HackSafe

Smart Contract Security Audit Report

KITTY KAT

February 2023

Security Status

★★★★½

www.hacksafe.io

Audit Details

Audited project
KITTY KAT

Deployer address
0xe25b802be5701e13dcbff386a103d9315e82332c

Client contacts
KITTY KAT Team

Blockchain
Binance smart chain

Website
https://kittykatcoin.io/

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 KITTY KAT to perform an audit of smart contracts:

- https://bscscan.com/token/0xAd35ee5461443c139864349e547930A229809204#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 22.02.2023

Token Type	: MEME
Contract name	: KittyKat
Contract address	: 0xAd35ee5461443c139864349e547930A229809204
Total supply	: 9,999,999,999
Token ticker	: KATS
Decimals	: 18
Token Holders	: 16,312
Transactions count	: 41,852
Compiler version	: v0.6.12+commit.27d51765
Contract deployer address	: 0xe25b802be5701e13dcbff386a103d9315e82332c
Owner address	: 0xe25b802be5701e13dcbff386a103d9315e82332c

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.

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 0 low.

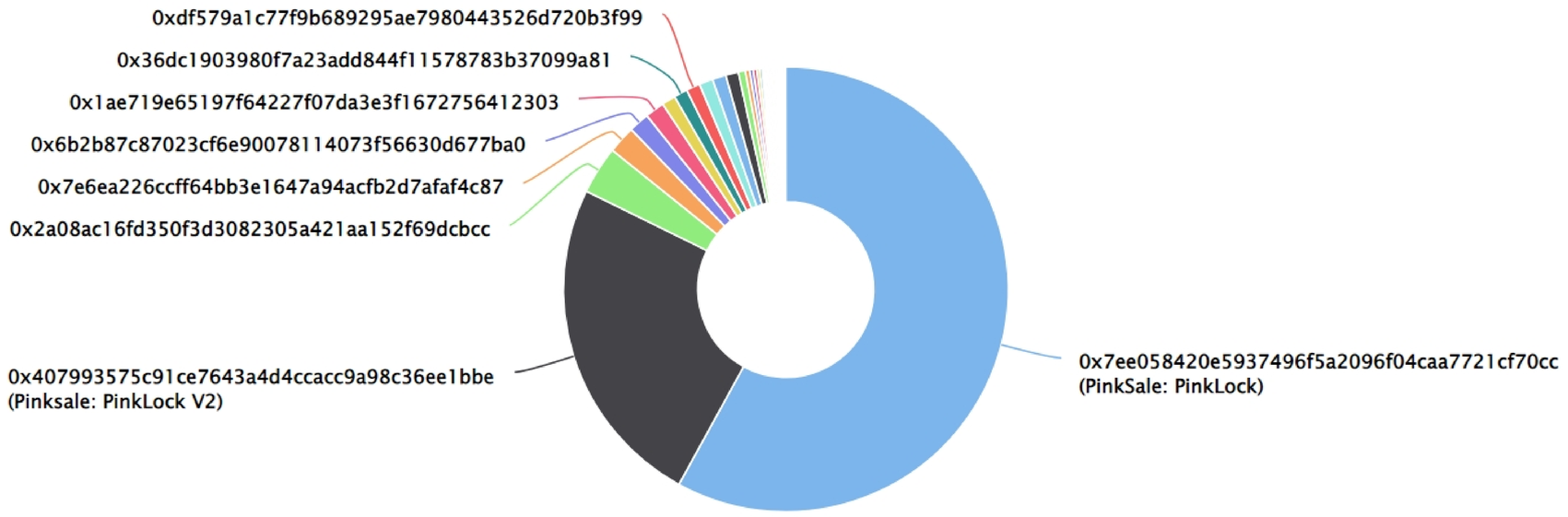
KITTY KAT Token Distribution

The top 100 holders collectively own 99.89% (9,989,188,798.05 Tokens) of Kitty Kat Coin

