



Smart Contract Security Audit Report

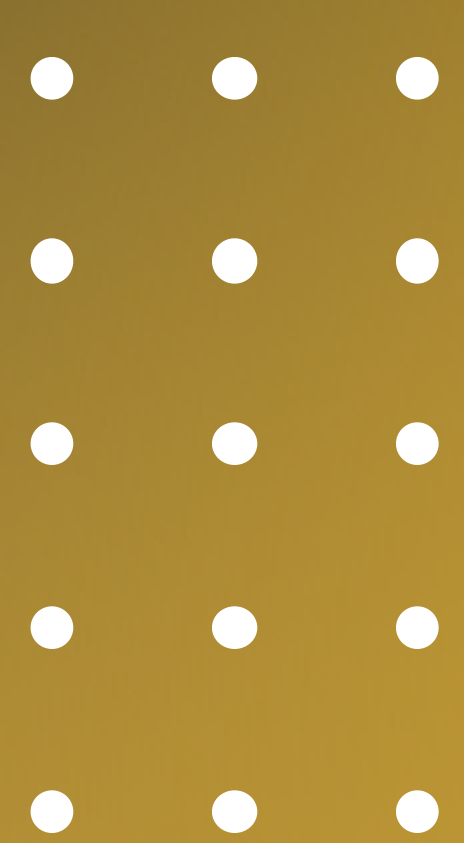
Vikky Token

December 2022

Security Status



www.hacksafe.io



Audit Details



Audited project

Vikky Token



Deployer address

0xee657f82e219ef61d00b058df3f86c7809de8a70



Client contacts

Vikky Token Team



Blockchain

Ethereum



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.

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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 to Vikky Token perform an audit of smart contracts:

- <https://etherscan.io/token/0xd2946be786f35c3cc402c29b323647abda799071#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.

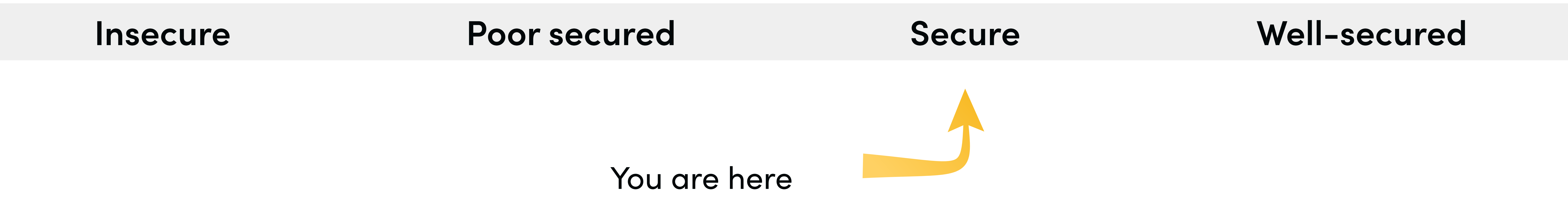
Contract Details

Token contract details for 02.12.2022

Token Type	: DEFI
Contract name	: VikkyToken
Contract address	: 0xd2946be786F35c3Cc402C29b323647aBda799071
Total supply	: 12,000,000,000
Token ticker	: VIKKY
Decimals	: 8
Token Holders	: 675
Transactions count	: 14,262
Compiler version	: v0.4.21+commit.dfe3193c
Contract deployer address	: 0xee657f82e219ef61d00b058df3f86c7809de8a70
Owner address	: 0xee657f82e219ef61d00b058df3f86c7809de8a70

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.



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, 1 medium and 2 low.

Social profiles

Twitter profile	: https://twitter.com/VikkyGlobal
Coinmarket profile	: https://coinmarketcap.com/currencies/vikkytoken/
Coingecko profile	: https://www.coingecko.com/en/coins/vikkytoken/
Facebook profile	: https://www.facebook.com/VikkyGlobal/

