HackSafe

Smart Contract Security Audit Report

Arya

May 2022

Security Status

★ ★ ★ ★ ★

www.hacksafe.io

Audit Details

Audited project
Arya

Deployer address
0x3a98a1933773a970a8e92bff0e3ac1d39f3a1771

Client contacts
Arya Token

Blockchain
Binance Smart Chain

Website
Not Provided by team

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 Arya Token to perform an audit of smart contract:

- https://bscscan.com/address/0xF0b416B746F90C42604b7eBe63eBA8CD5F017512#code

Contract Details

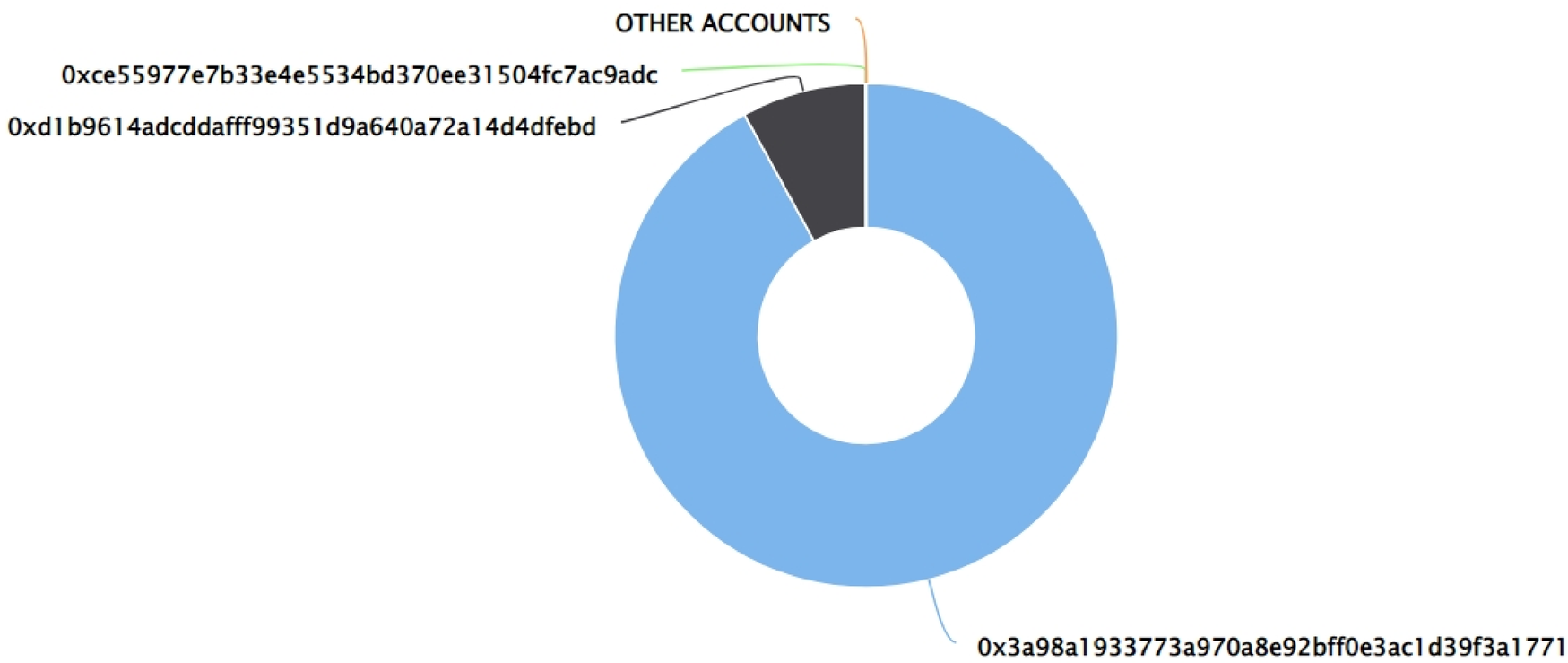
Token contract details for 31.05.2022

Contract name	: ARYA
Contract address	: 0xF0b416B746F90C42604b7eBe63eBA8CD5F017512
Compiler version	: v0.6.12+commit.27d51765
Total supply	: 100,000,000
Token Ticker	: ARYA
Decimals	: 18
Token Holders	: 3
Transactions count	:14
Contract deployer address	: 0x3a98a1933773a970a8e92bff0e3ac1d39f3a1771
owner address	: 0x3a98a1933773a970a8e92bff0e3ac1d39f3a1771