Token Total Supply: 9,999,999,999.00 Token | Total Token Holders: 16,312

Kitty Kat Coin Top 100 Token Holders

Source: BscScan.com



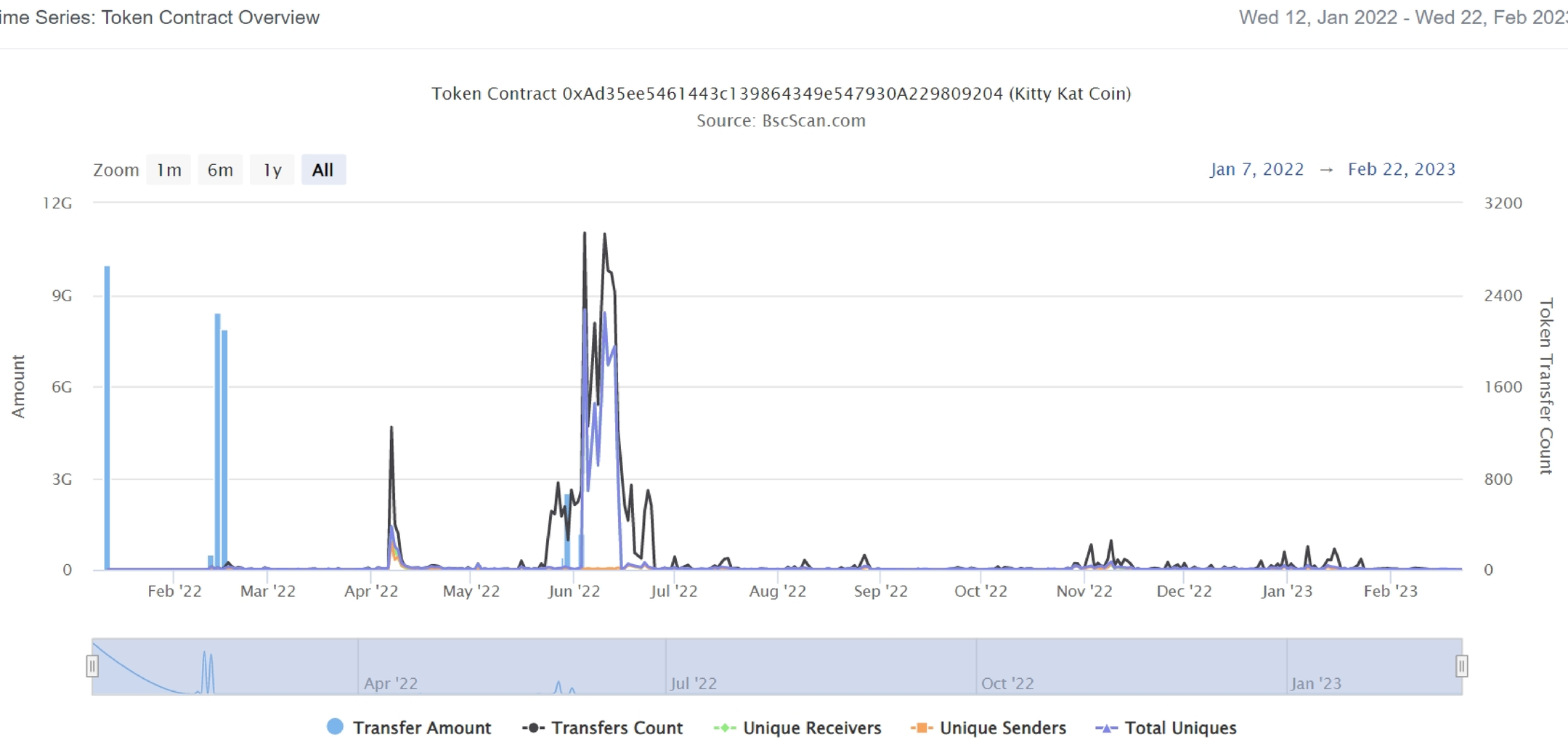
KITTY KAT Top 01 Token Holders

(A total of 9,989,188,798.05 tokens held by the top 100 accounts from the total supply of 9,999,999,999.00 token)

