HackSafe

Smart Contract Security Audit Report

CAFESWAP TOKEN

February 2023

Security Status

★★★★½

www.hacksafe.io

Audit Details

Audited project
CAFESWAP TOKEN

Deployer address
0x4def43e20e659A06045d812B3f129d6Bca65969E

Client contacts
CAFESWAP TOKEN Team

Blockchain
Polygon

Website
Not provided

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.

DISCLAIMER: By reading this report or any part of it, you agree to the terms of this disclaimer. If you do not agree to the terms, then please immediately cease reading this report, and delete and destroy any and all copies of this report downloaded and/or printed by you. This report is provided for information purposes only and on a non-reliance basis, and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and TechRate and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers and other representatives) (HackSafe) owe no duty of care towards you or any other person, nor does HackSafe make any warranty or representation to any person on the accuracy or completeness of the report. The report is provided "as is", without any conditions, warranties or other terms of any kind except as set out in this disclaimer, and HackSafe hereby excludes all representations, warranties, conditions and other terms (including, without limitation, the warranties implied by law of satisfactory quality, fitness for purpose and the use of reasonable care and skill) which, but for this clause, might have effect in relation to the report. Except and only to the extent that it is prohibited by law, HackSafe hereby excludes all liability and responsibility, and neither you nor any other person shall have any claim against HackSafe, for any amount or kind of loss or damage that may result to you or any other person (including without limitation, any direct, indirect, special, punitive, consequential or pure economic loss or damages, or any loss of income, profits, goodwill, data, contracts, use of money, or business interruption, and whether in delict, tort (including without limitation negligence), contract, breach of statutory duty, misrepresentation (whether innocent or negligent) or otherwise under any claim of any nature whatsoever in any jurisdiction) in any way arising from or connected with this report and the use, inability to use or the results of use of this report, and any reliance on this report.

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 CAFESWAP TOKEN to perform an audit of smart contracts:

- https://polygonscan.com/token/0xb5106a3277718ecad2f20ab6b86ce0fee7a21f09#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 18.02.2023

Token Type	: DEFI
Contract name	: CoffeeToken
Contract address	: 0xb5106A3277718eCaD2F20aB6b86Ce0Fee7A21F09
Total supply	: 215,775,148.544436
Token ticker	: pBREW
Decimals	: 18
Token Holders	: 3,604
Transactions count	: 3,040,393
Compiler version	: v0.6.12+commit.27d51765
Contract deployer address	: 0x4def43e20e659A06045d812B3f129d6Bca65969E
Owner address	: 0xf9ded50213ffddd2c51da47750ee943b5460f39e

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 1 low.

