	functioning of aunch. Users ading critical
0	Major				t D	Major risks may i ircumstances, c project control.	include logical errors that, to ould result in fund losses o	under specific or loss of
1	Medium	1 Resolved			M b	Medium risks ma put they can affe	ay not pose a direct risk to u ct the overall functioning of	users' funds, f a platform.
0	Minor				N S ir	Minor risks can b scale. They gene ntegrity of the pro other solutions.	e any of the above, but on erally do not compromise the oject, but they may be less	a smaller ne overall s efficient than

Informational

Informational errors are often recommendations to improve the style of the code or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

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Disclaimer

CODEBASE STOBIX - AUDIT

Repository

https://github.com/stobix-com/stobix-contracts

Commit

bf5f06bce43c5a6a150afe21887a79447e0edfac

1557fb1a62c423671cdf2b7f67b78b57b2c92ceb

AUDIT SCOPE STOBIX - AUDIT

1 file audited • 1 file without findings

ID	Repo	File	SHA256 Checksum
• TRA	stobix- com/stobix- contracts	contracts/Treasury.sol	a97bd9f1be2bc84f0695a977cf658f43d9ecef3 8f9afe5b96b9f0af05b39d71a

APPROACH & METHODS STOBIX - AUDIT

This report has been prepared for Stobix to discover issues and vulnerabilities in the source code of the Stobix - Audit project as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Formal Verification, Manual Review, and Static Analysis 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:

- Testing the smart contracts against both common and uncommon attack vectors;
- 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.

FINDINGS STOBIX - AUDIT

This report has been prepared to discover issues and vulnerabilities for Stobix - Audit. Through this audit, we have uncovered 2 issues ranging from different severity levels. Utilizing the techniques of Formal Verification, Manual Review & Static Analysis to complement rigorous manual code reviews, we discovered the following findings:

ID	Title	Category	Severity	Status
STA-02	Centralization Related Risks	Centralization	Centralization	• 2/3 Multi-Sig
STA-03	Function Calls User-Provided Addresses With No Access Control Modifier	Access Control	Medium	Resolved

STA-02 CENTRALIZATION RELATED RISKS

Category	Severity	Location	Status
Centralization	• Centralization	Treasury.sol (bf5f06b): 83~87, 107~111, 146~153, 182 ~187, 275	• 2/3 Multi-Sig

Description

In the Treasury contract, there are three "validators." Any validator, with another validator's signature, can control the following functions:

- pause
- unpause
- withdraw
- whitelistToken

Any compromise to the validators may allow the hacker to take advantage of this authority and pause/unpause the contract, withdraw tokens from the contract, and whitelist tokens.

Recommendation

The risk describes the current project design and potentially makes iterations to improve in the security operation and level of decentralization, which in most cases cannot be resolved entirely at the present stage. We advise the client to carefully manage the privileged account's private key to avoid any potential risks of being hacked. In general, we strongly recommend centralized privileges or roles in the protocol be improved via a decentralized mechanism or smart-contract-based accounts with enhanced security practices, e.g., multisignature wallets. Indicatively, here are some feasible suggestions that would also mitigate the potential risk at a different level in terms of short-term, long-term and permanent:

Short Term:

Timelock and Multi sign (2/3, 3/5) combination *mitigate* by delaying the sensitive operation and avoiding a single point of key management failure.

- Time-lock with reasonable latency, e.g., 48 hours, for awareness on privileged operations; AND
- Assignment of privileged roles to multi-signature wallets to prevent a single point of failure due to the private key compromised;

AND

• A medium/blog link for sharing the timelock contract and multi-signers addresses information with the public audience.

Long Term:

Timelock and DAO, the combination, *mitigate* by applying decentralization and transparency.

- Time-lock with reasonable latency, e.g., 48 hours, for awareness on privileged operations; AND
- Introduction of a DAO/governance/voting module to increase transparency and user involvement. AND
- A medium/blog link for sharing the timelock contract, multi-signers addresses, and DAO information with the public audience.

Permanent:

Renouncing the ownership or removing the function can be considered *fully resolved*.

- Renounce the ownership and never claim back the privileged roles.
 OR
- Remove the risky functionality.

Alleviation

[Stobix Team, 05/09/2025]: The team acknowledged this issue.

[CertiK, 05/09/2025]: It is suggested to implement the aforementioned methods to avoid centralized failure. Also, CertiK strongly encourages the project team to periodically revisit the private key security management of all addresses related to centralized roles.

[CertiK, 05/15/2025]: The team deployed the contract at address 0x8283E74dA050F6eE93991Dfb0D823e35515Da8E8 on the ETH, ARB, and BSC chains, using the multi-signer 2/3 solution. The signer addresses are: [[0xf108E3A7aD6E51C067228D4BacD2677B67bb43A3] [0x3117E213a8AC1C49eCd18e74C65ee894cdcDEc5a] [0x15126c1A4413F464801D5D2fD1310E3cdeCc2918]].

STA-03FUNCTION CALLS USER-PROVIDED ADDRESSES WITH
NO ACCESS CONTROL MODIFIER

Category	Severity	Location	Status
Access Control	Medium	Treasury.sol (bf5f06b): 133	Resolved

Description

Calling a user provided address is dangerous, especially in a public function with no access control restriction. An attacker could deploy a malicious contract and use the vulnerable function to trigger a call to the malicious contract, potentially stealing user funds or causing other serious damages.

Recommendation

We recommend restricting what addresses (e.g., whitelisted tokens) can be called from it.

Alleviation

[Stobix Team, 05/09/2025]: The team heeded the advice and resolved the issue in commit: 1557fb1a62c423671cdf2b7f67b78b57b2c92ceb.

APPENDIX STOBIX - AUDIT

Finding Categories

Categories	Description
Access Control	Access Control findings are about security vulnerabilities that make protected assets unsafe.
Centralization	Centralization findings detail the design choices of designating privileged roles or other centralized controls over the code.

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.

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

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