



Smart Contract Security Audit Report

MetaGraphChain

January 2023

Security Status



www.hacksafe.io



Audit Details



Audited project

Metagraphchain



Deployer address

0xedae80becc3766075f47139ca683e2d0a610207e



Client contacts

MetaGraphChain



Blockchain

Ethereum



Website

Not provided

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 MetaGraphChain to perform an audit of smart contracts:

- <https://etherscan.io/token/0x6a27348483d59150ae76ef4c0f3622a78b0ca698#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.

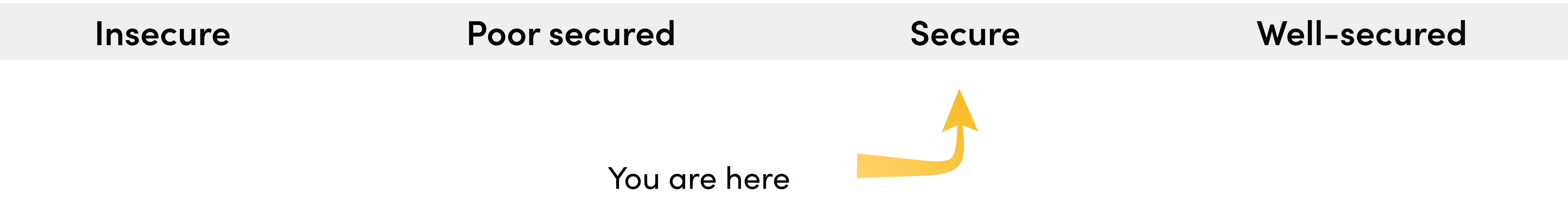
Contract Details

Token contract details for 16.01.2023

Token Type	: DEFI
Contract name	: MetaGraphChain
Contract address	: 0x6A27348483D59150aE76eF4C0f3622A78B0cA698
Total supply	: 10,000,000,000
Token ticker	: BKBT
Decimals	: 18
Token Holders	: 28,283
Transactions count	: 71,911
Compiler version	: v0.4.18+commit.9cf6e910
Contract deployer address	: 0xedae80becc3766075f47139ca683e2d0a610207e
Owner address	: 0x606A324BbAbF1C9DEAFbb8E90F22eE588a08599c

Audit Summary

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



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 0 low.

