HackSafe

Smart Contract Security Audit Report

JetSwap Token

August 2022

Security Status

★★★★⯪

www.hacksafe.io

Audit Details

Audited project
JetSwap Token

Deployer address
0xc9CB0B9Fe83698DFC3d3935d31BAddEDb5C06151

Client contacts
JetSwap Token team

Blockchain
Binance Smart chain

Website
https://jetswap.finance/

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 JetSwap Token to perform an audit of smart contracts:

- https://bscscan.com/address/0x0487b824c8261462f88940f97053e65bdb498446#code

The purpose of the audit was to achieve the

- Ensutre 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 22.08.2022

Token Type	: BEP20
Contract name	: WingsToken
Contract address	: 0x0487b824c8261462F88940f97053E65bDb498446
Compiler version	: v0.6.12+commit.27d51765
Total supply	: 32,450,645.496743
Token Ticker	: WINGS
Decimals	: 18
Token Holders	: 41,227
Transactions count	: 2,164,101
Contract deployer address	: 0xc9CB0B9Fe83698DFC3d3935d31BAddEDb5C06151
Owner address	: 0x63d6ec1cdef04464287e2af710ffef9780b6f9f5

Social profiles

Twitter profile	: https://twitter.com/Jetfuelfinance
Telegram Profile	: https://t.me/jetfuelfinance
Coinmarketcap Profile	: https://coinmarketcap.com/currencies/jetswap-finance/

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 and some very low-level issues. These issues are not critical ones.

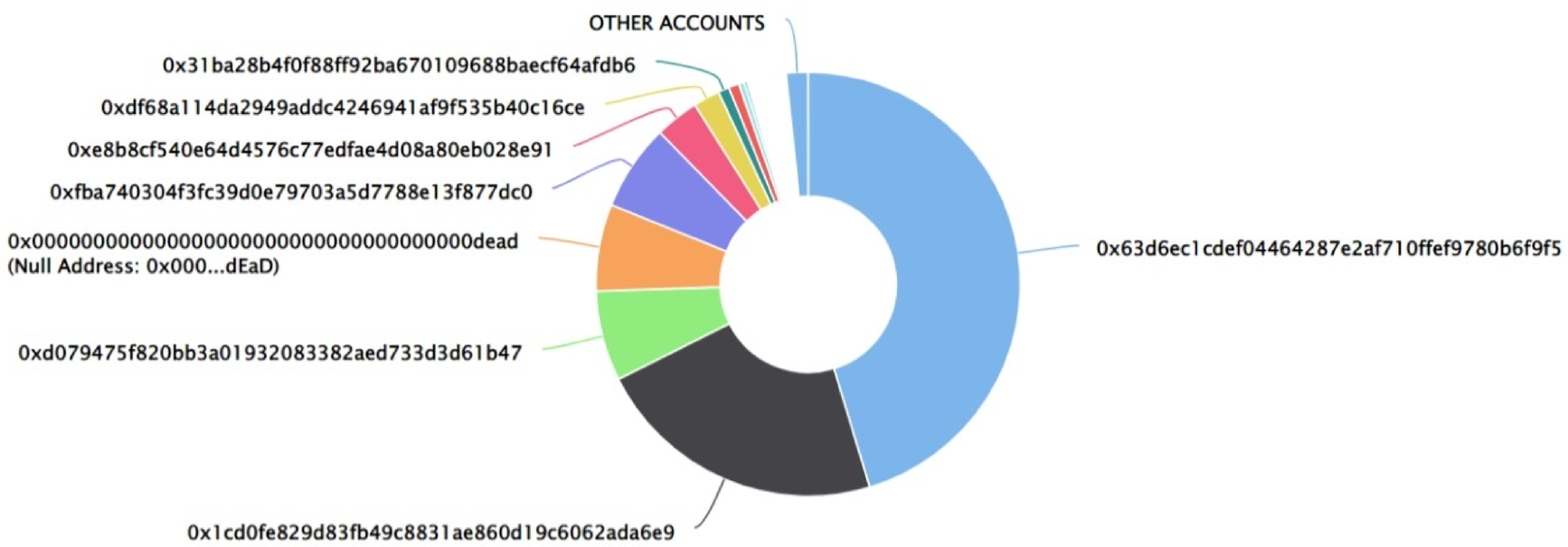
JetSwap Token Token Distribution

The top 100 holders collectively own 98.33% (31,910,001.16 Tokens) of JetSwap Token