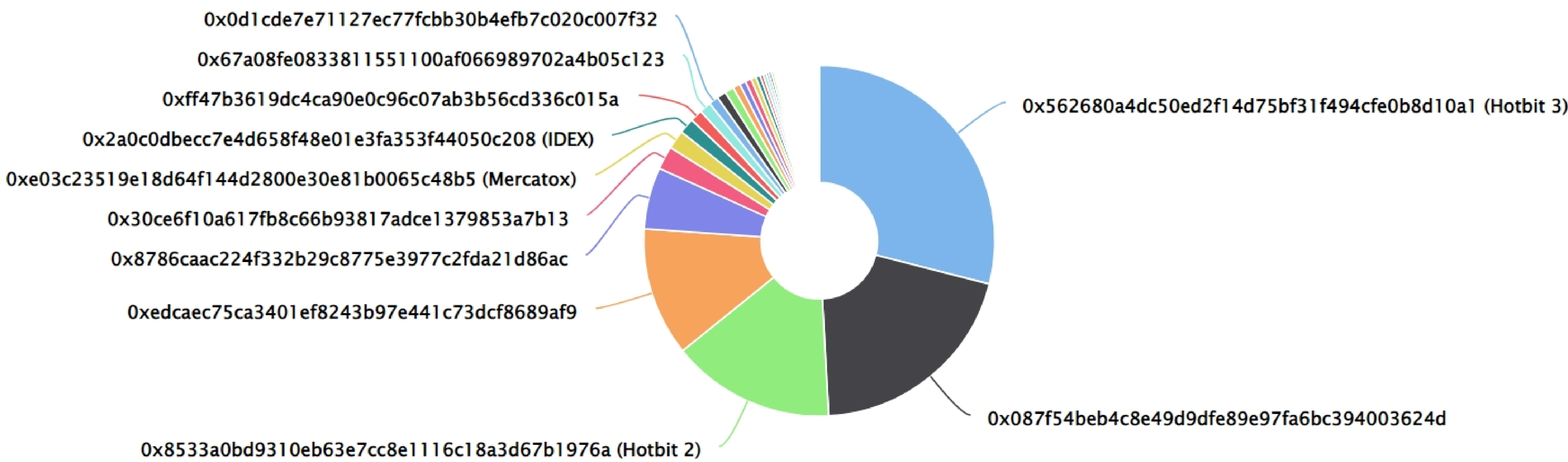
Vikky Token Distribution

💡 The top 100 holders collectively own 140.41% (16,848,638,595.54 Tokens) of Vikky Token

