HackSafe

Smart Contract Security Audit Report

Moonlift

October 2022

Security Status

★★★★½

www.hacksafe.io

Audit Details

Audited project
Moonlift

Deployer address
0x1cc55d7d0cFb2ba20633311a4Aa76E330ae66195

Client contacts
Moonlift Team

Blockchain
Binance smart chain

Website
https://moonlift.capital/

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 Moonlift to perform an audit of smart contracts:

- https://bscscan.com/address/0x9d7c580e0bc4ea441db96eebc7e1440d264bce51#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 06.10.2022

Token Type	: BEP20
Contract name	: Moonlift
Contract address	: 0x9D7c580e0bc4eA441Db96eebc7e1440d264bcE51
Total supply	: 87,500,000,000
Token ticker	: MLTPX
Decimals	: 18
Token holders	: 7,893
Transactions count	: 88,594
Compiler version	: v0.6.12+commit.27d51765
Contract deployer address	: 0x1cc55d7d0cFb2ba20633311a4Aa76E330ae66195
Owner address	: 0x1e26cda209c9ce1799b35a51f3eefb6decd0680b

Social profiles

Twitter Profile	: https://twitter.com/Moonlift
Telegram profile	: https://t.me/MoonLift
Coinmarketcap profile	: https://coinmarketcap.com/currencies/moonlift-protocol/
Coingecko profile	: https://www.coingecko.com/en/coins/moonlift/

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

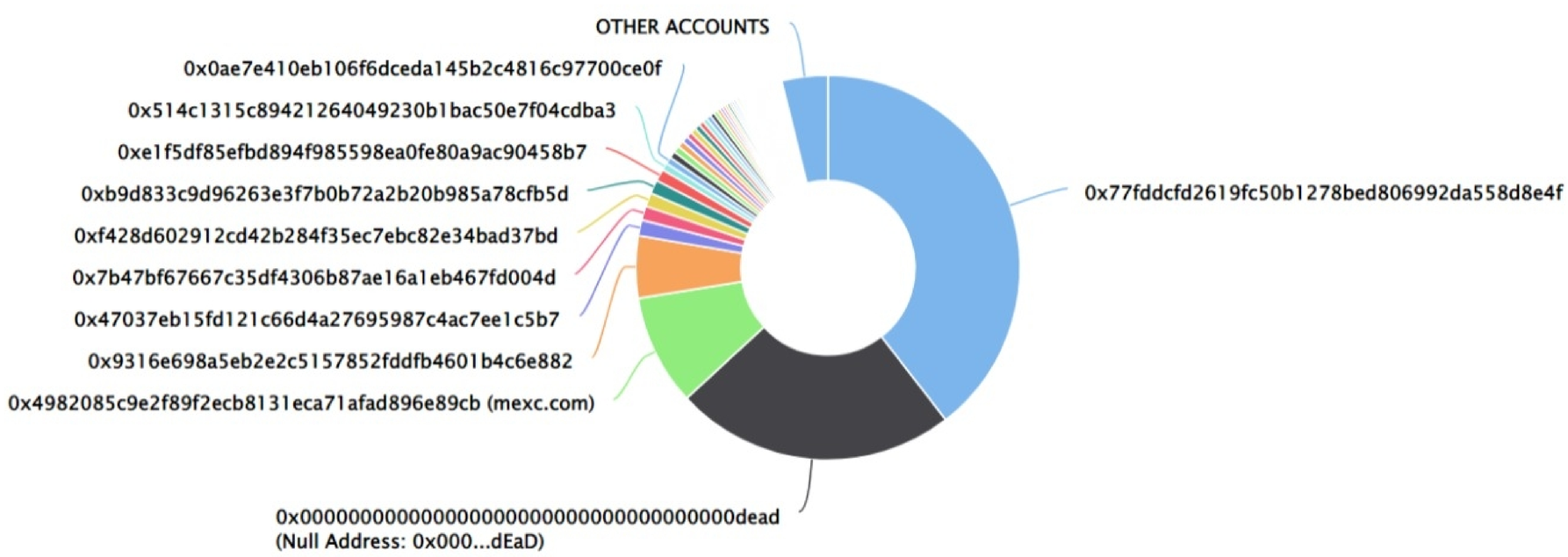
You are here 

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 1 low and some very low-level issues. These issues are not critical ones.

