HackSafe

Smart Contract Security Audit Report

RNTB Token

December 2022

Security Status

★★★★½

www.hacksafe.io

Audit Details

Audited project
RNTB Token

Deployer address
0x004e8e8da94265a6be5442a8da64eb061bc2312c

Client contacts
RNTB Token Team

Blockchain
Ethereum

Website
https://bitrent.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 RNTB Token to perform an audit of smart contracts:

- https://etherscan.io/token/0x1fe70be734e473e5721ea57c8b5b01e6caa52686#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 09.12.2022

Token Type	: DEFI
Contract name	: RNTBToken
Contract address	: 0x1FE70bE734e473e5721ea57C8B5B01e6Caa52686
Total supply	: 1,000,000,000
Token ticker	: RNTB
Decimals	: 18
Token Holders	: 25,456
Transactions count	: 44,141
Compiler version	: v0.4.15+commit.bbb8e64f
Contract deployer address	: 0x004e8e8da94265a6be5442a8da64eb061bc2312c
Owner address	: 0x004e8E8DA94265a6BE5442A8DA64eB061Bc2312c

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.

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.

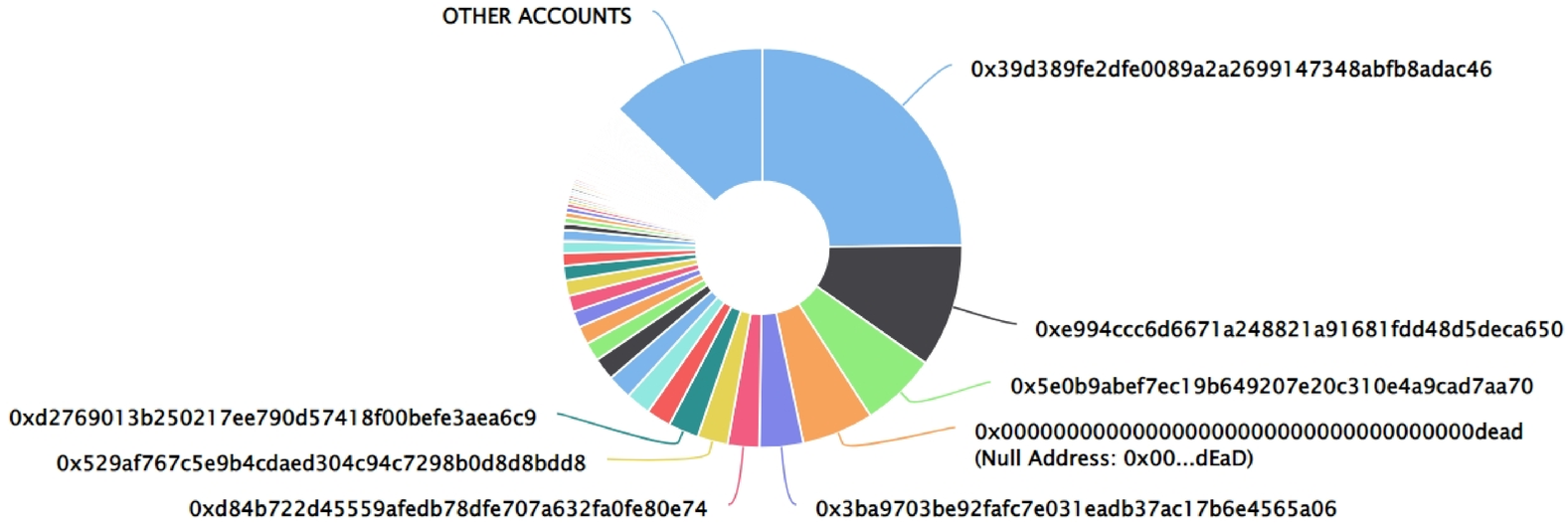
We found 0 critical, 0 high, 0 medium and 2 low.

