HackSafe

Smart Contract Security Audit Report

Neonic

November 2022

Security Status

★ ★ ★ ★ ⯪

www.hacksafe.io

Audit Details

Audited project
Neonic

Deployer address
0x2a28724f7134c7d4ec3f6d98eacd1a20d9cc58fc

Client contacts
Neonic Team

Blockchain
Binance smart chain

Website
https://neonic.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 Neonic to perform an audit of smart contracts:

- https://bscscan.com/token/0x94026f0227cE0c9611e8a228f114F9F19CC3Fa87#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 28.11.2022

Token Type	: DEFI
Contract name	: NeonToken
Contract address	: 0x94026f0227cE0c9611e8a228f114F9F19CC3Fa87
Total supply	: 32,844,745.163613
Token ticker	: NEON
Decimals	: 18
Token Holders	: 2,191
Transactions count	: 900,311
Compiler version	: v0.6.12+commit.27d51765
Contract deployer address	: 0x2a28724f7134c7d4ec3f6d98eacd1a20d9cc58fc
Owner address	: 0x045502ee488806bdf22928b6228bdd162b5056f6

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.

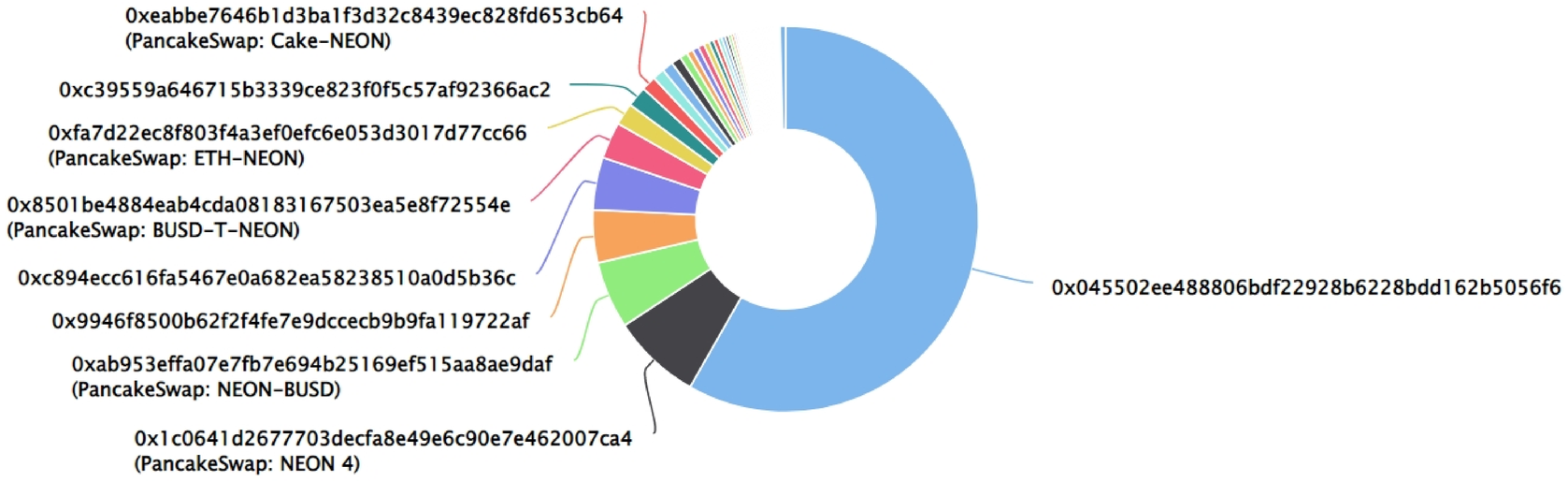
NeonToken Distribution

The top 100 holders collectively own 99.51% (32,685,381.86 Tokens) of Neonic

Token Total Supply: 32,844,745.16 Token | Total Token Holders: 2,191

Neonic Top 100 Token Holders

Source: BscScan.com



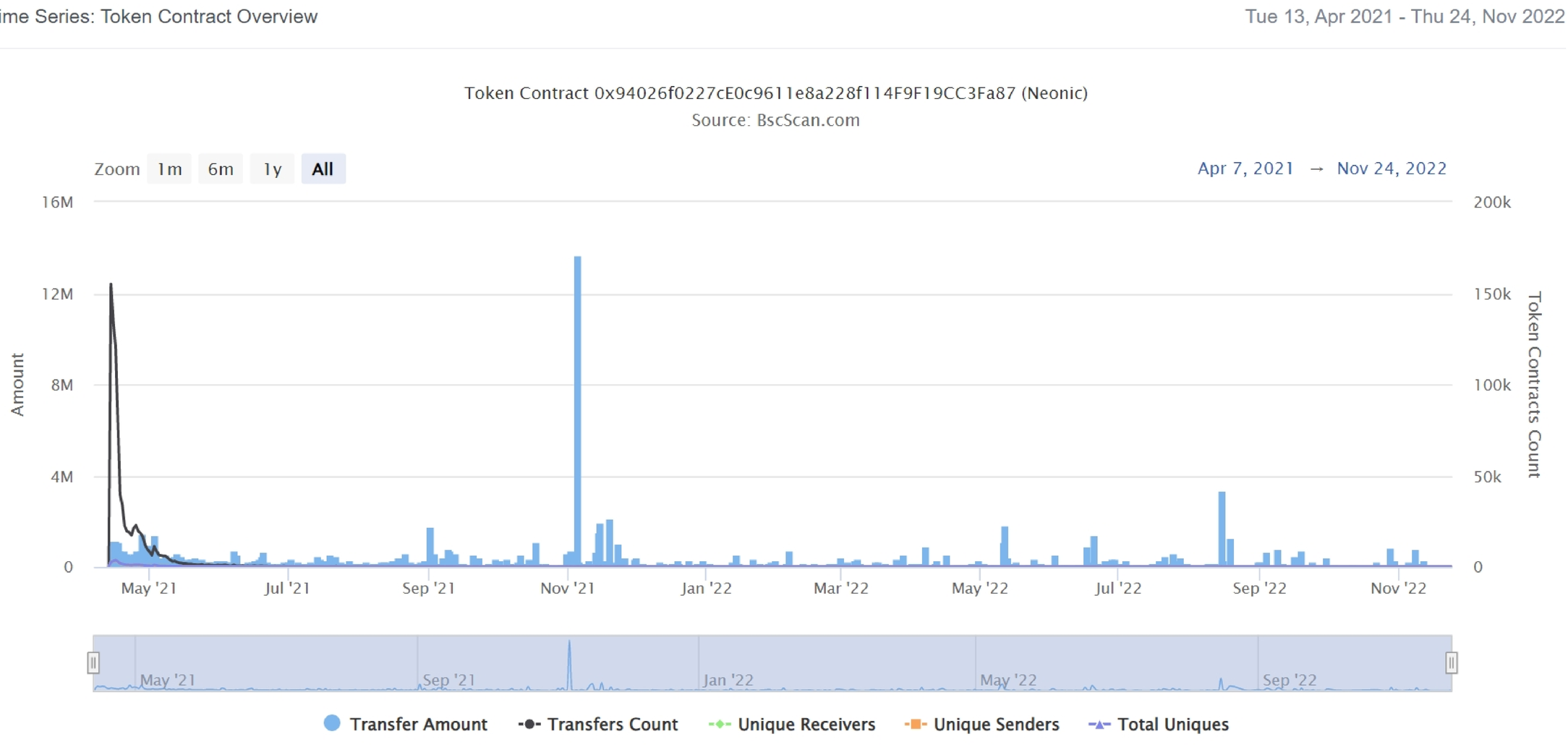
NeonToken Top 20 Token Holders

(A total of 32,685,381.86 tokens held by the top 100 accounts from the total supply of 32,844,745.16 token)

Rank	Address	Quantity (Token)	Percentage
1	0x045502ee488806bdf22928b6228bdd162b5056f6	19,137,191.089489183544669907	58.2656%
2	PancakeSwap: NEON 4	2,449,280.189432858272855715	7.4571%
3	PancakeSwap: NEON-BUSD	1,853,210.682162365206934911	5.6423%
4	0x9946f8500b62f2f4fe7e9dccecb9b9fa119722af	1,449,982.668565780473899479	4.4147%
5	0xc894ecc616fa5467e0a682ea58238510a0d5b36c	1,442,612.639090291794899479	4.3922%
6	PancakeSwap: BUSD-T-NEON	1,009,720.07675692635393947	3.0742%
7	PancakeSwap: ETH-NEON	609,375.598945997943484146	1.8553%
