

Preliminary Comments ZoRobotics (ZORO) Token

Report for:	ZORO (https://www.zoro.org)
Timeline:	Delivered on 15.05.2025

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Preliminary Comments

Executive Summary

E-Gates (Provider) was contracted by **ZORO** (Client) to perform a security audit of the ZoRobotics (ZORO) Token. The audit report was delivered on <u>15.05.2025</u>.

Token Overview

Types	ERC-20
Ecosystem	BNB Smart Chain (BSC)
Methods	Formal Verification, Manual Review, Static Analysis
Language	Solidity
Key Components	N/A
Codebase	<u>bscscan</u>

Vulnerability Summary and Severity Definition

Total findings: 1 pending

Severity	Indicator	Findings	Description
Critical	••••	0	Critical risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
Major	•••	1 Pending	Major risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
Medium	•••	0	Medium risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform.
Minor	••	0	Minor risks can be any of the above, but on a smaller scale. They generally do not compromise the overall integrity of the project, but they may be less efficient than other solutions.
Info		0	Info 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.



Approach and Methods

This report has been prepared for ZORO to discover issues and vulnerabilities in the source code of the ZoRobotics (ZORO) 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;

Audit Scope

#	File Name	SHA256 Checksum
1.	contracts/StandardToken.sol	4eca399fa9050ce2a20fd32a3aded988c2f19 63aa254f886643fbaea1b7f8966



Review Notes

Overview

The StandardToken implements an ERC20 token called "ZoRobotics" with the symbol "ZORO". All tokens are minted during deployment and assigned to a specified initial owner. This token contract facilitates transfers but does not support minting additional tokens.

External Dependencies

The following are external contracts referred to in the contracts. The project mainly uses OpenZeppelin for the templates and setup of contracts:

OpenZeppelin: ERC20

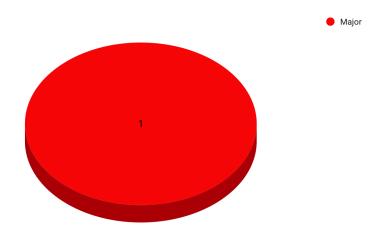
Since the OpenZeppelin contracts are actively developed, we recommend the team continuously monitor the library change to avoid unexpected failure.

Summary of Findings

This report has been prepared to discover issues and vulnerabilities for ZoRobotics (ZORO). Through this audit, we have uncovered 1 major issue. Utilizing the techniques of Formal Verification, Manual Review & Static Analysis to complement rigorous manual code reviews, we discovered the following findings:

#	Title	Category	Severity	Status
1.	Initial Token Distribution	Centralization	Major	Pending

Initially detected vulnerabilities:





Key Findings

1. Initial Token Distribution



Description

All of the ZoRobotics tokens are sent to the contract deployer. This is a centralization risk because the deployer can distribute tokens without obtaining the consensus of the community. Any compromise to these addresses may allow a hacker to steal and sell tokens on the market, resulting in severe damage to the project.

On-chain information:

• By the time 15.05.2025, the <u>0xA29eCd7c108bc31D2F80B10F3c923B8A78E82F1c</u> holds 100% tokens on the BNB Smart Chain (BSC)

Location

contracts/StandardToken.sol: 9

Recommendations

It is recommended that the team be transparent regarding the initial token distribution process. The token distribution plan should be published in a public location that the community can access. The team should make efforts to restrict access to the private keys of the deployer account or EOAs. A multi-signature (2/3, 3/5) wallet can be used to prevent a single point of failure due to a private key compromise. Additionally, the team can lock up a portion of tokens, release them with a vesting schedule for long-term success, and deanonymize the project team with a third-party KYC provider to create greater accountability.

====== For Preliminary Report Only =======

In order for E-Gates to update the status of this finding during the remediation phase, please kindly provide the URL to the published token distribution plan and the multi-signature wallet address that holds the undistributed tokens. We will verify the information and update the report.

Link to the token distribution plan: https://www...

Multi-sig wallet address: 0x...

Signer 1: 0x...

Signer 2: 0x...

Signer 3: 0x...



Appendix A.

Finding Categories

#	Categories	Description
1.	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) of each file.

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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