Moonlift Token Distribution

The top 100 holders collectively own 96.13% (84,111,889,823.65 Tokens) of Moonlift | Token Total Supply: 87,500,000,000.00 Token | Total Token Holders: 7,893



Moonlift Top 20 Token Holders

(A total of 84,111,889,823.65 tokens held by the top 100 accounts from the total supply of 87,500,000,000.00 token)

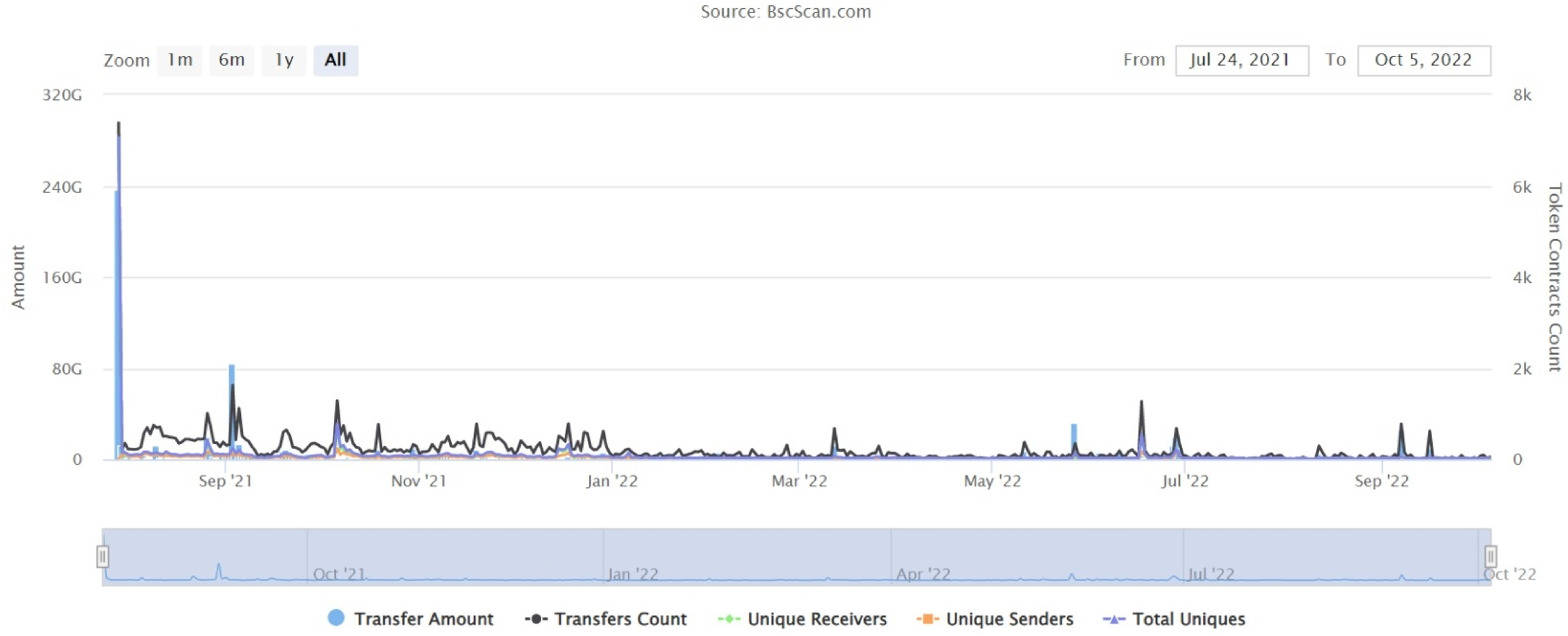
Rank	Address	Quantity (Token)	Percentage
1	0x77fddcfd2619fc50b1278bed806992da558d8e4f	34,566,519,897.478057739581906273	39.5046%
2	Null Address: 0x000...dEaD	20,695,195,954.766045862374979677	23.6517%
3	mexc.com	8,138,712,734.117979345019720115	9.3014%
4	0x9316e698a5eb2e2c5157852fddfb4601b4c6e882	4,568,447,331.89005335108102756	5.2211%
5	0x47037eb15fd121c66d4a27695987c4ac7ee1c5b7	1,153,461,266.790680451904034899	1.3182%
6	0x7b47bf67667c35df4306b87ae16a1eb467fd004d	1,051,983,666.11514488540285334	1.2023%
7	0xf428d602912cd42b284f35ec7ebc82e34bad37bd	1,001,424,715.906108894250447267	1.1445%
8	0xb9d833c9d96263e3f7b0b72a2b20b985a78cfb5d	1,001,000,000.000028386592922116	1.1440%
9	0xe1f5df85efbd894f985598ea0fe80a9ac90458b7	900,000,000	1.0286%
10	0x514c1315c89421264049230b1bac50e7f04cdba3	553,643,176.678588991	0.6327%
11	0x0ae7e410eb106f6dceda145b2c4816c97700ce0f	499,881,667.282259158912283821	0.5713%
12	0xf225bd92ddb722015f8c1255f4d97e5b56cb929c	492,740,302.518173712055792567	0.5631%
13	Moonlift Capital: MLTPX Token	492,649,024.47003572053509345	0.5630%
14	0x0fd3962e334bde07559a7377de08f57ee74b2195	479,078,056.840944337545128572	0.5475%
15	0x7e06afbaf8e253898f3f3bd7b2eaf1ec8551702a	449,863,249.262704810474693574	0.5141%
16	0x8b8f4a9213937f106ac75a3a3bcc6245f785bcdc	422,914,095.762691567308579317	0.4833%
17	0xeda04d93be8c8dce22177cd1c2cbd6abba0dbdb0	418,712,849.740002	0.4785%
18	0xdd645699047d33f3cd8ea4c38559971378ba1f77	404,874,381.611521915225342478	0.4627%
19	PancakeSwap V2: MLTPX-BUSD	353,833,452.237752392913546354	0.4044%
20	0x95075855cd95935665fe5c0af2403b0d699a4fd3	351,520,841.382	0.4017%