8	0xc39559a646715b3339ce823f0f5c57af92366ac2	563,608.6909620566514144	1.7160%
9	PancakeSwap: Cake-NEON	401,154.816137191477762242	1.2214%
10	PancakeSwap: BTCB-NEON	330,610.562470391170084134	1.0066%
11	PancakeSwap: DOT-NEON	305,433.618335216561952313	0.9299%
12	0x16c38e386c5b4d919bbe63162a9e84302ee8e04e	269,497.410869172649298175	0.8205%
13	0xe4f4bd2e7e76fccb7cbbe0d42f08a162dd8c67ca	216,636.039197999874460155	0.6596%
14	0x18d956fb66bd95b910812c1e21a9947a151c05f6	175,111.234350642470627559	0.5331%
15	0x07f6c3ab4db889dcd5c268ee5ab00717caf95a61	172,267.636339539592681753	0.5245%
16	0x9528fc1553815f7fcff1c473ea3a330ffb164e40	170,356.441363486612575038	0.5187%
17	0xd257207c817c40f45b360f59f1e855530df9a8d3	148,847.731985676047392221	0.4532%
18	0xef9c2a83cfc2de0c328e90e6c4e1e7ca0c6c7d73	127,930.6	0.3895%
19	0xe18f19f02c20fdda332574cc43266c6be3f0243b	126,651.237906175064758216	0.3856%
20	0x29605d427b910ed2ba03b63883a5151f6baa761c	110,774.249528188147543972	0.3373%

NeonToken Distribution

NeonToken Contract Overview



Contract functions details

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

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

+[Lib] SafeMath
    -[Int] tryAdd
    -[Int] trySub
    -[Int] tryMul
    -[Int] tryDiv
    -[Int] tryMod
    -[Int] add
    -[Int] sub
    -[Int] mul
    -[Int] div
    -[Int] mod
    -[Int] sub
    -[Int] div
    -[Int] mod

+ 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

+NeonToken (ERC20, Ownable)
-[Pub] burn #
-[Pub] mint #
-modifiers: onlyOwner
-[Pub] transfer #
-[Ext] delegates
-[Ext] delegate #
-[Ext] delegateBySig #
-[Ext] getCurrentVotes
-[Ext] getPriorVotes
-[Int] _delegate #
-[Int] _moveDelegates #
-[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 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 :

- Neonic Contract:
    - Owner can renounce and transfer ownership.
    - Owner can mint tokens.

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
- 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.