HackSafe

Smart Contract Security Audit Report

MobileGo

January 2023

Security Status

★ ★ ★ ★ ★

www.hacksafe.io

Audit Details

Audited project
MobileGo

Deployer address
0xed5eca2d2b341ba7eaa93273557f2b56b74f5107

Client contacts
MobileGo

Blockchain
Ethereum

Website
https://www.mobilego.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 MobileGo to perform an audit of smart contracts:

- https://etherscan.io/token/0x40395044Ac3c0C57051906dA938B54BD6557F212#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 17.01.2023

Token Type	: DEFI
Contract name	: MobileGoToken
Contract address	: 0x40395044Ac3c0C57051906dA938B54BD6557F212
Total supply	: 100,000,000
Token ticker	: MGO
Decimals	: 8
Token Holders	: 15,030
Transactions count	: 78,027
Compiler version	: v0.4.11+commit.68ef5810
Contract deployer address	: 0xed5eca2d2b341ba7eaa93273557f2b56b74f5107
Owner address	: 0xeD5eCa2D2B341Ba7EaA93273557F2b56b74F5107

Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are **“Well 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.

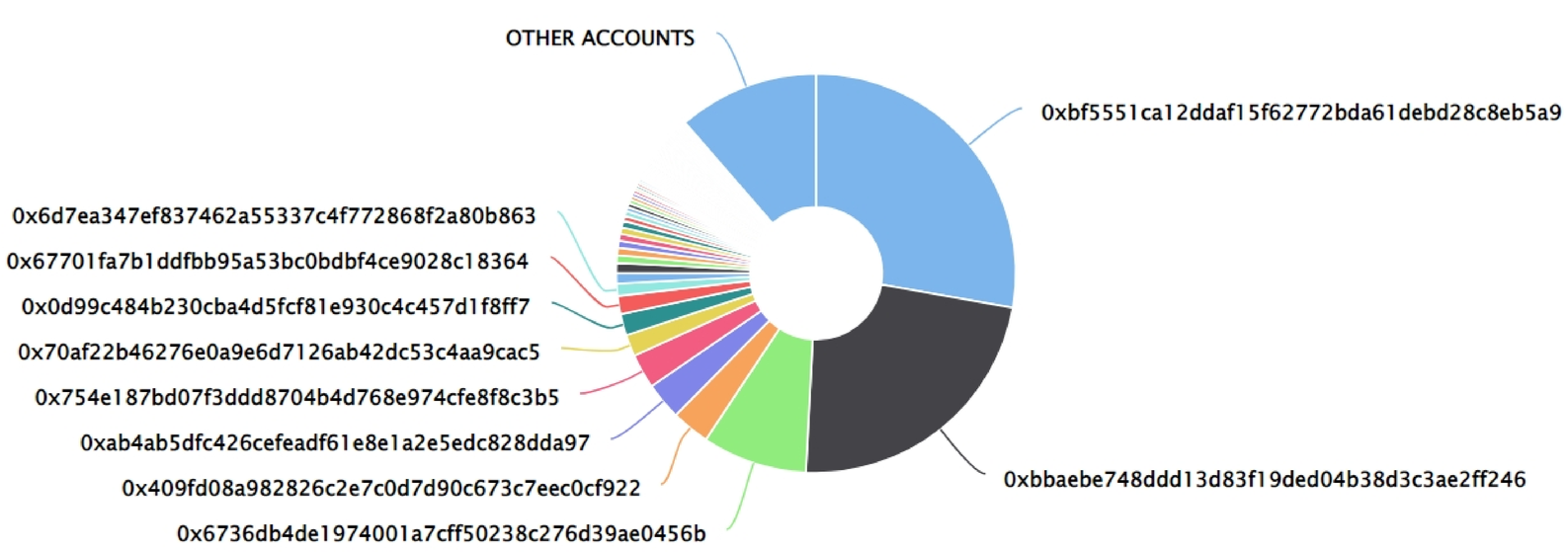
MobileGo Token Distribution

The top 100 holders collectively own 88.61% (88,609,632.84 Tokens) of MobileGo

Token Total Supply: 100,000,000.00 Token | Total Token Holders: 15,030

MobileGo Top 100 Token Holders

Source: Etherscan.io



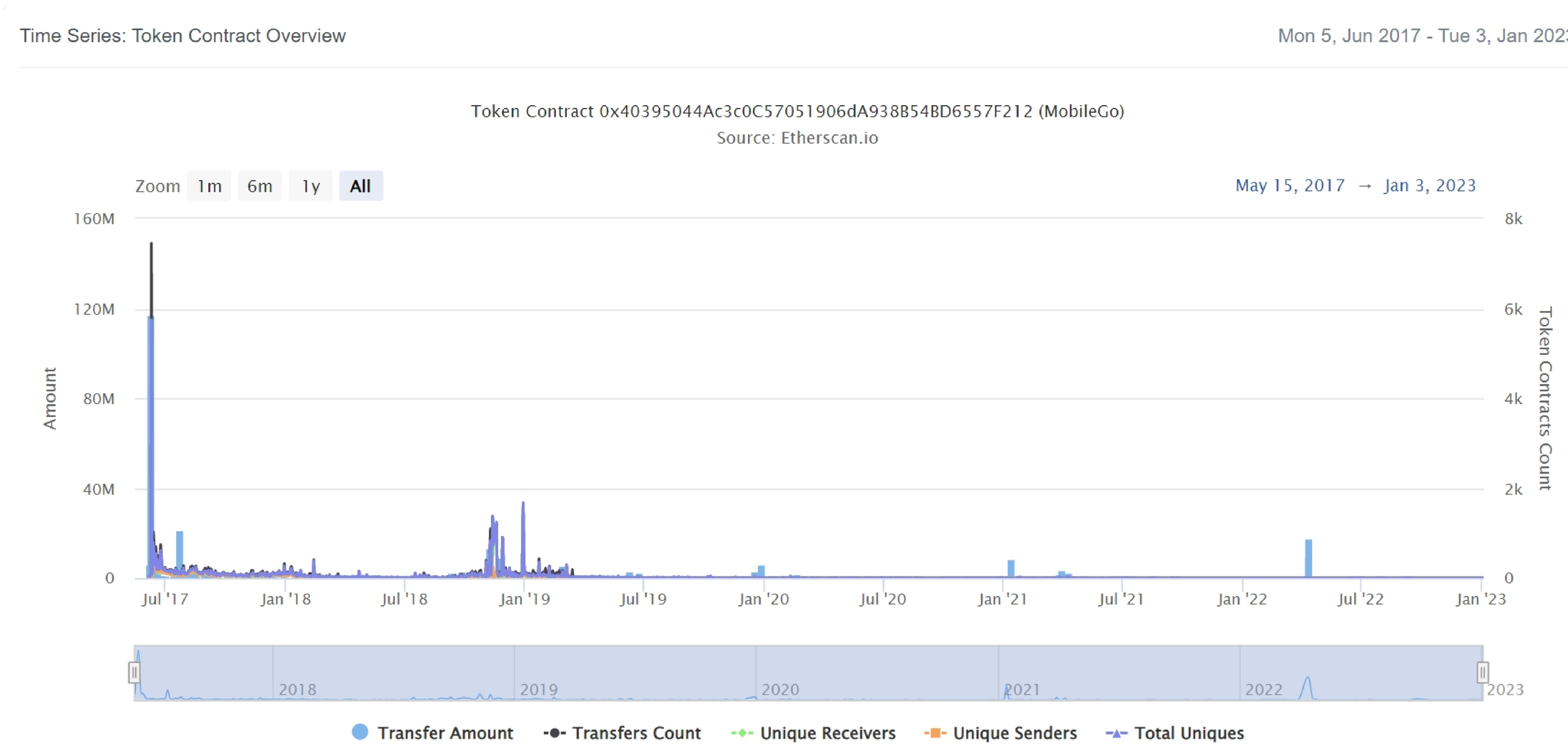
MobileGo Top 20 Token Holders

(A total of 88,609,632.84 tokens held by the top 100 accounts from the total supply of 100,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0xbf5551ca12ddaf15f62772bda61debd28c8eb5a9	27,774,525.35594828	27.7745%
2	0xbbaebe748ddd13d83f19ded04b38d3c3ae2ff246	23,048,064	23.0481%
3	0x6736db4de1974001a7cff50238c276d39ae0456b	8,486,830.7111008	8.4868%