Rank	Address	Quantity (Token)	Percentage
1	PinkSale: PinkLock	5,800,000,000	58.0000%
2	Pinksale: PinkLock V2	2,427,300,000	24.2730%
3	0x2a08ac16fd350f3d3082305a421aa152f69dcbcc	350,000,000	3.5000%
4	0x7e6ea226ccff64bb3e1647a94acfb2d7afaf4c87	200,000,000	2.0000%
5	0x6b2b87c87023cf6e90078114073f56630d677ba0	150,000,000	1.5000%
6	0x1ae719e65197f64227f07da3e3f1672756412303	139,050,906	1.3905%
7	0x123908b5d6510911af9cc7afbce7ca4b7cc4d12f	100,000,000	1.0000%
8	0x36dc1903980f7a23add844f11578783b37099a81	100,000,000	1.0000%
9	0xdf579a1c77f9b689295ae7980443526d720b3f99	100,000,000	1.0000%
10	0xf451bd9984235ee9fd584378efb8c583815b96f3	99,999,999	1.0000%
11	0x547028d8b3c74c7497cc9b67ae4d938c953c4a4d	98,000,000	0.9800%
12	0x1c313f29c63b9ac3c840fd6641fcbba7d4d264af	93,398,704	0.9340%
13	0x2af9e5840335db4cdd0f2bdfe0b3fbfcc6903f1b	50,000,000	0.5000%
14	0xeb92c7355eff34e46fd8740521f0ffa3a8d24cd8	32,688,838.13127329592557609	0.3269%
15	0x4c93988feccc8b2c6d1ae96b551fef58c7fa2eb8	25,650,626.296650236622465176	0.2565%
16	0xe29459a5dbe3a0555caa84e5e6ae26ccbc85f392	25,000,000	0.2500%
17	0x7b348af64cdbc457a4fcbb2b1e2c159d42904bc4	20,000,000	0.2000%
18	0x37805bbd58061ffeaa8eac8522a30ad5f89c1065	18,500,000	0.1850%
19	0x6b5b6644ed69bfa9a290929fd6e64096d7249bde	10,000,000	0.1000%
20	0xcee9ac0d37c68851c8ddf1be9581c033103d91a2	10,000,000	0.1000%

KITTY KAT Token Distribution

KITTY KAT Contract overview



Contract functions details

+[Int] IERC20
  - [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)
  - [Pub] <Constructor>#
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [Int] _transferOwnership #

+KittyKat (Context, IERC20, Ownable)
  - [Ext] getOwner
  - [Ext] decimals
  - [Ext] symbol

Contract functions details

- [Ext] name
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Pub] mint #
  - modifiers: onlyOwner
- [Int] _transfer #
- [Pub] switchTax #
  - modifiers: onlyOwner
- [Pub] updateTaxRate #
  - modifiers: onlyOwner
- [Pub] removeFromTax #
  - modifiers: onlyOwner
- [Pub] addToTax #
  - modifiers: onlyOwner
- [Prv] calculateTaxFee
- [Int] _mint #
- [Int] _burn #
- [Int] _approve #
- [Int] _burnFrom #

($) = payable function
= non-constant function

Issues Checking Status

No.	Title	Status
1.	Compiler error	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	Passed

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**
  No low severity issue found.

Centralization

Owner privileges :

- KITTY KAT Contract:
    - Owner can mint any amount of tokens.
    - Owner can enable/disable tax.
    - Owner can change tax rate.
    - Owner can whitelist addresses (no taxes).

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 the owner functions:

- mint
- switchTax
- updateTaxRate
- removeFromTax
- addToTax

Conclusion

Smart contract contains no 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.