HackSafe

Smart Contract Security Audit Report

OTCBTC Token

October 2022

Security Status

★★★★½

www.hacksafe.io

Audit Details

Audited project
OTCBTC Token

Deployer address
0x0063283050C073308fA40d0d5E49c9A7eE0E0362

Client contacts
OTCBTC Token Team

Blockchain
Ethereum

Website
https://otcbtc.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 OTCBTC Token to perform an audit of smart contracts:

- https://etherscan.io/token/0xa86a0da9d05d0771955df05b44ca120661af16de#code

The purpose of the audit was to achieve the following:

- Ensutre 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 19.10.2022

Token Type	: ERC20
Contract name	: OTCBTC
Contract address	: 0xA86a0Da9D05d0771955DF05B44Ca120661aF16DE
Total supply	: 187,435,789.517387754799999999
Token ticker	: OTB
Decimals	: 18
Token holders	: 4,953
Transactions count	: 8,744
Compiler version	: v0.4.19+commit.c4cbbb05
Contract deployer address	: 0x0063283050C073308fA40d0d5E49c9A7eE0E0362
Owner address	: 0x0063283050C073308fA40d0d5E49c9A7eE0E0362

Social profiles

Twitter profile	: https://twitter.com/otcbtc
Coinmarketcap Profile	: https://coinmarketcap.com/currencies/otcbtc-token/
Coingecko profile	: https://www.coingecko.com/en/coins/otcbtc-token/
Telegram profile	: https://t.me/otcbtc_cn

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.

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 and some very low-level issues.

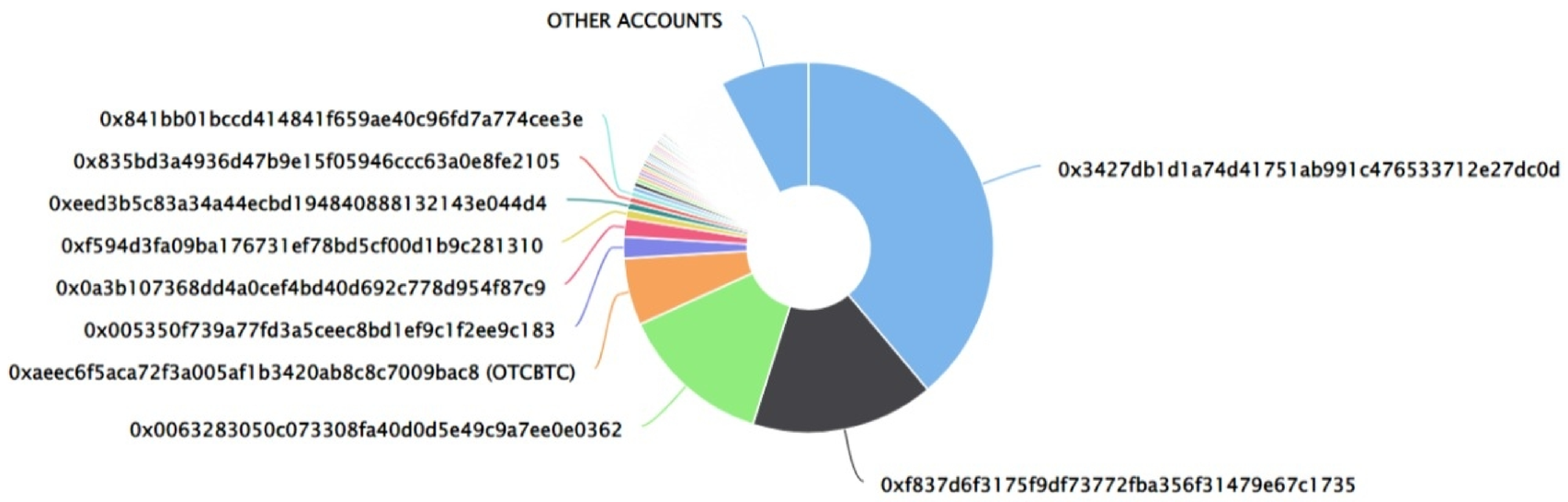
OTCBTC Token Distribution

The top 100 holders collectively own 92.24% (172,882,052.25 Tokens) of OTCBTC Token