Token Total Supply: 32,450,645.50 Token | Total Token Holders: 41,227

JetSwap Token Top 100 Token Holders

Source: BscScan.com



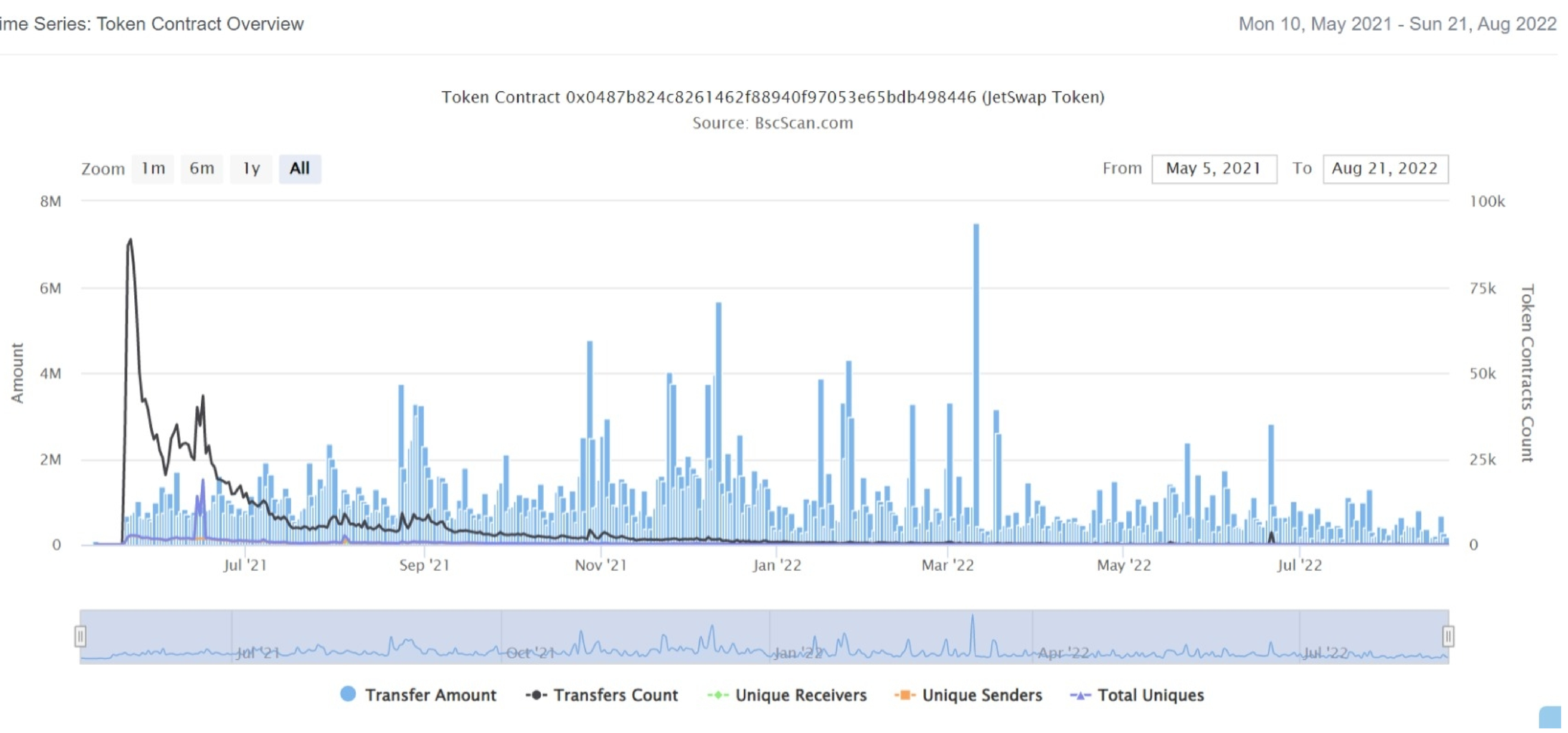
JetSwap Token Top 20 Token Holders

(A total of 31,910,001.16 tokens held by the top 100 accounts from the total supply of 32,450,645.50 token)