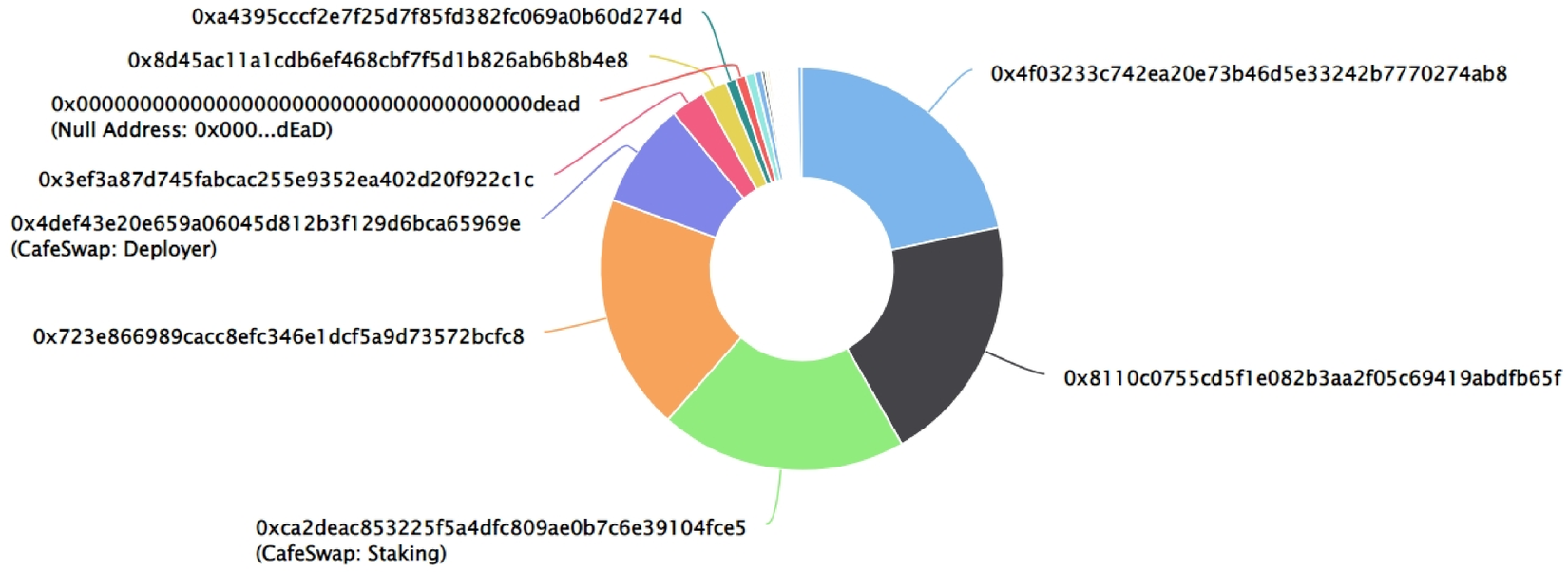
CAFESWAP TOKEN Distribution

The top 100 holders collectively own 99.66% (215,035,850.34 Tokens) of CafeSwap Token

Token Total Supply: 215,775,148.54 Token | Total Token Holders: 3,604

CafeSwap Token Top 100 Token Holders

Source: polygonscan.com



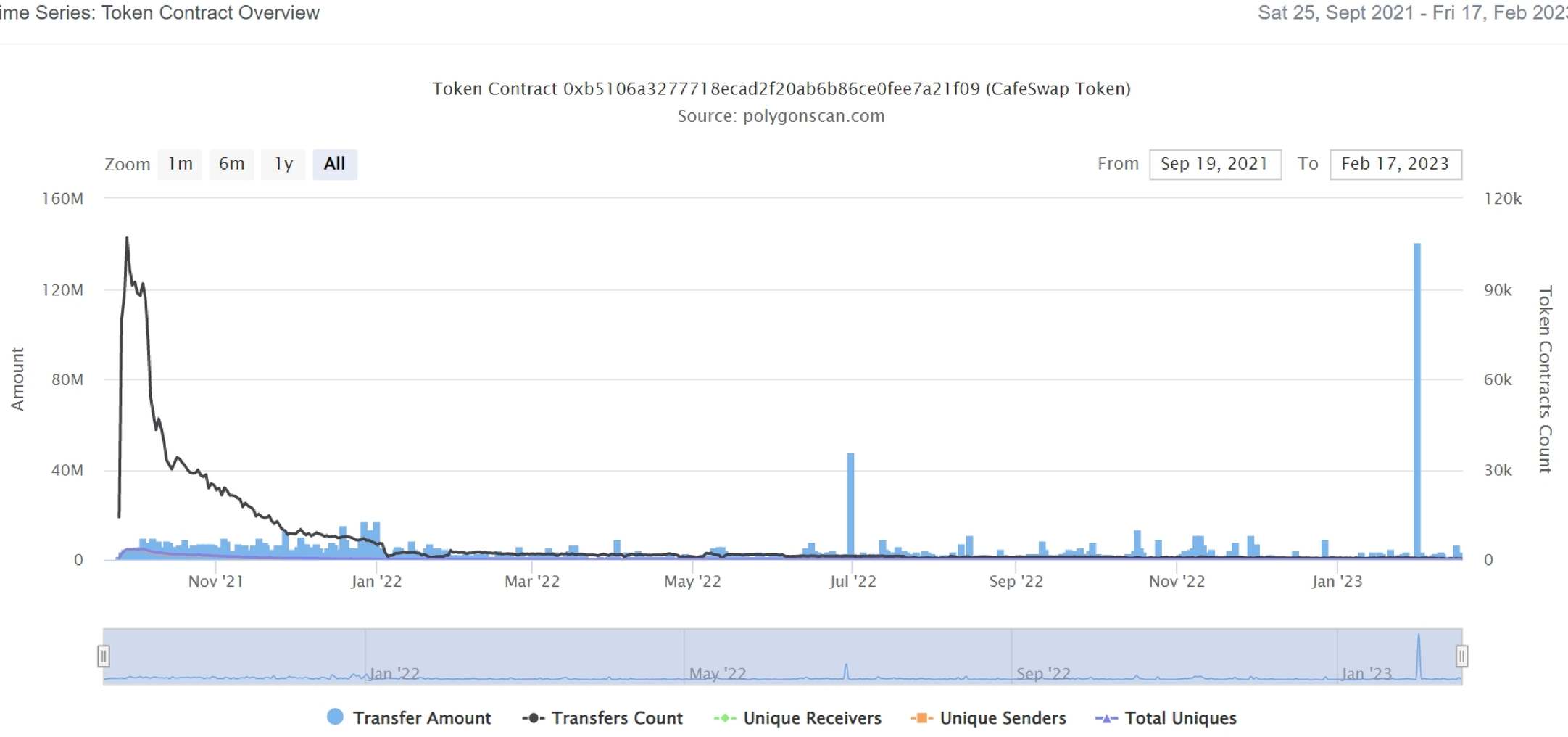
CAFESWAP TOKEN Top 20 Token Holders

(A total of 215,035,850.34 tokens held by the top 100 accounts from the total supply of 215,775,148.54 token)

