HackSafe

Smart Contract Security Audit Report

ZINARI

November 2022

Security Status

★★★★½

www.hacksafe.io

Audit Details

Audited project
ZINARI

Deployer address
0x399f8994e3bb8eafe7443bb4549c97d7df6e76cc

Client contacts
ZINARI Team

Blockchain
Binance smart chain

Website
https://zinaricoin.com/

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Procedure

Step 1 - In-Depth Manual Review

Manual line-by-line code reviews to ensure the logic behind each function is sound and safe from various attack vectors. This is the most important and lengthy portion of the audit process (as automated tools often cannot find the nuances that lead to exploits such as flash loan attacks).

Step 2 - Automated Testing

Simulation of a variety of interactions with your Smart Contract on a test blockchain leveraging a combination of automated test tools and manual testing to determine if any security vulnerabilities exist.

Step 3 – Leadership Review

The engineers assigned to the audit will schedule meetings with our leadership team to review the contracts, any comments or findings, and ask questions to further apply adversarial thinking to discuss less common attack vectors.

Step 4 - Resolution of Issues

Consulting with the team to provide our recommendations to ensure the code's security and optimize its gas efficiency, if possible. We assist project team's in resolving any outstanding issues or implementing our recommendations.

Step 5 - Published Audit Report

Boiling down results and findings into an easy-to-read report tailored to the project. Our audit reports highlight resolved issues and any risks that exist to the project or its users, along with any remaining suggested remediation measures. Diagrams are included at the end of each report to help users understand the interactions which occur within the project.

Background

HackSafe was commissioned by ZINARI to perform an audit of smart contracts:

- https://bscscan.com/token/0x76BeeD9649c0C297cB6De10d07eFd66Db38e3C47#code

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contract Details

Token contract details for 23.11.2022

Token Type	: Utility
Contract name	: ZINARI
Contract address	: 0x76BeeD9649c0C297cB6De10d07eFd66Db38e3C47
Total supply	: 17,964,995,369.644738
Token ticker	: ZINA
Decimals	: 18
Token Holders	: 3,309
Transactions count	: 30,102
Compiler version	: v0.6.8+commit.0bbfe453
Contract deployer address	: 0x399f8994e3bb8eafe7443bb4549c97d7df6e76cc
Owner address	: 0x06f17512abf8eb99b65df0aca6d53866747a13cc

Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are **“Secure”.** This token contract does contain owner control, which do not make it fully decentralized as owner does have control over smart contract.

