



Smart Contract Security Audit Report

Carbon

April 2022

Security Status



www.hacksafe.io



Audit Details



Audited project

Carbon team



Deployer address

0x4f9Db9a11A23f3116fcbE194B7A077Ed83d75A7C



Client contacts

Carbon team



Blockchain

Ethereum



Website

<https://carbon.network/>

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.

Background

HeckSafe was commissioned by Carbon to perform an audit of smart contracts:

- <https://etherscan.io/address/0xb4371da53140417cbb3362055374b10d97e420bb#code>

Contract Details

Token contract details for 19.04.2022

Contract name	:SwitcheoToken
Contract address	: 0xB4371dA53140417CBb3362055374B10D97e420bB
Total supply	: 18,85,180.82306893
Token Ticker	: SWTH
Decimals	: 8
Token Holders	: 86
Transactions count	: 1,158
Contract deployer address	: 0x4f9Db9a11A23f3116fcbE194B7A077Ed83d75A7C

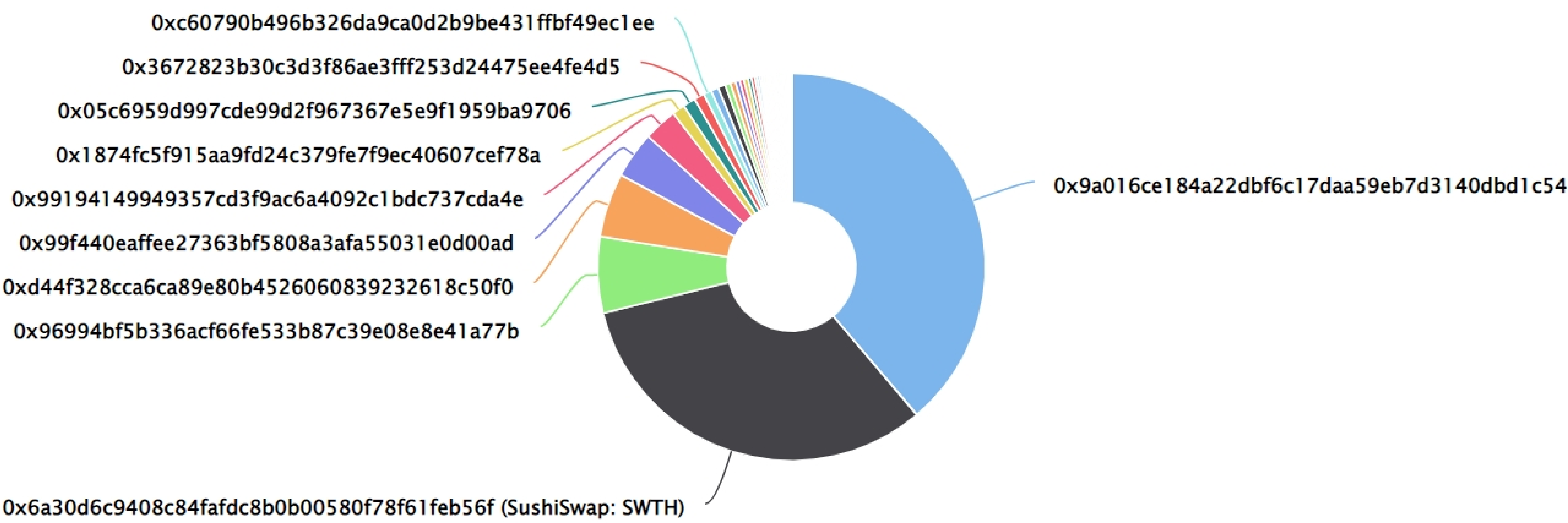
Switcheo Token Distribution

The top 100 holders collectively own 100.00% (18,855,180.82 Tokens) of Switcheo Token

Token Total Supply: 18,855,180.82 Token | Total Token Holders: 86



Switcheo Token Top 100 Token Holders

Source: Etherscan.io



Switcheo Top 10 Token Holders

(A total of 17,572,881.40 tokens held by the top 10 accounts from the total supply of 18,855,180.82 token)

Rank	Address	Quantity (Token)	Percentage
1	 0x9a016ce184a22dbf6c17daa59eb7d3140dbd1c54	7,322,170.82195821	38.8337%
2	 SushiSwap: SWTH	6,096,037.86192196	32.3308%
3	0x96994bf5b336acf66fe533b87c39e08e8e41a77b	1,200,177.34590798	6.3652%
4	0xd44f328cca6ca89e80b4526060839232618c50f0	1,013,552.57728035	5.3755%
5	0x99f440eaffee27363bf5808a3afa55031e0d00ad	732,017.55459905	3.8823%
6	0x99194149949357cd3f9ac6a4092c1bdc737cda4e	526,696.46062566	2.7934%
7	0x1874fc5f915aa9fd24c379fe7f9ec40607cef78a	200,000	1.0607%
8	0x05c6959d997cde99d2f967367e5e9f1959ba9706	197,615.72292401	1.0481%
9	0x3672823b30c3d3f86ae3fff253d24475ee4fe4d5	162,646.2820418	0.8626%
10	0xc60790b496b326da9ca0d2b9be431ffbf49ec1ee	121,966.77514299	0.6469%

Contract functions details

SafeMath.sol

+ [Lib] SafeMath

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

ERC20.sol

+ ERC20 (IERC20)

- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Pub] increaseApproval #
- [Pub] decreaseApproval #
- [Int] _transfer#
- [Int] _mint #
- [Int] _burn #
- [Int] _approve #
- [Int] _burnFrom #

ERC20Detailed.sol

+ ERC20Detailed

- [Pub] <Constructor> #
- [Pub] name
- [Pub] symbol
- [Pub] decimals

Contract functions details

IERC20.sol

+ [Int] IERC20

- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

SwitcheoToken.sol

+ SwitcheoToken (ERC20, ERC20Detailed)

- [Pub] <Constructor> #
- [Int] _transfer #
- [Ext] circulatingSupply #

Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	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

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

No low severity issues found.

Conclusion

Smart contract contains no 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.