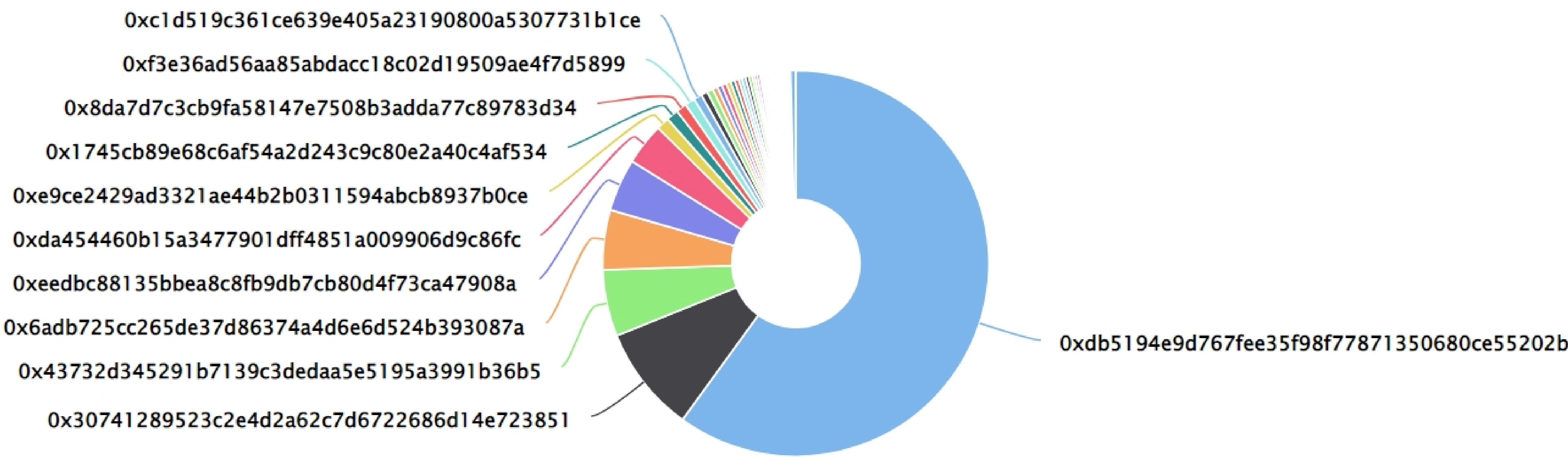
MetaGraphChain Token Distribution

💡 The top 100 holders collectively own 99.56% (9,955,765,959.03 Tokens) of MetaGraphChain