Insecure	Poor secured	Secure	Well-secured

You are here 

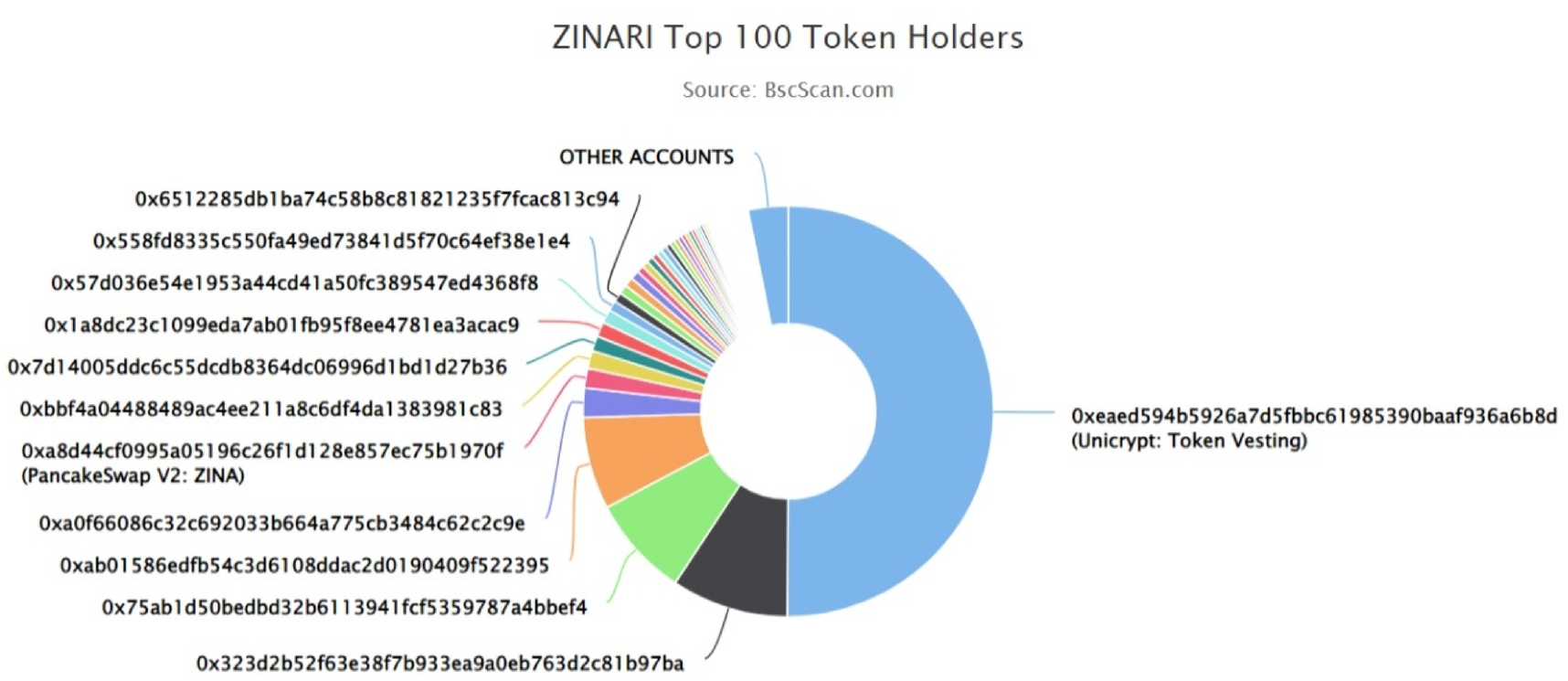
We used various tools like Slither, Mythril and Remix IDE. At the same time this finding is based on critical analysis of the manual audit. All issues found during automated analysis were manually reviewed and applicable vulnerabilities are presented in the issues checking status.

We found 0 critical, 0 high, 0 medium and 1 low.

