



Smart Contract Security Audit Report

DOW

August 2022

Security Status



www.hacksafe.io



Audit Details



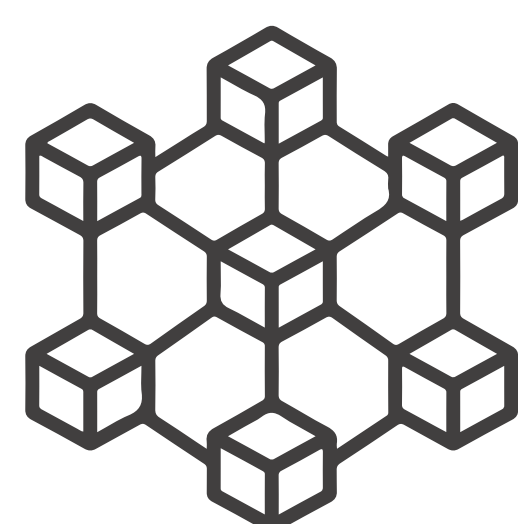
Audited project
DOW



Deployer address
0x61d0832B0E78b063942708754F6A056216CdcfD6



Client contacts
DOW Team



Blockchain
Ethereum



Website
Not provided by owner

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 DOW to perform an audit of smart contracts:

- <https://etherscan.io/address/0x76974c7b79dc8a6a109fd71fd7ceb9e40eff5382#code>

The purpose of the audit was to achieve the

- 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 31.08.2022

Token Type	: ERC20
Contract name	: DOWToken
Contract address	: 0x76974C7B79dC8a6a109Fd71fd7cEb9E40eff5382
Compiler version	: v0.4.18+commit.9cf6e910
Total supply	: 2,000,000,000
Token Ticker	: dow
Decimals	: 18
Token Holders	: 157
Transactions count	: 1090
Contract deployer address	: 0x61d0832B0E78b063942708754F6A056216CdcfD6
Owner address	: No Owner

Social profiles

Twitter profile	: https://twitter.com/dowcoin
Facebook profile	: https://www.facebook.com/dowcoin/
Github profile	: https://github.com/dowtoken
Telegram profile	: https://t.me/dowcoin
Coinmarketcap Profile	: https://coinmarketcap.com/currencies/dowcoin/
Coingecko profile	: https://www.coingecko.com/en/coins/dowcoin/

Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are “Secure”. This token contract does not contain owner control, which do make it fully decentralized as owner does not have control over smart contract.

Insecure	Poor secured	Secure	Well-secured
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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. These issues are not critical ones.

Dow Token Distribution

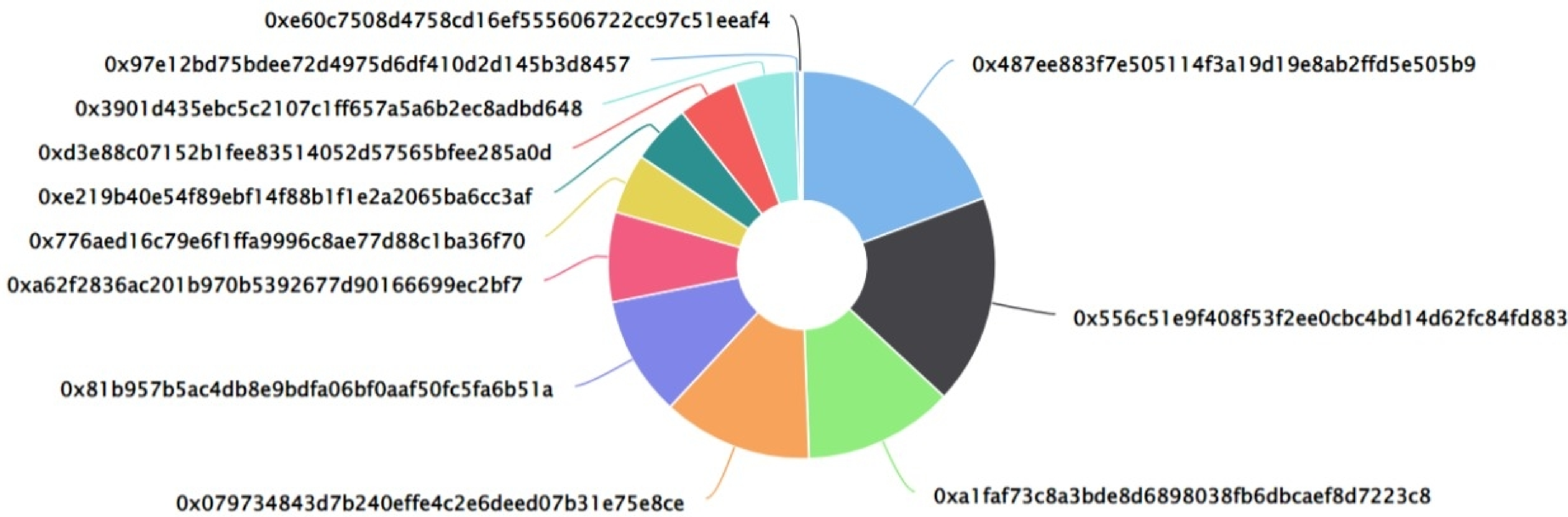
 The top 100 holders collectively own 100.00% (1,999,992,467.89 Tokens) of DOW