💡 Token Total Supply: 12,000,000,000.00 Token | Total Token Holders: 675

Vikky Token Top 100 Token Holders

Source: Etherscan.io



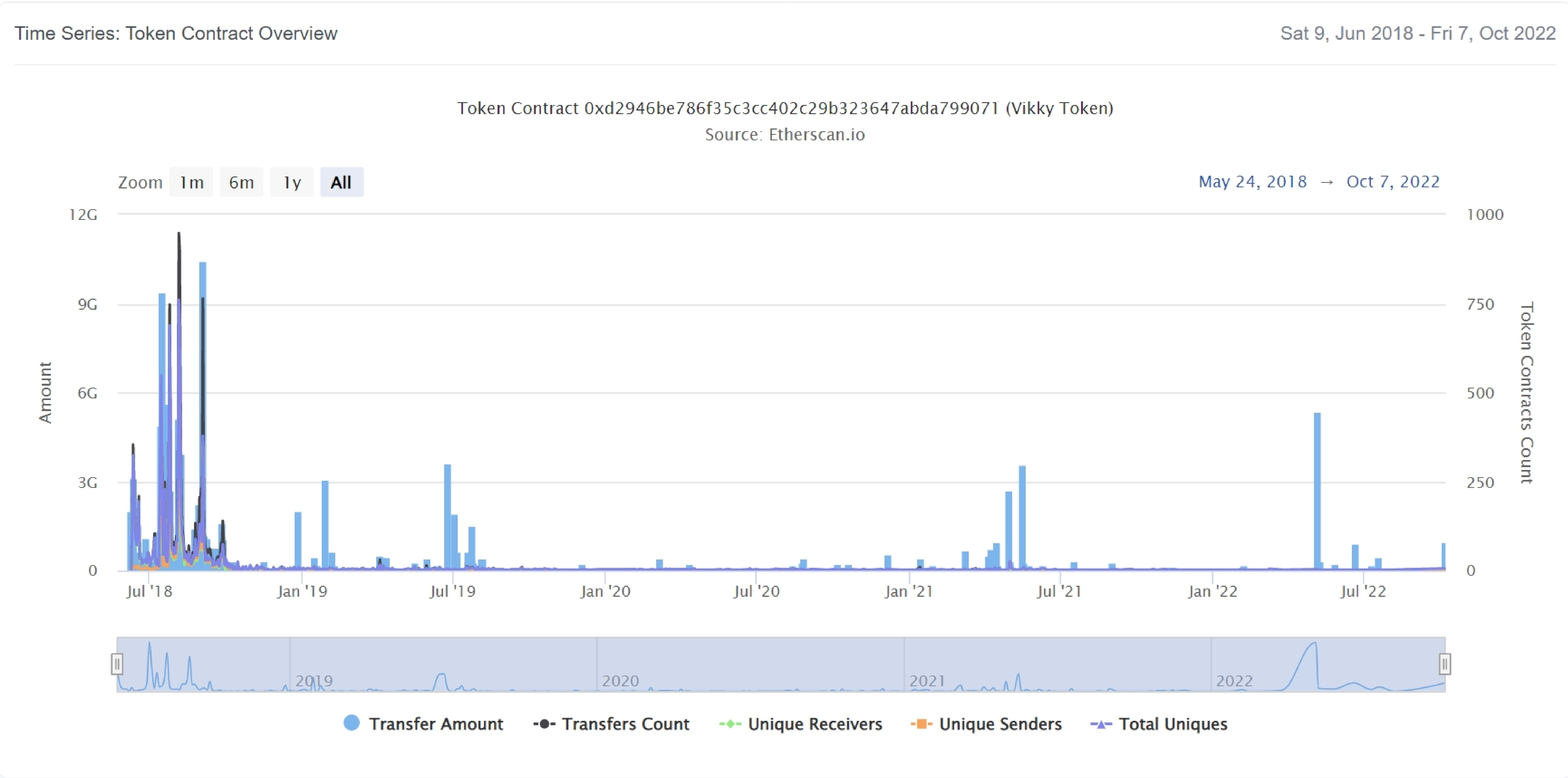
Vikky Token Top 20 Token Holders

(A total of 16,848,638,595.54 tokens held by the top 100 accounts from the total supply of 12,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	Hotbit 3	4,883,111,346.78191013	40.6926%
2	0x087f54beb4c8e49d9dfe89e97fa6bc394003624d	3,400,000,000	28.3333%
3	Hotbit 2	2,537,345,008	21.1445%
4	0xedcaec75ca3401ef8243b97e441c73dcf8689af9	2,000,000,000	16.6667%
5	0x8786caac224f332b29c8775e3977c2fda21d86ac	957,208,225.39131275	7.9767%
6	0x30ce6f10a617fb8c66b93817adce1379853a7b13	358,932,597	2.9911%
7	Mercatox	291,388,492.90801853	2.4282%
8	IDEX	241,006,636.69695715	2.0084%
9	0xff47b3619dc4ca90e0c96c07ab3b56cd336c015a	192,219,768	1.6018%
10	0x67a08fe0833811551100af066989702a4b05c123	181,003,000	1.5084%
11	0x0d1cde7e71127ec77fcb30b4efb7c020c007f32	150,000,000	1.2500%
12	0xe24405406de7fc3f14219b1daf91d13418016ec	144,200,000	1.2017%
13	0xed394172ddc02f8163ba7ac932670c3050b7b9ee	140,003,014	1.1667%
14	0x674de058f8cc14d3ed910ac51746af9ac90df072	113,853,121.72899828	0.9488%
15	0xee61f5fb0db81d3a09392375ee96f723c0620e07	97,160,074.81310261	0.8097%
16	LAToken 2	93,536,441.21138906	0.7795%
17	0x6724aa739aa062a6c9487fc5ca02001bbb14e7d2	75,997,645	0.6333%
18	0x6179c49ba578ca514059f71a6efc58626397d25f	69,189,700	0.5766%
19	0xc72e17d81e681762292c124dbdf199c0f347c781	50,000,000	0.4167%
20	0xf74e91fe9de6b72c1c3335a17e590d7b14ce54b2	50,000,000	0.4167%

Vikky Token Distribution

Vikky Token Overview



Contract functions details

+[Lib] SafeMath

- [Int] mul
- [Int] div
- [Int] sub
- [Int] add

+AltcoinToken

- [Pub] balanceOf
- [Pub] transfer

+ERC20Basic

- [Pub] balanceOf
- [Pub] transfer

+ERC20 (ERC20Basic)

- [Pub] allowance
- [Pub] transferFrom
- [Pub] approve

+VikkyToken (ERC20)

- [Pub] VikkyToken
- [Pub] transferOwnership #
 - modifiers: onlyOwner
- [Pub] finishDistribution #
 - modifiers: onlyOwner, canDistr
- [Pvt] distr #
 - modifiers: canDistr
- [Int] doAirdrop #
- [Pub] adminClaimAirdrop #
 - modifiers: onlyOwner
- [Pub] adminClaimAirdropMultiple #
 - modifiers: onlyOwner
- [Pub] updateTokensPerEth #
 - modifiers: onlyOwner
- <> \$
- [Pub] getTokens \$
 - modifiers: canDistr
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] transferFrom #

Contract functions details

- [Pub] approve #
- [Pub] allowance
- [Pub] getTokenBalance
- [Pub] withdraw #
 - modifiers: onlyOwner
- [Pub] burn #
 - modifiers: onlyOwner
- [Pub] withdrawAltcoinTokens #
 - modifiers: onlyOwner

(\$) = payable function

= non-constant function

Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	Low issue
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.	Medium issue
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

One medium severity issue found.

1. Out of gas limit.

• Description

The smart contract has functions which has used for adminClaimAirdropMultiple. Large length of _addresses can cause an error of out of gas for these function.

• Recommendation

It is advisable to either remove for loop or use smaller length to avoid the gas limit error while transaction.

✔ Low Severity Issues

Two low severity issue found.

1. Unlocked Compiler Version.

• Description

The contract utilizes an unlocked compiler version. An unlocked compiler version in the contract's source code permits the user to compile it at or above a particular version. This, in turn, leads to differences in the generated bytecode between compilations due to differing compiler version numbers. This can lead to ambiguity when debugging as compiler-specific bugs may occur in the codebase that would be difficult to identify over a span of multiple compiler versions rather than a specific one.

• Recommendation

It is advisable that the compiler version is alternatively locked at the lowest version possible so that the contract can be compiled. For example, for version ^0.4.18 the contract should contain the following line:

```
pragma solidity 0.4.21;
```

2. 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 :

- Vikky Token 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 Admin functions:

- transferOwnership
- finishDistribution
- adminClaimAirdrop
- adminClaimAirdropMultiple
- updateTokensPerEth
- withdrawAltcoinTokens
- burn
- withdraw

Conclusion

Smart contract contains low and medium 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.