Rank	Address	Quantity (Token)	Percentage
1	0x63d6ec1cdef04464287e2af710ffef9780b6f9f5	14,709,444.733079028754087753	45.3287%
2	0x1cd0fe829d83fb49c8831ae860d19c6062ada6e9	7,233,845.386402606929823228	22.2918%
3	0xd079475f820bb3a01932083382aed733d3d61b47	2,230,151.677699649504763787	6.8724%
4	Null Address: 0x000...dEaD	2,145,217.301323107042106421	6.6107%
5	0xfba740304f3fc39d0e79703a5d7788e13f877dc0	2,140,210.252681589130886965	6.5953%
6	0xe8b8cf540e64d4576c77edfae4d08a80eb028e91	1,079,798.389046841242740867	3.3275%
7	0xdf68a114da2949addc4246941af9f535b40c16ce	656,146.522629287103312787	2.0220%
8	0x31ba28b4f0f88ff92ba670109688baecf64afdb6	275,095.894521252627610789	0.8477%
9	0x0333f409b71b9e2f64a7faef933acafa90ef19f6	260,700	0.8034%
10	0xe7b83b7c91520a5c11b61b5ee68173e30ca54354	134,334.668677950882285051	0.4140%
11	0x8783f4d85ac64c2d0b3245425b6e4eb73c6b0ad8	74,644.90155347313334758	0.2300%
12	0x4a77353d54d57c8646d904725959fe49ba302432	49,935.52682013	0.1539%
13	0x65d891261d1898da2ba32cf8700118862bdf1aac	44,896.512801571284283102	0.1384%
14	0xcb225352d8d3b0c70e805c4e89aa1e4414ca87d3	38,173.120812769808036454	0.1176%
15	PancakeSwap V2: WINGS 4	35,403.376621017914084684	0.1091%
16	0x998aebccaf91b03776a1d3264c79c9c7ad30a75f	31,795.36856511934251321	0.0980%
17	0x4d720d7262737c8e58acfdc3c65bb0ebe06822d3	31,592.56440027382344529	0.0974%
18	0x321a5d185b78ea329565847c5b8999d9c1cbd946	31,161.390820530650072361	0.0960%
19	0xf9675bf8e6b7baa0ad6953188defabc1ca34a058	29,473.868736686861027282	0.0908%
20	0x789261a07725593778adda47c92336f404ba6dcb	26,946.010485801117053529	0.0830%

JetSwap Token Token Distribution

JetSwap Token Contract Overview



Contract functions details

+ Context

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

+ Ownable (Context)

-[Int] <constructor>
-[Pub] owner
-[Pub] renounceOwnership #
-modifiers: onlyOwner
-[Pub] transferOwnership #
-modifiers: onlyOwner
-[Int] _transferOwnership #

+ [Int] IBEP20

-[Ext] totalSupply
-[Ext] decimals
-[Ext] symbol
-[Ext] name
-[Ext] getOwner
-[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
-[Int] min
-[Int] sqrt

+ [Lib] Address

-[Int] isContract

Contract functions details

-[Int] sendValue
-[Int] functionCall
-[Int] functionCall
-[Int] functionCallWithValue
-[Int] functionCallWithValue
-[Pvt] _functionCallWithValue

+BEP20 (Context, IBEP20, Ownable)
-[Pub] <constructor>
-[Ext] getOwner
-[Pub] name
-[Pub] decimals
-[Pub] symbol
-[Pub] totalSupply
-[Pub] balanceOf
-[Pub] transfer #
-[Pub] allowance
-[Pub] approve #
-[Pub] transferFrom #
-[Pub] increaseAllowance
-[Pub] decreaseAllowance
-[Pub] mint #
-modifiers: onlyOwner
-[Int] _transfer #
-[Int] _mint#
-[Int] _burn #
-[Int] _approve #
-[Int] _burnFrom #

+ WingsToken (BEP20)
-[Pub] mint #
-modifiers: onlyOwner
-[Ext] delegates
-[Ext] delegate
-[Ext] delegateBySig
-[Ext] getCurrentVotes
-[Ext] getPriorVotes
-[Int] _delegate
-[Int] _moveDelegates

Contract functions details

-[Int] _writeCheckpoint
-[Int] safe32
-[Int] getChainId

($) = 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 issues 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:

- JetSwap Token Contract:
    - Owner can remove and transfer ownership.
    - Owner can mint.

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 but smart contract ownership has been renounced. Following are Admin functions and burner functions:

- Transferownership
- Renounceownership
- Mint

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.