Smart Contract Security Audit

Audit details:

Audited project:	CatzCoin
Deployer address:	0xb7332a228329896a3b286b8670880a3ca313094d
Client contacts:	CatzCoin team
Blockchain:	Binance Smart Chain
Project website:	http://catzcoin.io

May, 2021
TechRate

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.

Background

TechRate was commissioned by CatzCoin to perform an audit of smart contracts:

- *https://bscscan.com/address/0xbfbee3dac982148ac793161f7362344925506903#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 used to 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.

Contracts details

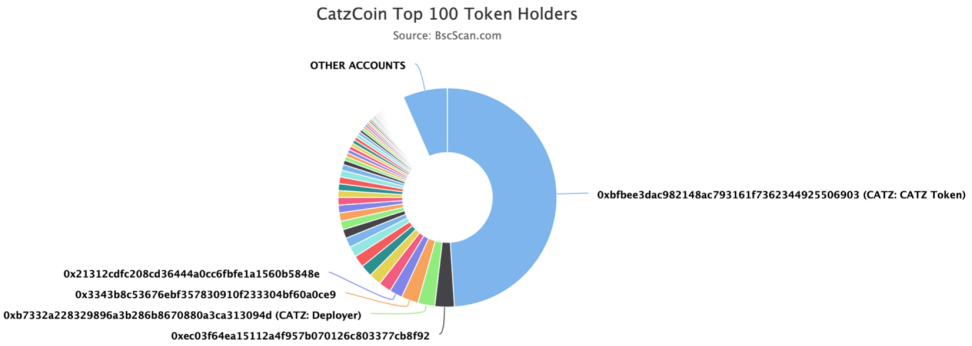
Token contract details for 15.05.2021.

Contract name:	CatzCoin
Contract address:	0xbfbee3dac982148ac793161f7362344925506903
Total supply:	100000000000000000000000000000
Token ticker:	CATZ
Decimals:	18
Token holders:	4049
Transactions count:	12252
Top 100 holders dominance:	93.40 %
Airdrop liquidity:	139818980309999999999999999994
Burn liquidity:	200000000000000000000000000000
Marketing liquidity:	50000000000000000000000000000
Team liquidity:	100000000000000000000000000000
Contract deployer address:	0xb7332a228329896a3b286b8670880a3ca313094d
Time before next vest:	6591784

CatzCoin token distribution

The top 100 holders collectively own 93.40% (93,397,603,522.85 Tokens) of CatzCoin

Token Total Supply: 100,000,000,000.00 Token | Total Token Holders: 4,049

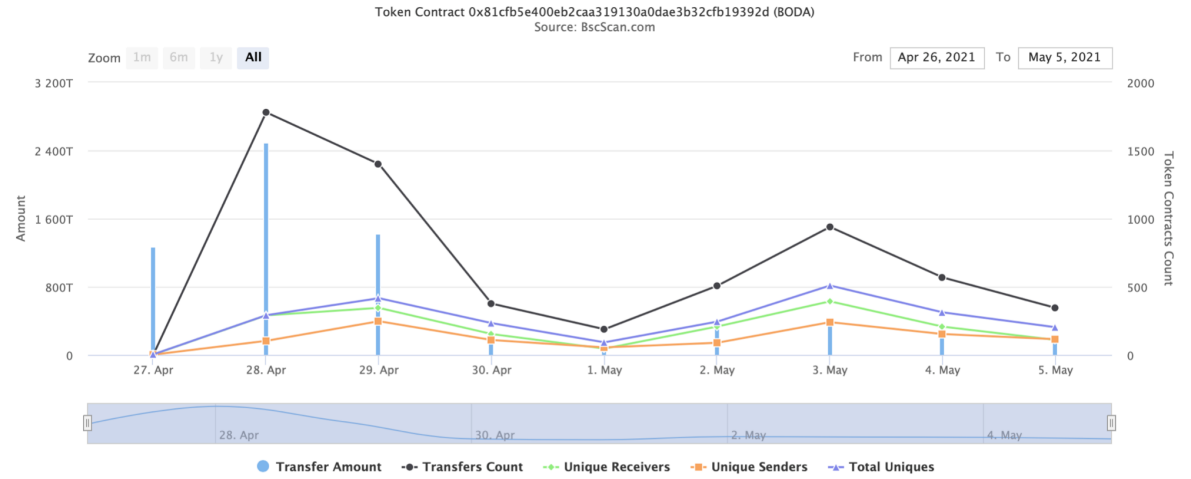


(A total of 93,397,603,522.85 tokens held by the top 100 accounts from the total supply of 100,000,000,000.00 token)