 Token Total Supply: 2,000,000,000.00 Token

Total Token Holders: 157

DOW Top 100 Token Holders

Source: Etherscan.io



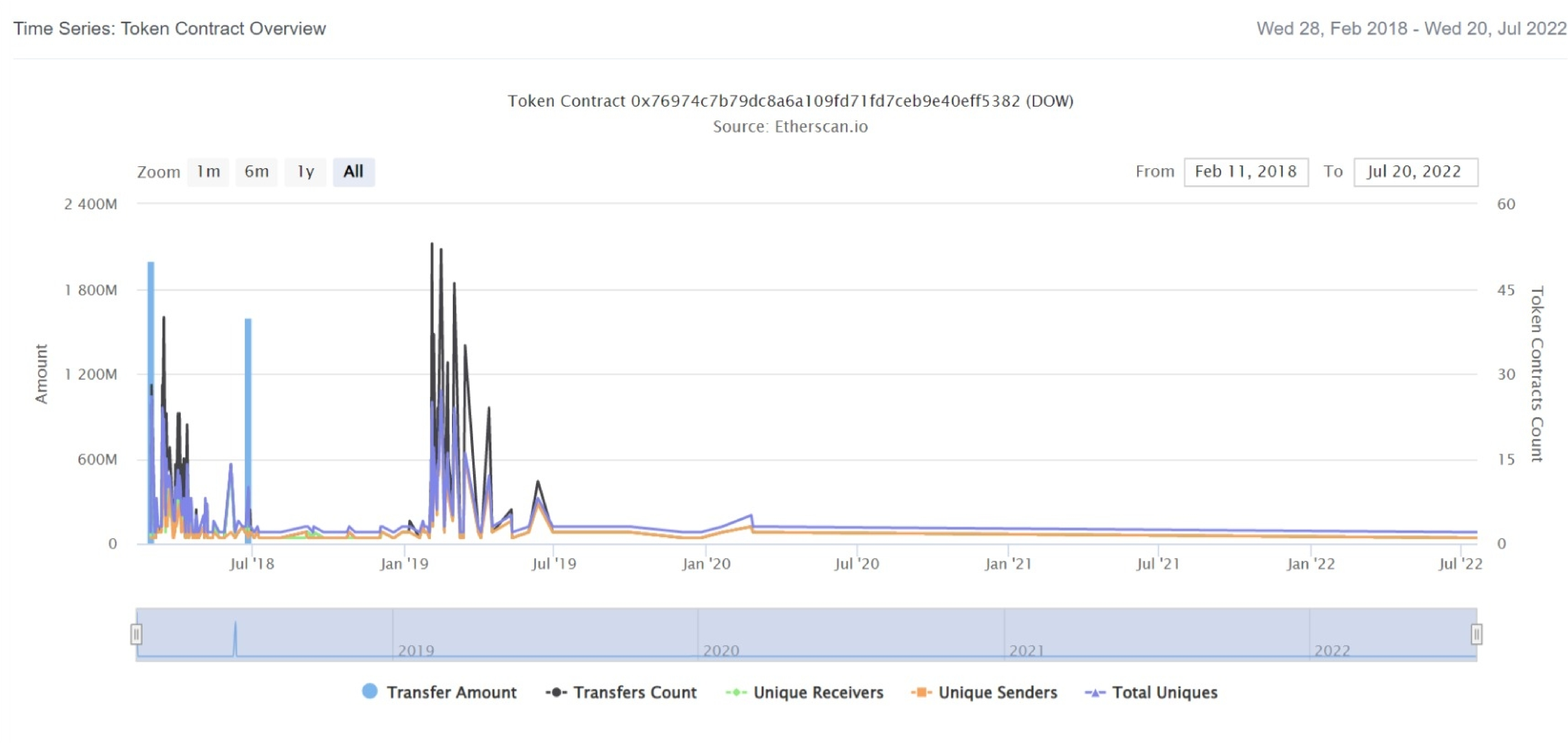
Dow Top 20 Token Holders

(A total of 1,999,992,467.89 tokens held by the top 100 accounts from the total supply of 2,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0x487ee883f7e505114f3a19d19e8ab2ffd5e505b9	388,154,734.5	19.4077%
2	0x556c51e9f408f53f2ee0cbc4bd14d62fc84fd883	350,000,000	17.5000%
3	0xa1faf73c8a3bde8d6898038fb6dbcaef8d7223c8	250,000,000	12.5000%
4	0x079734843d7b240effe4c2e6deed07b31e75e8ce	250,000,000	12.5000%
5	0x81b957b5ac4db8e9bdfa06bf0aaf50fc5fa6b51a	200,000,000	10.0000%
6	0xa62f2836ac201b970b5392677d90166699ec2bf7	150,000,000	7.5000%
7	0x776aed16c79e6f1ffa9996c8ae77d88c1ba36f70	100,000,000	5.0000%
8	0xe219b40e54f89ebf14f88b1f1e2a2065ba6cc3af	100,000,000	5.0000%
9	0xd3e88c07152b1fee83514052d57565bfee285a0d	100,000,000	5.0000%
10	0x3901d435ebc5c2107c1ff657a5a6b2ec8adbd648	100,000,000	5.0000%
11	0x97e12bd75bdee72d4975d6df410d2d145b3d8457	8,349,352.1099814	0.4175%
12	0xe60c7508d4758cd16ef555606722cc97c51eeaf4	937,853	0.0469%
13	0x6c67bc635c8eda7b474e7031444e754bb3ae8c01	896,836	0.0448%