RNTB Token Distribution

The top 100 holders collectively own 87.23% (872,306,938.33 Tokens) of RNTB Token | Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 25,456

RNTB Token Top 100 Token Holders

Source: Etherscan.io



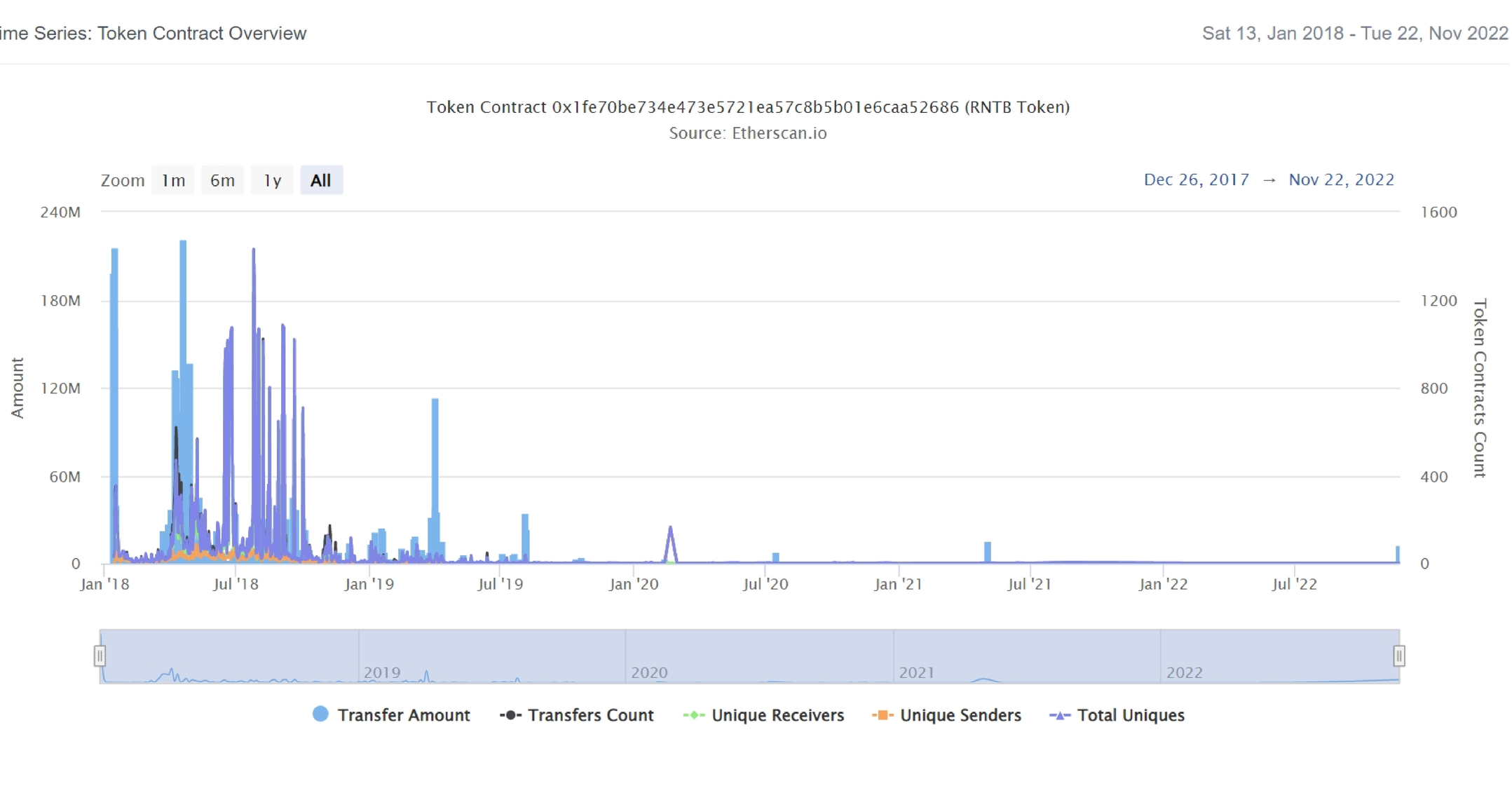
RNTB Token Top 20 Token Holders

(A total of 872,306,938.33 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0x39d389fe2dfe0089a2a2699147348abfb8adac46	247,884,794.382	24.7885%
2	0xe994ccc6d6671a248821a91681fdd48d5deca650	100,000,000	10.0000%
3	0x5e0b9abef7ec19b649207e20c310e4a9cad7aa70	61,157,438.357123910145929942	6.1157%
4	Null Address: 0x00...dEaD	58,011,500	5.8012%
5	0x3ba9703be92fafc7e031eadb37ac17b6e4565a06	35,500,000	3.5500%
6	0xd84b722d45559afedb78dfe707a632fa0fe80e74	25,461,278.292840437686231372	2.5461%
7	0x529af767c5e9b4cdaed304c94c7298b0d8d8bdd8	24,634,196	2.4634%
8	0xd2769013b250217ee790d57418f00befe3aea6c9	24,500,000	2.4500%
9	0xa45eb6703688884ed7eb6bdf9586d8a2eb1017b6	20,000,000	2.0000%
10	0x72715922a54bfb6e639da8d7c4a097e5ac9e9271	20,000,000	2.0000%
11	0x8bdc4d64f91e19e5f6d4943becb2e2c2e9d52bde	20,000,000	2.0000%
12	0xf6c7314873e4389498b38e9e65ceaebeb220ad9d	18,284,802.53276	1.8285%
13	0x53da932032ed2df9558355f03cc4d3d601b4b0f4	15,000,000	1.5000%
14	0x86721aa6a357c04aee68e4c2951c9e22225c49c6	14,591,860.389287135624483137	1.4592%
15	OTCBTC	13,194,513.37601453	1.3195%
16	HitBTC 3	13,139,545.364785521297635815	1.3140%
17	Union Chain	12,492,665.64580001	1.2493%
18	0x6150b5435c9bb68829a7574e07a983e1292b20ba	11,937,290.705	1.1937%
19	0xff513e9e184f0c6c16304bf66252824df2c9d69a	10,000,000	1.0000%
20	0xfd00ea68b479040c63b78fdca1263af3c1e88809	10,000,000	1.0000%

RNTB Token Distribution

RNTB Token Contract Overview



Contract functions details

+Ownable
  -Ownable