Token Total Supply: 187,435,789.52 Token | Total Token Holders: 4,953

OTCBTC Token Top 100 Token Holders

Source: Etherscan.io



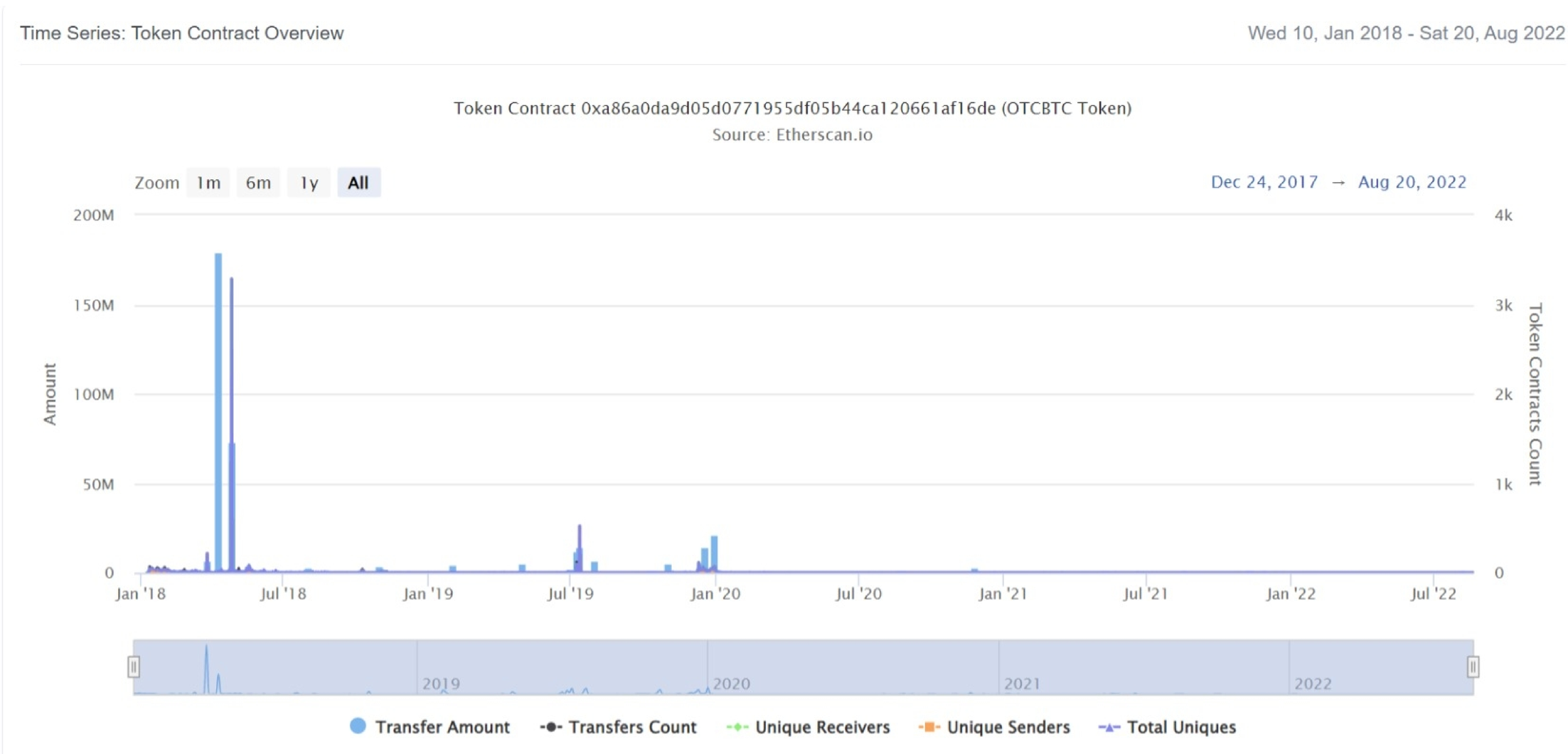
OTCBTC Token 20 Token Holders

(A total of 172,882,052.25 tokens held by the top 100 accounts from the total supply of 187,435,789.52 token)

