

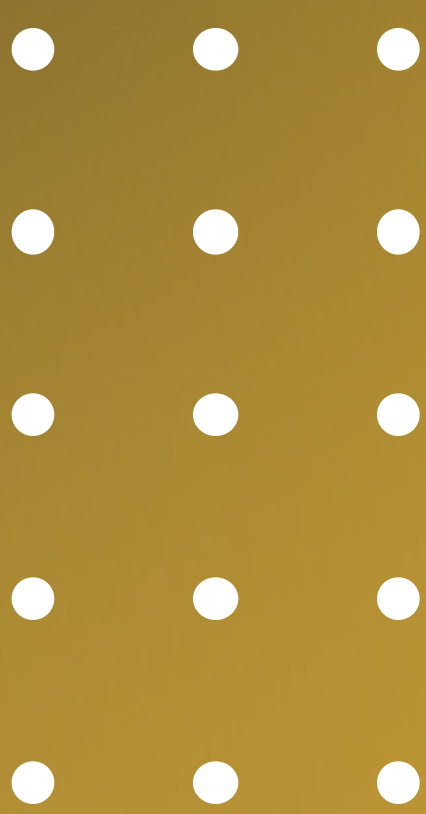


Smart Contract Security Audit Report

IBTC

October 2022

Security Status



Audit Details



Audited project

IBTC



Deployer address

0xbe9B4Beea0ae06e66c834bdF875a2B8887a588a9



Client contacts

IBTC Team



Blockchain

Ethereum



Website

<http://ibtctoken.com/>

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 IBTC to perform an audit of smart contracts:

- <https://etherscan.io/token/0x0784dbabb6c6834bddfb7cfce116ba049e5dafab#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 understood to 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 22.10.2022

Token Type	: ERC20
Contract name	: IBTCToken
Contract address	: 0x0784dBaBb6C6834bdDfb7cFEe116bA049e5DafaB
Total supply	: 21,000,000
Token ticker	: IBTC
Decimals	: 18
Token holders	: 1,875
Transactions count	: 4,397
Compiler version	: v0.4.11+commit.68ef5810
Contract deployer address	: 0xbe9B4Beea0ae06e66c834bdF875a2B8887a588a9
Owner address	: 0x9FD6977e609AA945C6b6e40537dCF0A791775279

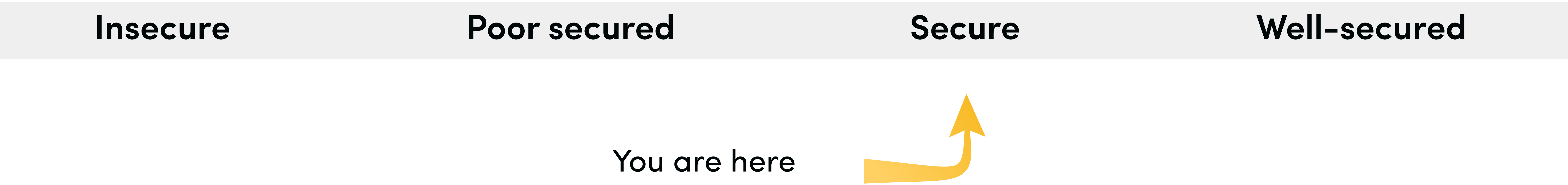
Social profiles

Twitter profile : <https://twitter.com/ibtctoken>

Coinmarketcap Profile : <https://coinmarketcap.com/currencies/ibtc/>

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 and some very low-level issues.

