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Latest Audit - 2023/01/31



Z<sup>3</sup>  
0x50Eec6D765792dCfB0913C8403ef2A12e1B861a6 [↗](#)

[Static analysis](#) [Dynamic analysis](#) [Symbolic Execution](#) [SWC check](#)

Z<sup>3</sup> is a decentralised, zero-emission, Proof of Holdings (POH), auto-mining protocol on the ethereum blockchain. Buy, Hold, Mine, Grow.



CONTRACT ADDRESS  
0x50Ee...B861a6 [↗](#)

NETWORK  
Ethereum Mainnet

LICENSE  
MIT







COMPILER  
v0.8.17+commit.8df45f5f

TYPE  
N/A

LANGUAGE  
Solidity

REQUEST DATE  
2023/01/29

REVISION DATE  
2023/01/31

CRITICAL  Passed	HIGH  Passed	MEDIUM  Passed	LOW  <b>3 Issues</b>	INFORMATIONAL  Passed	OPTIMIZATION  Passed
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## Owner privileges

### No critical issues found

The contract does not contain issues of high or medium criticality. This means that no known vulnerabilities were found in the source code.



### Comments

### Ownership Privileges:

- Change/Update the pair token and the AMM address
- Disable limits and transfer delay but cannot re-enable them
- Enable Trading but cannot disable it
- Add/Remove wallets from fee exemption
- Set fees and Fee receiver addresses.
- Withdraw tokens from the contract but not native ones.
- Set the next rebase in the future with any date.

Due to lack of access control, any user can call the manual rebase function whenever the next rebase time is reached or passed.

**We recommend investors/users to do their own research before investing**

### Contract owner cannot mint

It is not possible to mint new tokens.



### Contract owner cannot blacklist addresses.

It is not possible to lock user funds by blacklisting addresses.



### Contract owner cannot set high fees

The fees, if applicable, can be a maximum of 25% or lower. The contract can therefore not be locked. Please take a look in the comment section for more details.



### Contract cannot be locked

Owner cannot lock any user funds.



### Token cannot be burned

There is no burn function within the contract.



### Ownership is not renounced

Contract can be manipulated by owner functions.



## Audit Scope

This audit covered the following files listed below with a SHA-1 Hash. The above token Team provided us with the files that needs to be tested.

We will verify the following claims:

- Correct implementation of Token standard
- Deployer cannot mint any new tokens
- Deployer cannot burn or lock user funds
- Deployer cannot pause the contract
- Overall checkup (Smart Contract Security)

The auditing process follows a routine series of steps:

- Review of the specifications, sources, and instructions provided to SolidProof to make sure we understand the size, scope, and functionality of the smart contract.
- Manual review of code, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
- Comparison to specification, which is the process of checking whether the code does what the specifications, sources, and instructions provided to SolidProof describe.
- Test coverage analysis, which is the process of determining whether the test cases are actually covering the code and how much code is exercised when we run those test cases.
- Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
- Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.
- Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts.

*A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.*

## Audit Details

Throughout the review process, care was taken to evaluate the repository for security-related issues, code quality, and adherence to specification and best practices. To do so, reviewed line-by-line by our team of expert pentesters and smart contract developers, documenting any issues as there were discovered.

Risk represents the probability that a certain source-threat will exploit vulnerability, and the impact of that event on the organization or system. Risk Level is computed based on CVSS version 3.0.

### Low Issues

#### #1 ISSUE ⓘ

##### Missing Events Arithmetic (events-maths)

 Pending

ZCUBED.SOL

L736-742 L749-752

#### DESCRIPTION

Emit an event for critical parameter changes.

#### #2 ISSUE ⓘ

##### Uninitialized local variables (uninitialized-local)

 Pending

ZCUBED.SOL

L383 L384

#### DESCRIPTION

Initialize all the variables. If a variable is meant to be initialized to zero, explicitly set it to zero to improve code readability.

#### #3 ISSUE ⓘ

##### Dangerous usage of `tx.origin` (tx-origin)

 Pending

ZCUBED.SOL

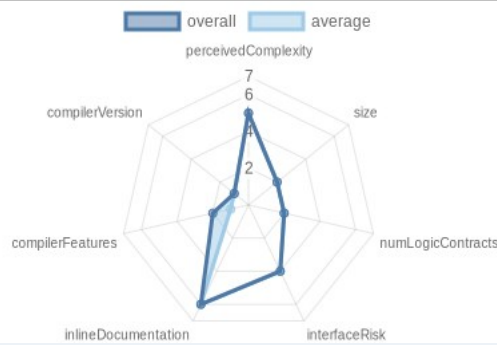
L497-544

#### DESCRIPTION

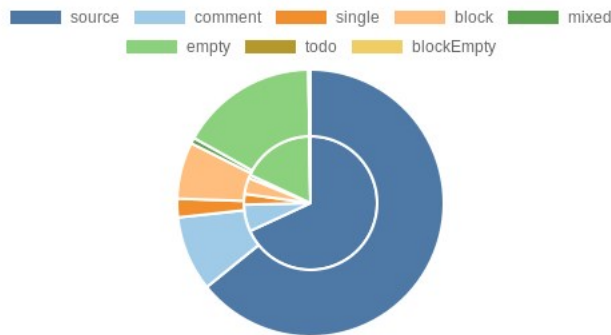
Do not use `tx.origin` for authorization.

# Diagrams

Risk Chart



Source Lines Chart



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