ZINARI Distribution

The top 100 holders collectively own 96.86% (17,400,828,003.86 Tokens) of ZINARI

Token Total Supply: 17,964,995,369.64 Token | Total Token Holders: 3,309



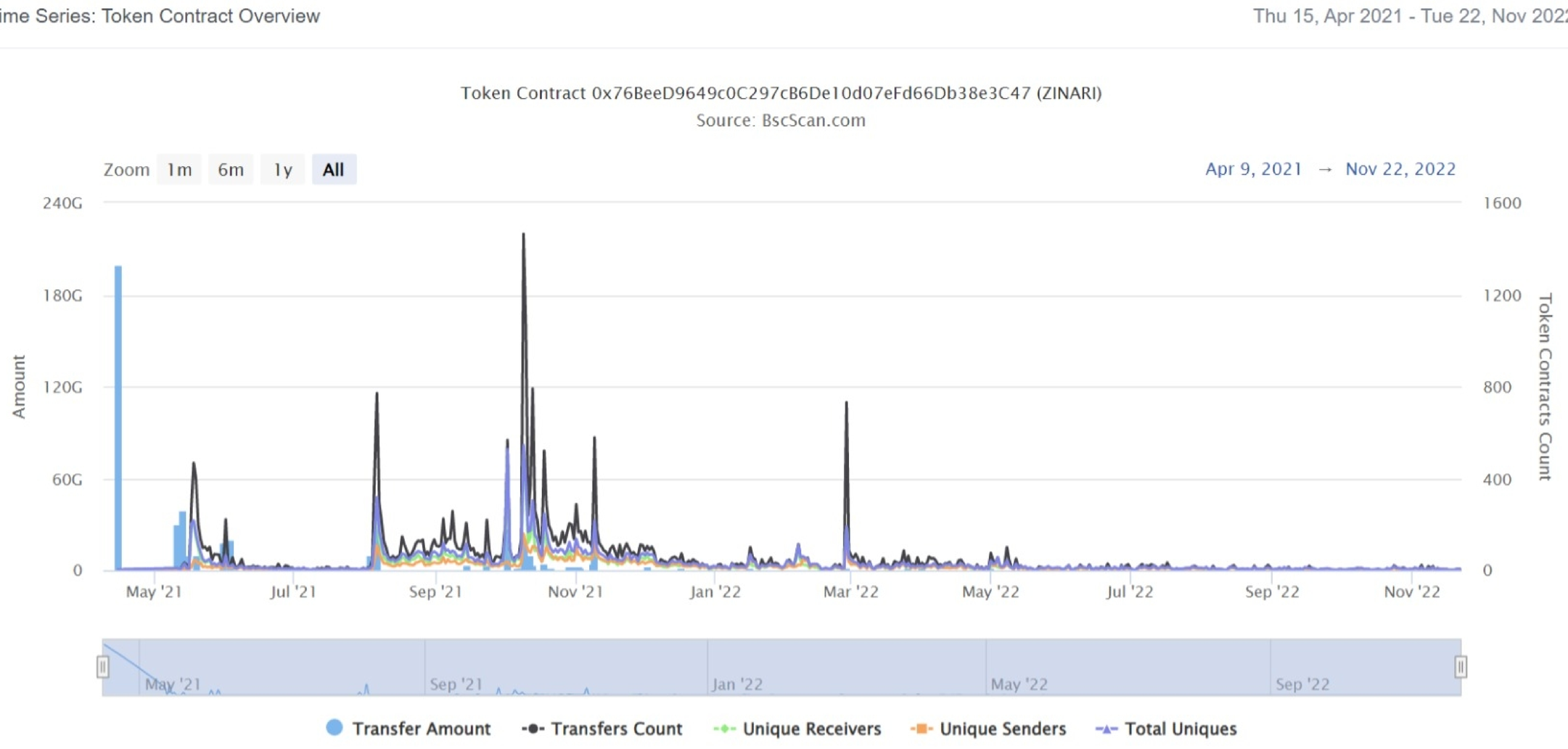
ZINARI Top 20 Token Holders

(A total of 17,400,828,003.86 tokens held by the top 100 accounts from the total supply of 17,964,995,369.64 token)

Rank	Address	Quantity (Token)	Percentage
1	Unicrypt: Token Vesting	9,000,000,000	50.0974%
2	0x323d2b52f63e38f7b933ea9a0eb763d2c81b97ba	1,652,286,903.1006323645534	9.1973%
3	0x75ab1d50bedbd32b6113941fcf5359787a4bbef4	1,431,126,899.727567359974309888	7.9662%
4	0xab01586edfb54c3d6108ddac2d0190409f522395	1,305,035,018.578111960518090486	7.2643%
5	0xa0f66086c32c692033b664a775cb3484c62c2c9e	415,546,912.694382272904670638	2.3131%
6	PancakeSwap V2: ZINA	277,176,855.696207312775650523	1.5429%
7	0xbbf4a04488489ac4ee211a8c6df4da1383981c83	252,091,052.066624657572233542	1.4032%
8	0x7d14005ddc6c55dcdb8364dc06996d1bd1d27b36	210,300,436.336268272602063387	1.1706%
9	0x1a8dc23c1099eda7ab01fb95f8ee4781ea3acac9	209,250,590.841817276019268585	1.1648%
10	0x57d036e54e1953a44cd41a50fc389547ed4368f8	191,392,862.13786214	1.0654%
11	0x558fd8335c550fa49ed73841d5f70c64ef38e1e4	146,712,854.941688130794908617	0.8167%
12	0x6512285db1ba74c58b8c81821235f7fcac813c94	135,121,111.950652831180669349	0.7521%
13	0x38c7ef90fd621e3cb6e22d7c0899471346a4f204	131,612,600.778815816247823602	0.7326%
14	0xe067cef776c779989ca6701e95ccc5649b5c3357	127,009,701.224146753824973753	0.7070%
15	0xd5c4ea2e8937de47c629f4db16fe747de7708428	125,382,041.381907873643108268	0.6979%
16	0xacc6a76d43de0fbf164b1feb78e08262d84017e4	99,570,891.823078130224220993	0.5542%
17	0x47d3c565ae0c074b07cfbccd035b2859fe228a57	94,324,925.21971661336506	0.5250%
18	0x69ca4340bff20db67511fd150b4a2be22369ca4e	88,980,000	0.4953%
19	PancakeSwap V2: ZINA-BUSD	82,803,175.697632376741483865	0.4609%
20	0x75d5ac5703cf3e31fbd76d8b843b3364cc30820d	81,423,521.051577572542271999	0.4532%

