CERTIK

Security Assessment

SpaceCatch - Token

CertiK Assessed on Mar 21st, 2024

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SpaceCatch - Token

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

Executive Summary

TYPES	ECOSYSTEM	METHODS
ERC-20	Arbitrum (ARB)	Manual Review, Static Analysis

LANGUAGE	TIMELINE	KEY COMPONENTS
Solidity	Delivered on 03/21/2024	N/A

CODEBASE	COMMITS
mainnet	0xf0a479c9c3378638ec603b8b6b0d75903902550b
View All in Codebase Page	View All in Codebase Page

Vulnerability Summary

1	0	1	0	0	0
Total Findings	Resolved	Mitigated	Partially Resolved	Acknowledged	Declined

0	Critical		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.
1	Major	1 Mitigated	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.
0	Medium		Medium risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform.
0	Minor		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.
0	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.

TABLE OF CONTENTS | SPACECATCH - TOKEN

CODEBASE | SPACECATCH - TOKEN

Repository

mainnet

Commit

0xf0a479c9c3378638ec603b8b6b0d75903902550b

AUDIT SCOPE | SPACECATCH - TOKEN

1 file audited ● 1 file with Mitigated findings

ID	Repo	File	SHA256 Checksum
● CAT	mainnet	contracts/Catch.sol	63a3303c83e730a616959d4d4040dcd34de43bd7ccc06a315810adb4adf93d5c

APPROACH & METHODS | SPACECATCH - TOKEN

This report has been prepared for SpaceCatch to discover issues and vulnerabilities in the source code of the SpaceCatch - Token project as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing 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 | SPACECATCH - TOKEN

1	0	1	0	0	0
Total Findings	Critical	Major	Medium	Minor	Informational

This report has been prepared to discover issues and vulnerabilities for SpaceCatch - Token. Through this audit, we have uncovered 1 issues ranging from different severity levels. Utilizing the techniques of Manual Review & Static Analysis to complement rigorous manual code reviews, we discovered the following findings:

ID	Title	Category	Severity	Status
CAT-01	**Initial Token Distribution**	**Centralization**	**Major**	**Mitigated**

CAT-01 | INITIAL TOKEN DISTRIBUTION

Category	Severity	Location	Status
Centralization	**Major**	**contracts/Catch.sol: 7~8**	**Mitigated**

Description

All of the CATCH tokens are sent to the contract deployer or one or several externally-owned account (EOA) addresses. This is a centralization risk because the deployer or the owner(s) of the EOAs 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.

Recommendation

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 (⅔, ⅗) 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.

Alleviation

Token distribution plan, lock-up periods, vesting schedule: https://whitepaper.spacecatch.io/blockchain/token/tokenomics

Token claim information: https://whitepaper.spacecatch.io/blockchain/token/token-claim

SpaceCatch is KYC Gold Verified: https://skynet.certik.com/projects/spacecatch

GnosisSafeL2 multi-sig contract was deployed at 0x3e5c63644e683549055b9be8653de26e0b4cd36e via proxy. 2 out of 3 signers required to sign transactions:

```
0x149c504BA83BaE8715c641BD70bcC6e5A34e7D44
0x29e00877324b57a7731c879401b0C89A2b954187
0xfE60d1e7e4AcaBf742C08eb6d49B1fE317ED3b54
```

APPENDIX | SPACECATCH - TOKEN

Finding Categories

Categories	Description
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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