4	0x409fd08a982826c2e7c0d7d90c673c7eec0cf922	3,106,663.82021674	3.1067%
5	0xab4ab5dfc426cefeadf61e8e1a2e5edc828dda97	3,001,986.5	3.0020%
6	0x754e187bd07f3ddd8704b4d768e974cfe8f8c3b5	2,815,925.40213616	2.8159%
7	0x70af22b46276e0a9e6d7126ab42dc53c4aa9cac5	1,750,269.32467778	1.7503%
8	0x0d99c484b230cba4d5fcf81e930c4c457d1f8ff7	1,725,359	1.7254%
9	0x67701fa7b1ddfbb95a53bc0bdbf4ce9028c18364	1,466,598.70159087	1.4666%
10	0x6d7ea347ef837462a55337c4f772868f2a80b863	999,980	1.0000%
11	0xe10c540088113fa6ec00b4b2c8824f8796e96ec4	859,172.42608082	0.8592%
12	Idax.global	780,853.20070549	0.7809%
13	Bitfinex: Hot Wallet	646,324.49143623	0.6463%
14	0xc9011f163a61f2db27b5769d5552994caf0d46ac	599,998.4179	0.6000%
15	0x7ce9867ce6c6bc61806204f63984bd83eecfed54	557,045	0.5570%
16	0x70f1ce4948b777a292f433ddb3cb6c8abc88e1e3	555,421.57718267	0.5554%
17	0x1b3d794bbeecd9240f46dbb3b79f4f71a972e00a	540,056.02678565	0.5401%
18	0x15d708547f78713e9c37054ea649ee2fd3a38c03	521,036	0.5210%
19	0x08ad18b3c23babef652f70cb43e694eba8fcd337	410,998.92705764	0.4110%
20	0xe03dab01abd9b55faefebd8b3ab3a0b3c80233a7	398,070.62526622	0.3981%

MobileGo Token Distribution

MobileGo Contract Overview



Contract functions details

+ContractReceiver
    -tokenFallback

+MobileGoToken
    -MobileGoToken #
    -totalSupply
    -balanceOf
    -transfer #
    -transferFrom #
    -approve #
    -allowance
    -name
    -symbol
    -decimals
    -transfer #
    -[Int] transferToAddress #
    -[Int] transferToContract #
    -[Int] isContract
    -burn #
    -currentSupply
    -amountBurned

($) = 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.

Conclusion

Smart contract contains no 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.