ZINARI Distribution

ZINARI Contract Overview



Contract functions details

+[Int] iBEP20
    -[Ext] totalSupply
    -[Ext] decimals
    -[Ext] symbol
    -[Ext] name
    -[Ext] getOwner
    -[Ext] balanceOf
    -[Ext] transfer
    -[Ext] allowance
    -[Ext] approve
    -[Ext] transferFrom

+Context
    -[Int] <constructor>
    -[Int] _msgSender
    -[Int] _msgData

+[Lib] SafeMath
    -[Int] add
    -[Int] sub
    -[Int] sub
    -[Int] mul
    -[Int] div
    -[Int] div
    -[Int] mod
    -[Int] mod

+Ownable (Context)
    -[Int] <constructor>
    -[Pub] owner
    -[Pub] renounceOwnership #
      -modifiers: onlyOwner
    -[Pub] transferOwnership #
      -modifiers: onlyOwner
    -[Int] _transferOwnership #

+ ZINARI (Context, iBEP20, Ownable)
    -[Pub] <constructor>
    -[Ext] getOwner

Contract functions details

-[Pub] decimals
-[Pub] symbol
-[Pub] name
-[Pub] totalSupply
-[Pub] balanceOf
-[Pub] transfer #
-[Pub] allowance
-[Pub] approve #
-[Pub] transferFrom #
-[Pub] increaseAllowance #
-[Pub] decreaseAllowance #
-[Pub] burn #
-[Pub] burnFrom #
-[Int] _transfer #
-[Int] _burn #
-[Int] _approve #

($) = payable function
= non-constant function

Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	Passed
2.	Missing Input Validation	Passed
3.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
4.	Possible delays in data delivery	Passed
5.	Oracle calls.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Passed
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	Private use data leaks.	Passed
13.	Malicious Event log.	Passed
14.	Scoping and Declarations.	Passed
15.	Uninitialized storage pointers.	Passed
16.	Arithmetic accuracy.	Passed
17.	Design Logic.	Passed
18.	Safe Open Zeppelin contracts implementation and usage.	Passed
19.	Incorrect Naming State Variable	Passed
20.	Too old version	Low issue

Severity Definitions

Risk Level	Description
Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to assets loss or data manipulations.
High	High-level vulnerabilities are difficult to exploit; however, they also have a significant impact on smart contract execution, e.g., public access to crucial functions
Medium	Medium-level vulnerabilities are important to fix; however, they can't lead to assets loss or data manipulations.
Low	Low-level vulnerabilities are mostly related to outdated, unused, etc. code snippets that can't have a significant impact on execution.

Security Issues

- **Critical Severity Issues**

  No critical severity issue found.

- **High Severity Issues**

  No high severity issue found.

- **Medium Severity Issues**

  No medium severity issue found.

- **Low Severity Issues**

  One low severity issue found.

1. Old compiler version

- **Description**

  Contract has been deployed using too old solidity version.

- **Recommendation**

  It is advisable to deploy contract using any of the latest version of solidity

Centralization

Owner Privileges :

- ZINARI Contract:
    - Owner can renounce and transfer ownership.

This smart contract has some functions which can be executed by the admin (Owner) only. If the admin wallet private key would be compromised, then it would create trouble as smart contract ownership has not been renounced. Following are Admin functions:

- renounceOwnership
- transferOwnership

Conclusion

Smart contract contains low severity issues! The further transfer and operations with the fund raised are not related to this particular contract.

HackSafe note: Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.