IBTC Token Distribution

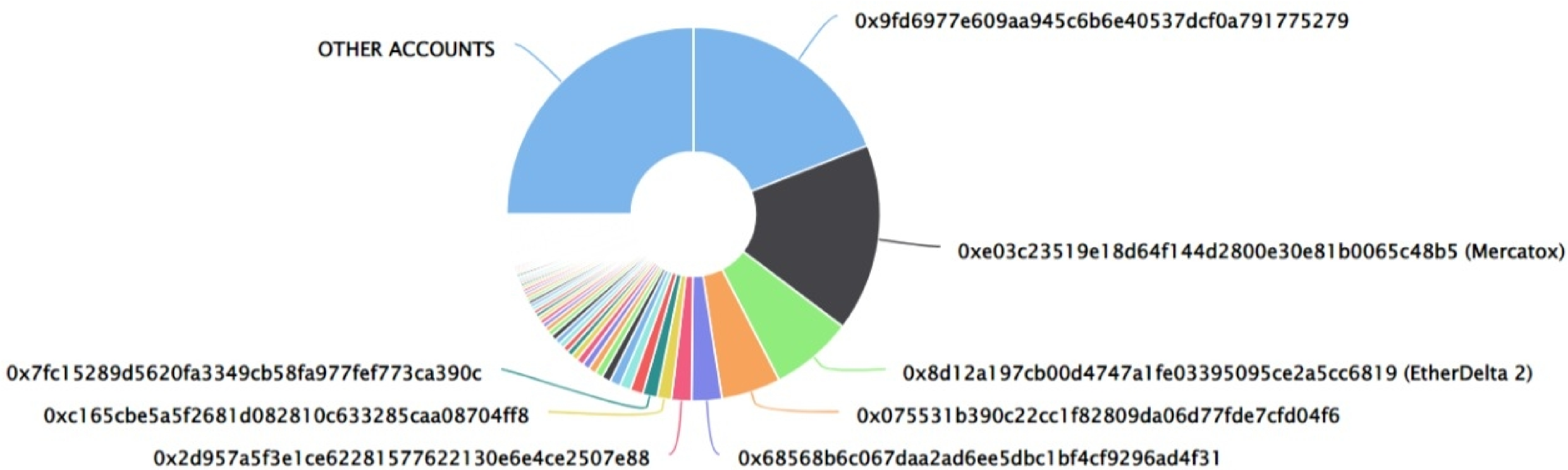
 The top 100 holders collectively own 75.01% (15,752,630.07 Tokens) of IBTC