  -[Pub] transferOwnership #
    -modifiers: onlyOwner

+HasNoEther (Ownable)
  -<HasNoEther> $
  -[Ext] reclaimEther #
    -modifiers: onlyOwner

+ERC20Basic
  -[Pub] balanceOf
  -[Pub] transfer

+ERC20 (ERC20Basic)
  -[Pub] allowance
  -[Pub] transferFrom
  -[Pub] approve

+DetailedERC20 (ERC20)
  -[Pub] DetailedERC20

+IRntToken (DetailedERC20)
+[Lin] SafeMath
  -[Int] mul
  -[Int] div
  -[Int] sub
  -[Int] add

+BasicToken (ERC20Basic)
  -[Pub] transfer #
  -[Pub] balanceOf

+StandardToken (ERC20, BasicToken)
  -[Pub] transferFrom #
  -[Pub] approve #
  -[Pub] allowance
  -[Pub] increaseAllowance #
  -[Pub] decreaseAllowance #

Contract functions details

+Pausable (Ownable)
  -[Pub] pause #
    -modifiers: onlyOwner, whenNotPaused
  -[Pub] unpause #
    -modifiers: onlyOwner, whenPaused

+PausableToken(StandardToken, Pausable)
  -[Pub] transfer #
    -modifiers: whenNotPaused
  -[Pub] transferFrom #
     -modifiers: whenNotPaused
  -[Pub] approve #
    -modifiers: whenNotPaused
  -[Pub] increaseApproval #
    -modifiers: whenNotPaused
  -[Pub] decreaseApproval #
    -modifiers: whenNotPaused

+RNTBToken (HasNoEther, IRntToken, PausableToken)
  -[Pub] RNTBToken

($) = 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.	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**
  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 ^0.4.15 the contract should contain the following line:

  pragma solidity 0.4.15;

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 :

- RNTB Token Contract:
    - Owner can transfer/renounce ownership.
    - Owner can pause / unpause transfers.
    - Owner can reclaim ether.

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
- reclaimEther
- pause
- unpause

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.