Rank	Address	Quantity (Token)	Percentage
1	0x4f03233c742ea20e73b46d5e33242b7770274ab8	46,798,207.904873280992675148	21.6884%
2	0x8110c0755cd5f1e082b3aa2f05c69419abdfb65f	43,227,884.968015300964150035	20.0338%
3	CafeSwap: Staking	42,842,083.92531516032048538	19.8550%
4	0x723e866989cacc8efc346e1dcf5a9d73572bcfc8	40,967,269.195418864218313921	18.9861%
5	CafeSwap: Deployer	18,321,903.169357325627287385	8.4912%
6	0x3ef3a87d745fabcac255e9352ea402d20f922c1c	5,992,112.938090451420210627	2.7770%
7	0x8d45ac11a1cdb6ef468cbf7f5d1b826ab6b8b4e8	4,312,015.144409572152984939	1.9984%
8	0xa4395cccf2e7f25d7f85fd382fc069a0b60d274d	1,851,632.668618064552653679	0.8581%
9	Null Address: 0x000...dEaD	1,721,265.140111208093997499	0.7977%
10	0x1a033c4750cc55160ea1a86786e479089da48891	1,657,706.140113305669849303	0.7683%
11	0x3a1793e7094890dcb5a467e4191ca7ca123cfabe	1,193,641.931877027424466089	0.5532%
12	0xe439b2ee0f4c9b61ae89c57423cabdb35895ff45	560,171.254289176188802329	0.2596%
13	0x52e34f0a0a2b26800b7a3d5240d2ccadb444dd32	423,352.24074308653032213	0.1962%
14	0x70c00b63ad8abf2d4e40d796957ceceb3197e0d8	380,948.3	0.1765%
15	0xa276be9d54ad2c50e5cecbd19685bfed22fd1727	344,717.801736700100777619	0.1598%
16	0xe11cf31740761ae71975a729419cdc856bf75df9	335,849.447459300206454663	0.1556%
17	0x0b5cc691fbf7923da8a30db4a8bb8c9f9ce9f7d5	305,426.469430651142941059	0.1415%
18	0x62fc798d7a1924532c72511d132aeabd02f4fa30	263,777.117820646222580632	0.1222%
19	0x1c676b055c6d3f88ee6a7662a11b75abb652b067	242,457.175135229029258031	0.1124%
20	0xed895e0955c350b8efef746fd857f951b808bc9f	194,630.807034278415204624	0.0902%

CAFESWAP TOKEN Distribution

CAFESWAP TOKEN Contract Overview



Contract functions details

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

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

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

+[Lib] Address
    -[Int] isContract
    -[Int] sendValue

+ERC20 (Context, IERC20)
    -[Pub] <constructor>
    -[Pub] name
    -[Pub] symbol
    -[Pub] decimals
    -[Pub] totalSupply
    -[Pub] balanceOf
    -[Pub] transfer #
    -[Pub] allowance
    -[Pub] approve #
    -[Pub] transferFrom #
    -[Pub] increaseAllowance #
    -[Pub] decreaseAllowance #

Contract functions details

-[Int] _transfer #
-[Int] _mint #
-[Int] _burn #
-[Int] _approve #
-[Int] _setupDecimals #
-[Int] _beforeTokenTransfer #

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

+[Lib] SafeERC20
-[Int] safeTransfer
-[Int] safeTransferFrom
-[Int] safeApprove
-[Int] safeIncreaseAllowance
-[Int] safeDecreaseAllowance
-[Int] _callOptionalReturn

+CoffeeToken (ERC20)
-[Pub] <constructor> #
-[Pub] getGetMinter
-[Ext] mint #
-modifiers: onlyMinter
-[Ext] burn #
-[Ext] burnFrom#
-[Ext] setGovernance #
-modifiers: onlyGovernance
-[Ext] addMinter #
-modifiers: onlyGovernance
-[Ext] removeMinter #
-modifiers: onlyGovernance
-[Ext] setCap #
-modifiers: onlyGovernance
-[Int] _beforeTokenTransfer #

Contract functions details

-[Ext] governanceRecoverUnsupported #
-modifiers: onlyGovernance

($) = 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	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 :

- CAFESWAP TOKEN Contract:
    - Governance can add and remove minter.
    - Governance can set cap value.
    - Governance can take unsupported tokens out of the contract

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/Governance functions:

- governanceRecoverUnsupported
- removeMinter
- addMinter
- setCap
- setGovernance

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.