14	0x3fb58e69a16b64cfce6c58a8bd39eb6dfefd514b	576,262.665	0.0288%
15	0xf8576d15b7c27820dc7c092d8f54bd9831971ee0	363,548.5	0.0182%
16	0xdc4d4790878ce120aa2a58f4d1dcba6de9617d2e	162,784	0.0081%
17	0x9206b1a0836ee944e4441beb4d75031f598d8e9c	94,835	0.0047%
18	0x40654dc0c2b35af786aecf69aad5db7150a8e15	34,282	0.0017%
19	0x1aad57cb1404b8786ae2f551f9fe915cac74c8f5	34,282	0.0017%
20	0x040f906feb24190c97de036323f1b3f74369ed2d	32,000	0.0016%

Dow Token Distribution

Dow Contract Overview



Contract functions details

+[Int] IERC20

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

+ BasicToken (IERC20)

- [Pub] balanceOf
- [Pub] allowance
- [Pub] transfer #
- [Pub] transferFrom #
- [Pub] approve #
- [Pub] increaseApproval #
- [Pub] decreaseApproval #

+[Lib] SafeMath

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

+ DOWToken (BasicToken)

- [Pub] DOWToken #
- [Pub] changeFounderMultiSigAddress #

(\$) = 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 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 0.4.18 the contract should contain the following line:

```
pragma solidity 0.4.18;
```


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.