Token Total Supply: 21,000,000.00 Token | Total Token Holders: 1,875



IBTC Top 100 Token Holders

Source: Etherscan.io



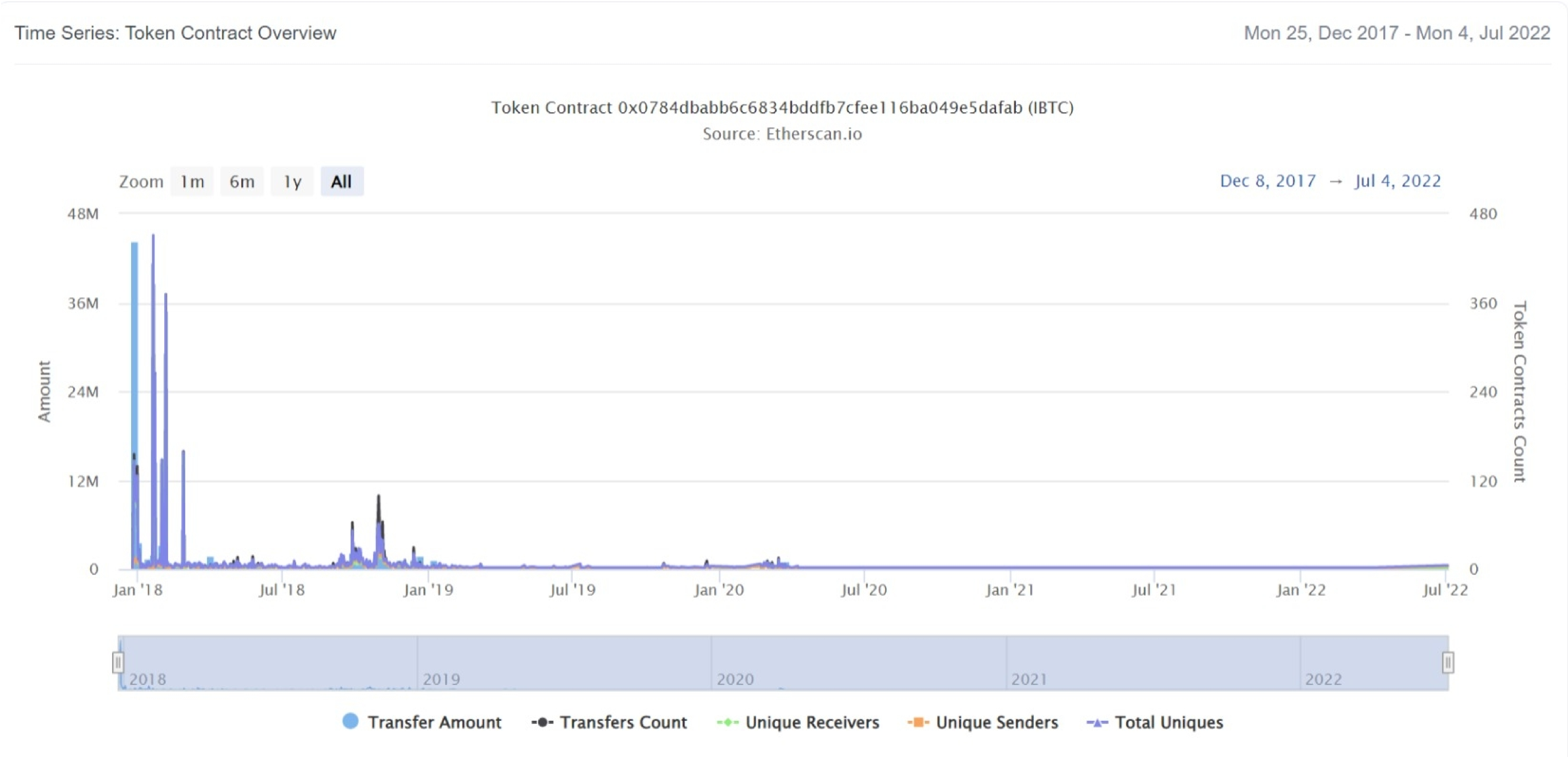
IBTC Token 20 Token Holders

(A total of 15,752,630.07 tokens held by the top 100 accounts from the total supply of 21,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0x9fd6977e609aa945c6b6e40537dcf0a791775279	4,000,548.850288420990852586	19.0502%
2	Mercatox	3,408,721.187893098725675976	16.2320%
3	 EtherDelta 2	1,498,337.862330579874437219	7.1349%
4	 0x075531b390c22cc1f82809da06d77fde7cfd04f6	1,081,778	5.1513%
5	0x68568b6c067daa2ad6ee5dbc1bf4cf9296ad4f31	543,898.241	2.5900%
6	0x2d957a5f3e1ce62281577622130e6e4ce2507e88	366,664.367632132	1.7460%
7	0xc165cbe5a5f2681d082810c633285caa08704ff8	260,004.936	1.2381%
8	0x7fc15289d5620fa3349cb58fa977fef773ca390c	258,400	1.2305%
9	0x1879851f0f89b14df436abf42814575060faefa1	240,306.938	1.1443%
10	0xd1a5818d4f32f1e824269fd5ce56b04a6b72b500	200,000	0.9524%
11	0xb8c5c8508832eec0fa8e4d57730d817ffefaaaa3	193,324.089	0.9206%
12	0x2fe919bfb747aa4760286af95c5ee95b06bc76e	158,976	0.7570%
13	0x0836bed321d8bc83dfd1db3cbde2459d4aca3ad3	142,016.416152194981674497	0.6763%
14	0xc1aeedfd8499053520e61c52fa001035208dc6bd	140,024.5	0.6668%
15	0x48630e80a6ef3cbce8bb119062658542bab014b6	134,987.545985836	0.6428%
16	0xc2adcdab2a4978334431ab5e631a4bf421dfe24c	127,989.584710797	0.6095%
17	0xc86eb59c0de26c9163bde99fe6280ea4ab88a8bd	120,500	0.5738%
18	0x37bf8cac84c5661d20b3668f7dcf732f121b91f7	104,814.17284137	0.4991%
19	0xb35f8c45d5272f3f6ce4bb76ac5e31b68fc0e661	103,146.658606166	0.4912%
20	0x38ad2597dd0ca44ee483a31a733737e90af964bc	100,859.6	0.4803%

IBTC Token Distribution

IBTC Contract Overview



Contract functions details

+ [Lib] SafeMath

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

+IERC20

- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer
- [Pub] transferFrom
- [Pub] approve
- [Pub] allowance

+IBTCToken (IERC20)

- [Pub] IBTCToken \$
- [Pub] \$
- [Pub] tokensale \$
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] sendIBTCToken #
 - modifiers: onlyOwner
- [Pub] sendIBTCTokenToMultiAddr
 - modifiers: onlyOwner
- [Pub] destroyIBTCToken #
 - modifiers: onlyOwner
- [Pub] transfer #
- [Pub] transferFrom #
- [Pub] approve #
- [Pub] allowance #
- [Pub] getTokenDetail #

(\$) = 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 issues found.

✔ Medium Severity Issues

One medium severity issues found.

1. DOS with block gas limit.

- **Description**

The smart contract has function `sendIBTCTokenToMultiAddr`, which use for loop with array of address and uint, that can fail due to the block gas limit if the pool size is too big.

- **Recommendation**

We advise you to check that array length is not too big.

✔ Low Severity Issues

Two low severity issues founds.

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 0.4.11 the contract should contain the following line:

```
pragma solidity 0.4.11;
```

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 :

- IBTC Contract :
 - Owner can send tokens.
 - Owner can destroy 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 but smart contract ownership has been renounced. Following are Admin functions and burner functions:

- Sendibtctoken
- Sendibtctokentomultiaddr
- Destroyibtctoken

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.