ARYA Token Distribution

Arya Token Top 100 Token Holders

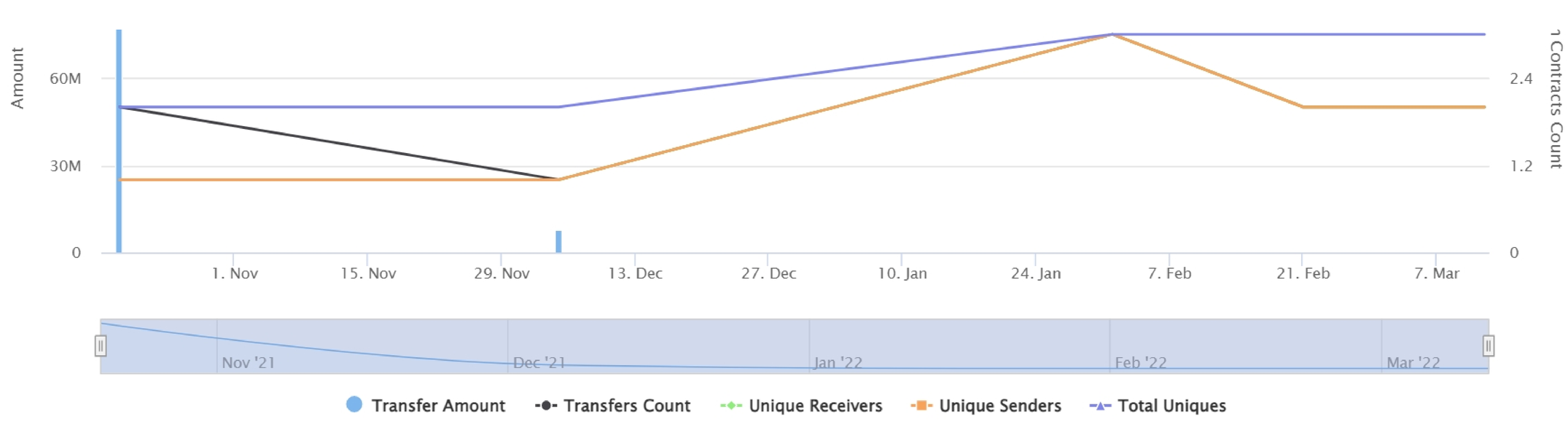
Source: BscScan.com



ARYA Top 3 Token Holders

Rank	Address	Quantity	Percentage	Analytics
1	0x3a98a1933773a970a8e92bff0e3ac1d39f3a1771	91,984,312.425742574258425742	91.9843%	
2	0xd1b9614adcddafff99351d9a640a72a14d4dfebd	7,999,992	8.0000%	
3	0xce55977e7b33e4e5534bd370ee31504fc7ac9adc	15,695.574257425742574258	0.0157%	

ARYA Token Transfer Data



Contract functions details

ARYA.sol
+ ARYA
    +[Pub] mint #
      -modifier: onlyOwner

Address.sol
+[Lib] Address
    -[Int] isContract
    -[Int] sendValue
    -[Int] functionCall
    -[Int] functionCall
    -[Int] functionCallWithValue
    -[Int] functionCallWithValue
    -[Pvt] _functionCallWithValue

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

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

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

Contract functions details

IBEP20.sol
+ [Int] IBEP20
  -[Ext] totalSupply
  -[Ext] decimals
  -[Ext] symbol
  -[Ext] name
  -[Ext] getOwner
  -[Ext] balanceOf
  -[Ext] transfer
  -[Ext] allowance
  -[Ext] approve
  -[Ext] transferFrom

BEP20.sol
+BEP20 (Context, IBEP20, Ownable)
  - [Pub] <constructor> #
  -[Pub] getOwner
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals
  - [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#

($) = 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.	Low issue
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

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. Scoping and Declarations.

Unused function.

- **Description**
  The _msgData function does nothing.

- **Recommendation**
  _msgData function

- **Recommendation**
  We advise to remove unused code.

Owner Privileges

Owner Privileges (in the period when the owner is not renounced) :

- Arya Contract:
    - Owner can renounce ownership.
    - Owner can transfer ownership.
    - Owner can mint new tokens.

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.