Rank	Address	Quantity (Token)	Percentage
1	0x3427db1d1a74d41751ab991c476533712e27dc0d	72,858,150.93	38.8710%
2	0xf837d6f3175f9df73772fba356f31479e67c1735	30,000,000	16.0055%
3	0x0063283050c073308fa40d0d5e49c9a7ee0e0362	25,000,000.65	13.3379%
4	OTCBTC	10,966,583.4760672448	5.8508%
5	0x005350f739a77fd3a5ceec8bd1ef9c1f2ee9c183	3,514,997.26280004	1.8753%
6	0x0a3b107368dd4a0cef4bd40d692c778d954f87c9	2,985,180.38562215	1.5926%
7	0xf594d3fa09ba176731ef78bd5cf00d1b9c281310	1,401,440.10910463	0.7477%
8	0xeed3b5c83a34a44ecbd194840888132143e044d4	1,199,850	0.6401%
9	0x835bd3a4936d47b9e15f05946ccc63a0e8fe2105	948,764.60254096	0.5062%
10	0x841bb01bccd414841f659ae40c96fd7a774cee3e	947,631.1418	0.5056%
11	0x1192810300f93cda88253ec12acf32960d9fc871	799,900	0.4268%
12	0x70e700a5f035b0c9ae51a5157165fcd371672867	750,920.25590375	0.4006%
13	0x2b0854e9a3c023c6168f4f9ab011ad8333a76b83	684,567.5	0.3652%
14	0x6f95fd365f6d0a68e428cb92b0405907c4fb6696	590,070.68554109	0.3148%
15	0x6496567b16f23069ff2e19e6092d48edb05848e6	567,106.53417845	0.3026%
16	0x3ca0d474a4253f27c547573265c4c745f96c1709	533,867.5	0.2848%
17	0x12f291027b3b6b2ce1e1eecef308a66376aceb78	513,970.5783	0.2742%
18	0xeb0799d909635e115d5039b1c7dce75d60df63be	499,788.7019	0.2666%
19	0x519a7fc43641e58f6dc22a896032b9d82d5f7efc	490,076.09983278	0.2615%
20	0x7fd40872006b7dfd32710aeefc10b9b67043ec41	463,066.83358234	0.2471%

OTCBTC Token Distribution

OTCBTC Token Contract Overview



Contract functions details

+SafeMath

-[Int] mul

-[Int] div

-[Int] sub

-[Int] add

+ owned

-[Pub] owned

-[Pub] transferOwnership #

-modifiers: onlyOwner

-[Pub] acceptOwnership #

+ERC20

-[Pub] totalSupply

-[Pub] balanceOf

-[Pub] transfer

-[Pub] transferFrom

-[Pub] approve

-[Pub] allowance

+ERC20Token (ERC20)

-[Pub] transfer #

-[Pub] transferFrom #

-[Pub] totalSupply

-[Pub] balanceOf

-[Pub] approve #

-[Pub] allowance

+OTCBTC (ERC20Token, Owned)

-[Pub] OTCBTC

-[Pub] transferAnyERC20Token #

-modifiers: onlyOwner

[Pub] burn #

($) = 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 issues found.
- **Medium Severity Issues**
  No medium severity issues found.
- **Low Severity Issues**
  Two low severity issue found.

1. 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.

2.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 0.4.19 the contract should contain the following line:

  pragma solidity 0.4.19;

Centralization

Owner Privileges:

- OTCBTC Token Contract:
    - Owner can and transfer renounce ownership.
    - Owner can transfer any ERC20 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 as smart contract ownership has not been renounced. Following are Admin functions:

- Transferownership
- Transferanyerc20token

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.