HackSafe

Smart Contract Security Audit Report

Ccore

September 2022

Security Status

★ ★ ★ ★ ★

www.hacksafe.io

Audit Details

Audited project
Ccore

Deployer address
0xCFe66A7339bd08469bB2Fc6ab4CAED4C022Fc6ac

Client contacts
Ccore Team

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 Ccore to perform an audit of smart contracts:

- https://etherscan.io/token/0x679badc551626e01b23ceecefbc9b877ea18fc46#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 30.09.2022

Token Type	: ERC20
Contract name	: CcoreTokenContract
Contract address	: 0x679BADc551626e01B23CeecEFBc9B877EA18fc46
Total supply	: 10,000,000
Token ticker	: CCO
Decimals	: 18
Token holders	: 748
Transactions count	: 4,297
Compiler version	: v0.4.18+commit.9cf6e910
Contract deployer address	: 0xCFe66A7339bd08469bB2Fc6ab4CAED4C022Fc6ac
Owner address	: No owner

Social profiles

Twitter Profile	: https://twitter.com/ccore_io
Telegram profile	: https://t.me/ccore_io
Facebook profile	: https://www.facebook.com/ccore.io
Coinmarketcap profile	: https://coinmarketcap.com/currencies/ccore/
Coingecko profile	: https://www.coingecko.com/en/coins/ccore/

Audit Summary

According to the standard audit assessment, Customer`s solidity smart contracts are “**Well 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

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. These issues are not critical ones.