Moonlift Token Distribution

Moonlift Contract Overview

Time Series: Token Contract Overview — Thu 29, Jul 2021 - Wed 5, Oct 2022

Token Contract 0x9d7c580e0bc4ea441db96eebc7e1440d264bce51 (Moonlift)
Source: BscScan.com



Contract functions details

+Context
    -[Int] <constructor>
    -[Int] _msgSender
    -[Int] _msgData

+Ownable (Context)
    -[Int] <constructor>
    -[Pub] owner
    -[Pub] renounceOwnership #
      -modifiers: onlyOwner
    -[Pub] transferOwnership #
      -modifiers: onlyOwner
    -[Int] _transferOwnership #

+[Int] IBEP20
    -[Ext] totalSupply
    -[Ext] decimals
    -[Ext] symbol
    -[Ext] name
    -[Ext] getOwner
    -[Ext] balanceOf
    -[Ext] transfer
    -[Ext] allowance
    -[Ext] approve
    -[Ext] transferFrom

+[Lib] SafeMath
    -[Int] add
    -[Int] sub
    -[Int] sub
    -[Int] mul
    -[Int] div
    -[Int] div
    -[Int] mod
    -[Int] mod
    -[Int] min
    -[Int] sqrt

Contract functions details

+[Lib] Address
    -[Int] isContract
    -[Int] sendValue
    -[Int] functionCall
    -[Int] functionCallWithValue
    -[Int] functionCallWithValue
    -[Pvt] _functionCallWithValue

+BEP20 (Context, IBEP20, Ownable)
    -[Pub] <constructor>
    -[Ext] getOwner
    -[Pub] name
    -[Pub] decimals
    -[Pub] symbol
    -[Pub] totalSupply
    -[Pub] balanceOf
    -[Pub] transfer #
    -[Pub] allowance
    -[Pub] approve #
    -[Pub] transferFrom #
    -[Pub] increaseAllowance #
    -[Pub] decreaseAllowance #
    -[Pub] mint #
      -modifiers: onlyOwner
    -[Int] _transfer #
    -[Int] _mint #
    -[Int] _burn #
    -[Int] _approve #
    -[Int] _burnFrom #

+Moonlift (BEP20)
    -[Pub] mint #
      -modifiers: onlyOwner
    -[Ext] delegates
    -[Ext] delegate
    -[Ext] delegateBySig
    -[Ext] getCurrentVotes

Contract functions details

-[Ext] getPriorVotes
-[Int] _delegate
-[Int] _moveDelegates
-[Int] _writeCheckpoint
-[Int] safe32
-[Int] getChainId

($) = payable function
= non-constant function

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
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 issue found.

Low Severity Issues

One 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.

Centralization

Owner Privileges :

- Moonlift Contract:
    - Owner can remove and transfer ownership.
    - Owner can mint new 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 functions:

- Transferownership
- Renounceownership
- Mint

Conclusion

Smart contract contains low severity issues! The further transfer and operations with the fund raised are not related to this particular contract.

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.