CatzCoin contract interaction details

Time Series: Token Contract Overview

Tue 27, Apr 2021 - Wed 5, May 2021



CatzCoin top 10 token holders

Rank	Address	Quantity (Token)	Percentage
1	CATZ: CATZ Token	48,981,898,031.599999999999999994	48.9819%
2	0xec03f64ea15112a4f957b070126c803377cb8f92	2,884,955,182.840548055671133715	2.8850%
3	CATZ: Deployer	2,500,000,000	2.5000%
4	0x3343b8c53676ebf357830910f233304bf60a0ce9	2,499,645,288	2.4996%
5	0x21312cdfc208cd36444a0cc6fbfe1a1560b5848e	1,914,188,357.610831212234220978	1.9142%
6	0x39a332a750adec378be2c956510be972ce77548f	1,860,755,113.569790911975277446	1.8608%
7	0x7379f33676a47f3c1db2aa16c0fd5c89d255826d	1,800,000,000	1.8000%
8	0xc90dc16fc523317929cdcaca39e749cfc2d6b5ea	1,757,381,829.014834650268086533	1.7574%
9	0x8b83ce7c3db5b9741fb36618e4b57fa691d92938	1,728,314,252	1.7283%
10	0xd8d68a1564b324fc0bfb78fa57387b1c71c403da	1,582,918,004	1.5829%

Contract functions details

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Int] IERC20Metadata (IERC20)
  - [Ext] name
  - [Ext] symbol
  - [Ext] decimals

+ ERC20 (Context, IERC20, IERC20Metadata)
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals
  - [Pub] totalSupply
  - [Pub] balanceOf
  - [Pub] transfer #
  - [Pub] allowance
  - [Pub] approve #
  - [Pub] transferFrom #
  - [Pub] increaseAllowance #
  - [Pub] decreaseAllowance #
  - [Int] _transfer #
  - [Int] _mint #
  - [Int] _burn #
  - [Int] _approve #
  - [Int] _beforeTokenTransfer #

+ CATZCoin (ERC20)
  - [Pub] <Constructor> #
    - modifiers: ERC20
  - [Prv] _initateDevLiquidity #
  - [Prv] _initiateExchangeLiquidity #
  - [Pub] useMarketingFunds #
  - [Pub] airDropCatz #
  - [Pub] releaseVesting #
  - [Pub] burnCatzCoin #

- [Pub] getTimeBeforeNextVest
- [Pub] getTimeBeforeNextBurn
- [Pub] getAirDropLiquidity
- [Pub] getMarketingLiquidity
- [Pub] getBurnLiquidity
- [Pub] getTeamDevLiquidity

($) = payable function
= non-constant function

Issues Checking Status

№	Issue description.	Checking status
1	Compiler errors.	Passed
2	Race conditions and Reentrancy. Cross-function race conditions.	Passed
3	Possible delays in data delivery.	Passed
4	Oracle calls.	Passed
5	Front running.	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	The impact of the exchange rate on the logic.	Passed
13	Private user data leaks.	Passed
14	Malicious Event log.	Passed
15	Scoping and Declarations.	Passed
16	Uninitialized storage pointers.	Passed
17	Arithmetic accuracy.	Passed
18	Design Logic.	Passed
19	Cross-function race conditions.	Passed
20	Safe Open Zeppelin contracts implementation and usage.	Passed
21	Fallback function security.	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

1. Double for loop

Issue:

There is the same for loop inside the useMarketingFunds function, which could be done in one loop.

Recommendation:

It would be better to use only one for loop.

Same for the airDropCatz function.

Owner privileges

- _tokenMarketingAddress can transfer marketing liquidity to addresses.
- _tokenMarketingAddress can transfer airdrop liquidity to addresses.

Conclusion

Smart contracts do not contain high severity issues!

Techrate 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.