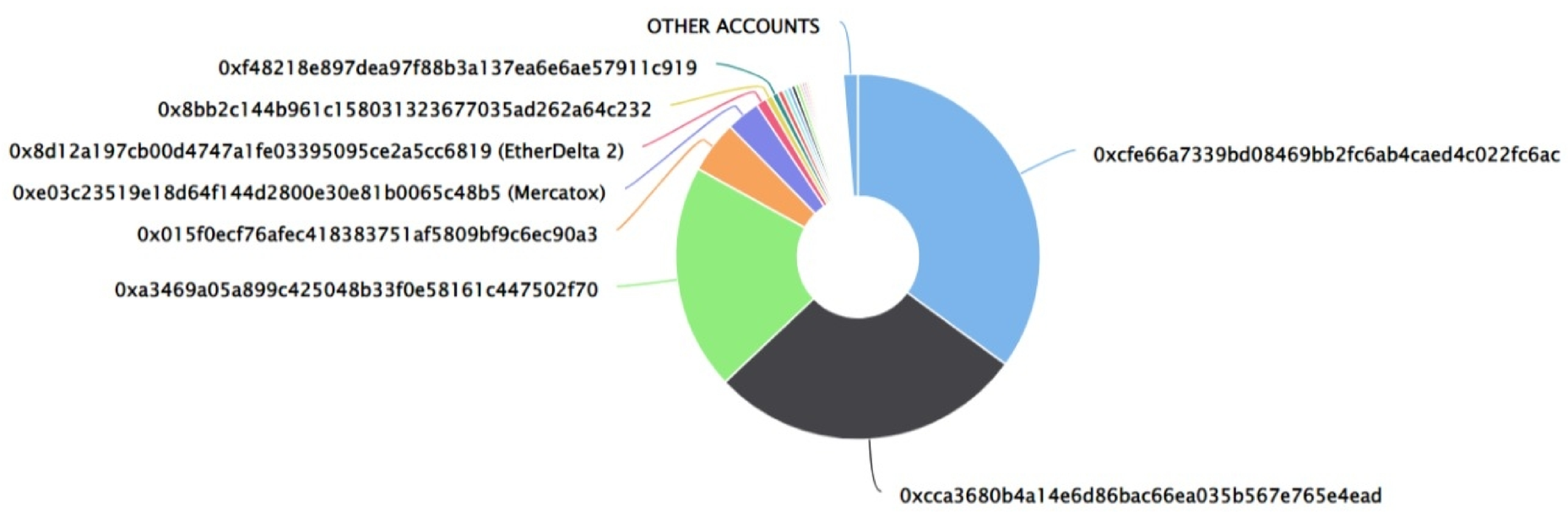
Ccore Token Distribution

The top 100 holders collectively own 98.70% (9,870,119.08 Tokens) of Ccore

Token Total Supply: 10,000,000.00 Token | Total Token Holders: 748

Ccore Top 100 Token Holders

Source: Etherscan.io



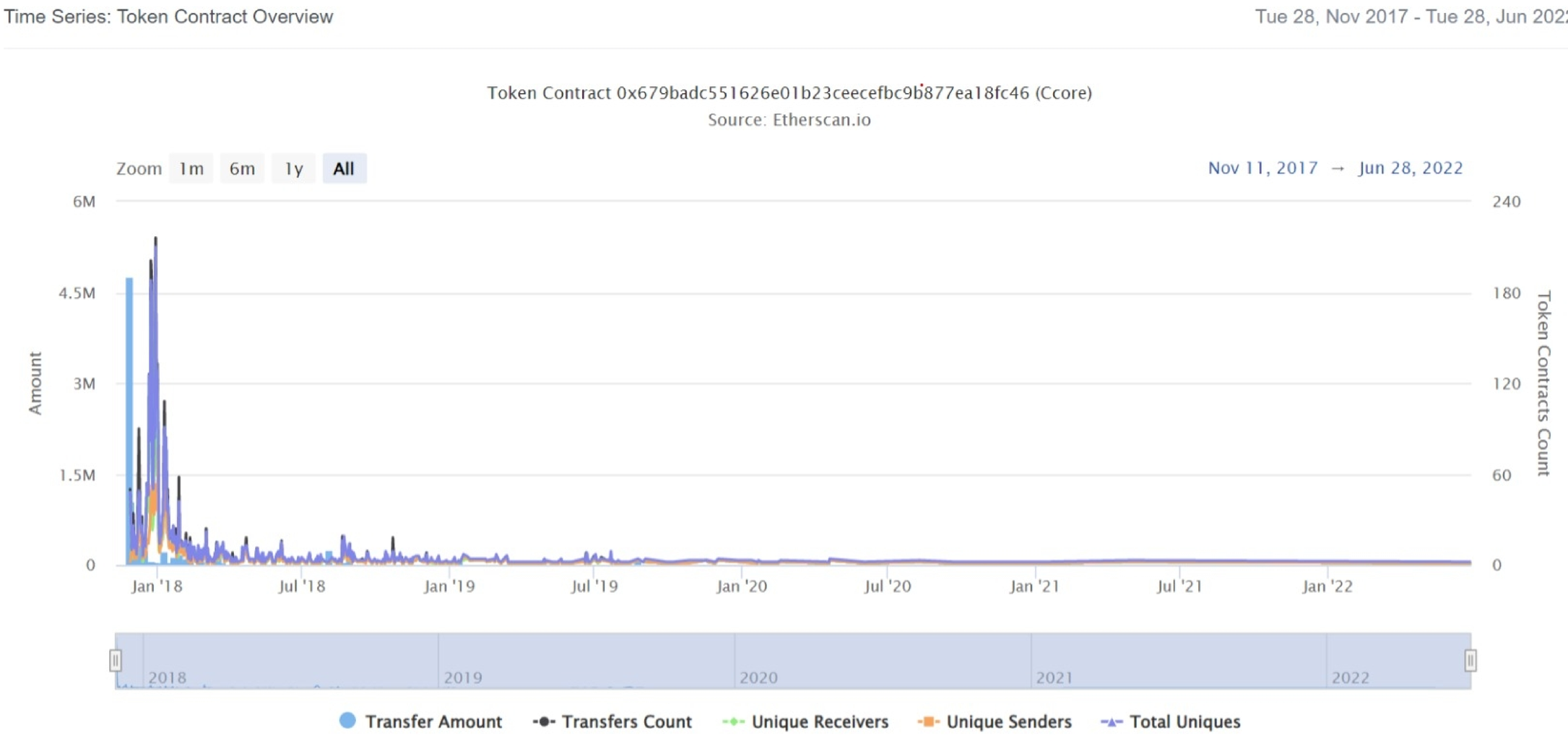
Ccore Top 20 Token Holders

(A total of 9,870,119.08 tokens held by the top 100 accounts from the total supply of 10,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0xcfe66a7339bd08469bb2fc6ab4caed4c022fc6ac	3,500,000	35.0000%
2	0xcca3680b4a14e6d86bac66ea035b567e765e4ead	2,800,001	28.0000%
3	0xa3469a05a899c425048b33f0e58161c447502f70	2,000,000	20.0000%
4	0x015f0ecf76afec418383751af5809bf9c6ec90a3	463,350.0246025466171976	4.6335%
5	Mercatox	300,590.987561528541656567	3.0059%
6	EtherDelta 2	93,565.084366047070249444	0.9357%
7	0x8bb2c144b961c158031323677035ad262a64c232	61,512.893782856838815154	0.6151%
8	0xf48218e897dea97f88b3a137ea6e6ae57911c919	53,889.420411251255570949	0.5389%
9	0x27c839a65cfb663fd12564b499836e0b295a5954	50,000	0.5000%
10	IDEX	40,674.122358226150269257	0.4067%
11	0x648c53a0b99ea2491535ff9dfecad8fe37b49e0c	39,688.432967799821320568	0.3969%
12	0x2664737643cdbb8af911aee33878d00a9a674ea3	36,214.973812227146487745	0.3621%
13	0x89aff3898408ecb8879cb27c36cdbeb2d8f9492e	34,615.999741557944373042	0.3462%
14	0x2164e8f4f7774146427a99b080848f4c15313e04	23,758.87198303	0.2376%
15	0xbc5f49b9174d0b28b665d8f46190a391250707e3	23,000	0.2300%
16	0xc45c589f835b92b312422bc8cb0de0c33c9f338a	21,228.83495034	0.2123%
17	0x4118f5959b7fccacf4fe7a8c9ed53b1af7f39039	20,562.801534753005	0.2056%
18	0x94beafc2cc90a3e015227a2bf427c5568745aa31	15,015	0.1502%
19	0xcf508f91298bc8a7f1d4afec058a375af65a87d8	14,846.63618182	0.1485%
20	0x6ba366de900785e24c605e4a8b5261bb23a97fe0	14,700.000001	0.1470%

Ccore Token Distribution

Ccore Contract Overview



Contract functions details

+[Int] tokenRecipient
    -[Pub] receiveApproval

+CcoreTokenContract
    -[Pub] CcoreTokenContract
    -[Int] _transfer #
    -[Pub] transfer #
    -[Pub] transferFrom #
    -[Pub] approve #
    -[Pub] approveAndCall #
    -[Pub] burn #
    -[Pub] burnFrom #

($) = 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. 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 0.4.16 the contract should contain the following line:

  pragma solidity 0.4.18;

2. Too 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.

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.