💡 Token Total Supply: 10,000,000,000.00 Token | Total Token Holders: 28,283


MetaGraphChain Top 100 Token Holders

Source: Etherscan.io



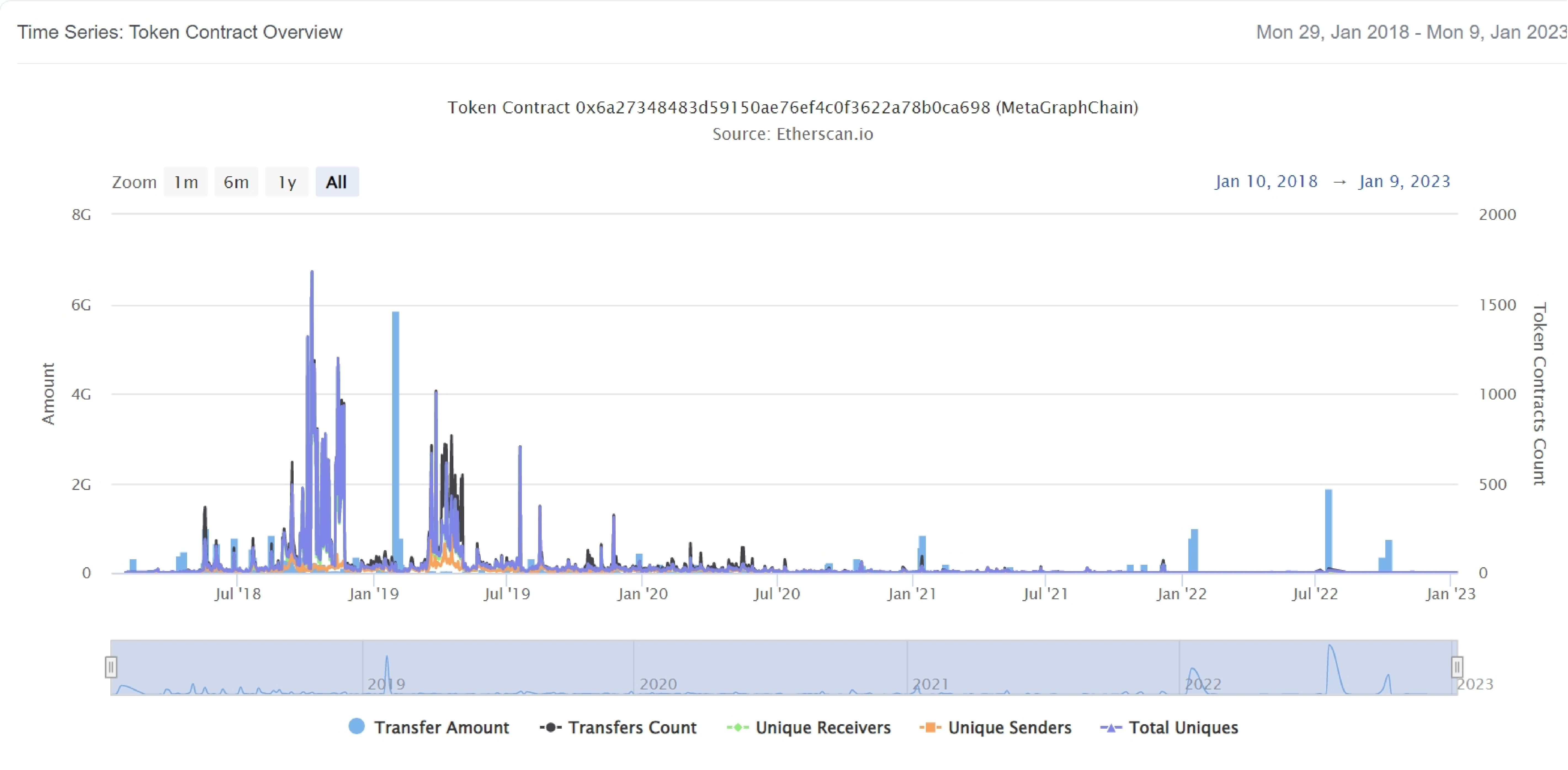
MetaGraphChain Top 20Token Holders

(A total of 9,955,765,959.03 tokens held by the top 100 accounts from the total supply of 10,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0xdb5194e9d767fee35f98f77871350680ce55202b	6,000,001,372.10917258	60.0000%
2	0x30741289523c2e4d2a62c7d6722686d14e723851	889,327,145.377682053	8.8933%
3	0x43732d345291b7139c3dedaa5e5195a3991b36b5	559,134,680.3746733	5.5913%
4	 0x6adb725cc265de37d86374a4d6e6d524b393087a	500,090,000	5.0009%
5	0xeedbc88135bbea8c8fb9db7cb80d4f73ca47908a	440,274,306.62822504	4.4027%
6	0xda454460b15a3477901dff4851a009906d9c86fc	348,325,788.9580387	3.4833%
7	0xe9ce2429ad3321ae44b2b0311594abcb8937b0ce	108,874,247.36151289	1.0887%
8	0x1745cb89e68c6af54a2d243c9c80e2a40c4af534	99,999,999.9	1.0000%
9	0x8da7d7c3cb9fa58147e7508b3adda77c89783d34	88,331,549.6579	0.8833%
10	0xf3e36ad56aa85abdacc18c02d19509ae4f7d5899	82,910,037.81368868	0.8291%
11	0xc1d519c361ce639e405a23190800a5307731b1ce	69,849,458.257212	0.6985%
12	Huobi: Old Address 9	55,000,000	0.5500%
13	0x4afcfff600836040c263ea7f813f46904bff059a	50,000,000	0.5000%
14	0x225f8b66cc6a8492c9059156bc293f04bd93dd22	42,000,000	0.4200%
15	0x0e416b0ff3820fc1b4b8d6b634b98c33afc9610	40,458,701	0.4046%
16	0x36d7b8e4c226f82a6e9cfac5272f542f48f88092	39,900,000	0.3990%
17	0xc7c171a3cefb734025a1c89b141d7b812e5a7a19	36,976,846.8773642	0.3698%
18	0xd4815abc9d474cc77ebbcf8d765490231aba211f	36,100,000	0.3610%
19	0x414641c7fff0ef78a39ab2ecd8d4fa0441d51deb	32,849,663.58891013	0.3285%
20	0xa33651b42dca3805441d1fdeec7a751aa3609dcf	30,299,900	0.3030%

MetaGraphChain Token Distribution

MetaGraphChain Contract Overview



Contract functions details

+[Lib] SafeMath

-[Int] mul

-[Int] div

-[Int] sub

-[Int] add

+ERC20

-[Pub] balanceOf

-[Pub] transfer

-[Pub] allowance

-[Pub] transferFrom

-[Pub] approve

+BasicToken (ERC20)

-[Pub] transfer #

-[Pub] balanceOf

+StandardToken (ERC20, BasicToken)

-[Pub] transferFrom #

-[Pub] approve #

-[Pub] allowance

+MetaGraphChain (StandardToken)

-[Pub] MetaGraphChain #

-[Pub] changeName #

-[Pub] changeSymbol #

-[Pub] changeNameAndSymbol #

(\$) = payable function

= non-constant function

Issues Checking Status

No.	Title	Status
1.	Compiler error	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.	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	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 issue found.

✔ Low Severity Issues

No low severity issue found.

Centralization

Owner Privileges :

- MetaGraphChain Contract :
 - owner can change name, symbol, nameandsymbol.

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 ownership has not been renounced.

Conclusion

Smart contract contains no 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.