



Smart Contract Security Audit Report

DEEPMAZE

January 2023

Security Status



www.hacksafe.io



Audit Details



Audited project

DEEPMAZE



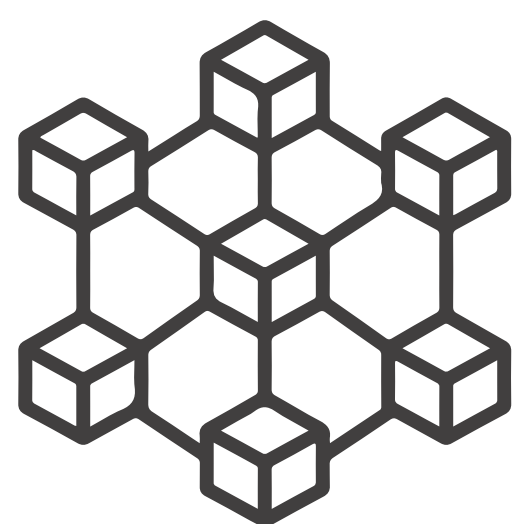
Deployer address

0x25c576144e75f86db15fc8420c09bda1e3ac4d99



Client contacts

DEEPMAZE



Blockchain

Binance smart chain



Website

[Https://Www.Deepmaze.Finance/](https://www.Deepmaze.Finance/)

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 DEEPMAZE to perform an audit of smart contracts:

- <https://bscscan.com/token/0xdC0118B27276065C573386aa44e7a6E5e2AF07C1#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.

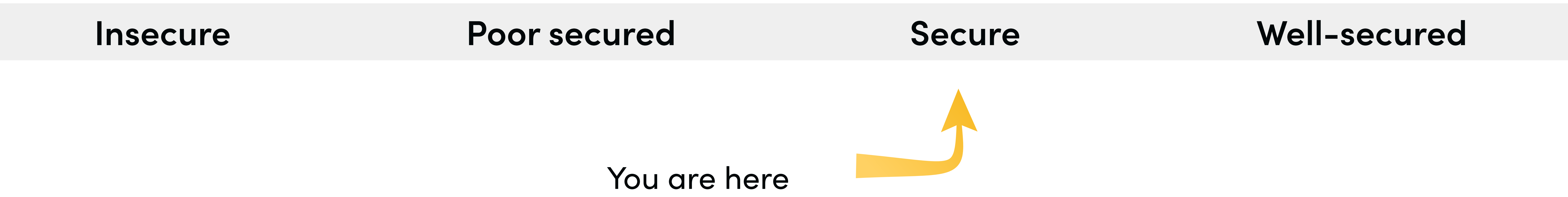
Contract Details

Token contract details for 10.01.2023

Token Type	: DEFI
Contract name	: DeepMaze
Contract address	: 0xdC0118B27276065C573386aa44e7a6E5e2AF07C1
Total supply	: 871,919,871.38175
Token ticker	: DPZ
Decimals	: 18
Token Holders	: 24,242
Transactions count	: 39,546
Presale tokens	: 0
Hard cap	: 10000000
Price	: 0.00016
Pancake swap V2 pair	: 0xade8078986e1128702f2bfc038ccc78397d4849e
Compiler version	: v0.6.12+commit.27d51765
Contract deployer address	: 0x25c576144e75f86db15fc8420c09bda1e3ac4d99
Owner address	: 0x25c576144e75f86db15fc8420c09bda1e3ac4d99

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.



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.

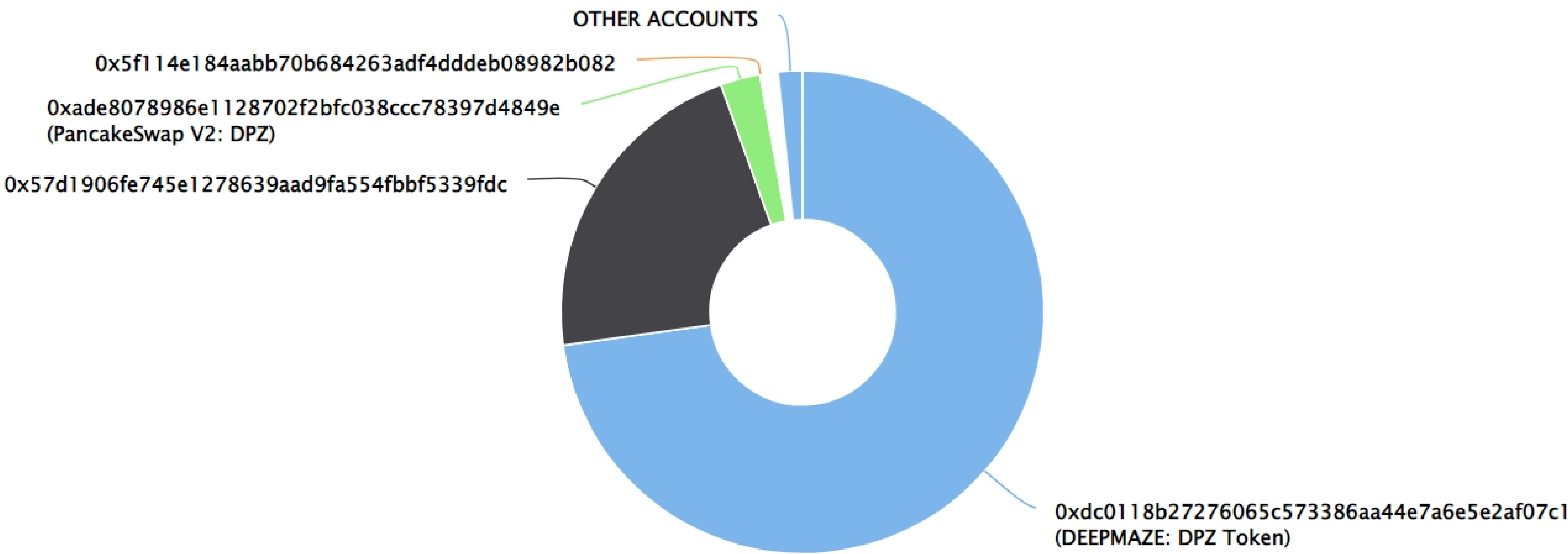
DEEPMAZE Token Distribution

💡 The top 100 holders collectively own 98.39% (857,892,784.99 Tokens) of DEEPMAZE

💡 Token Total Supply: 871,919,871.38 Token | Total Token Holders: 24,242




DEEPMAZE Top 100 Token Holders

Source: BscScan.com



DEEPMAZE Top 20 Token Holders

(A total of 857,892,784.99 tokens held by the top 100 accounts from the total supply of 871,919,871.38 token)

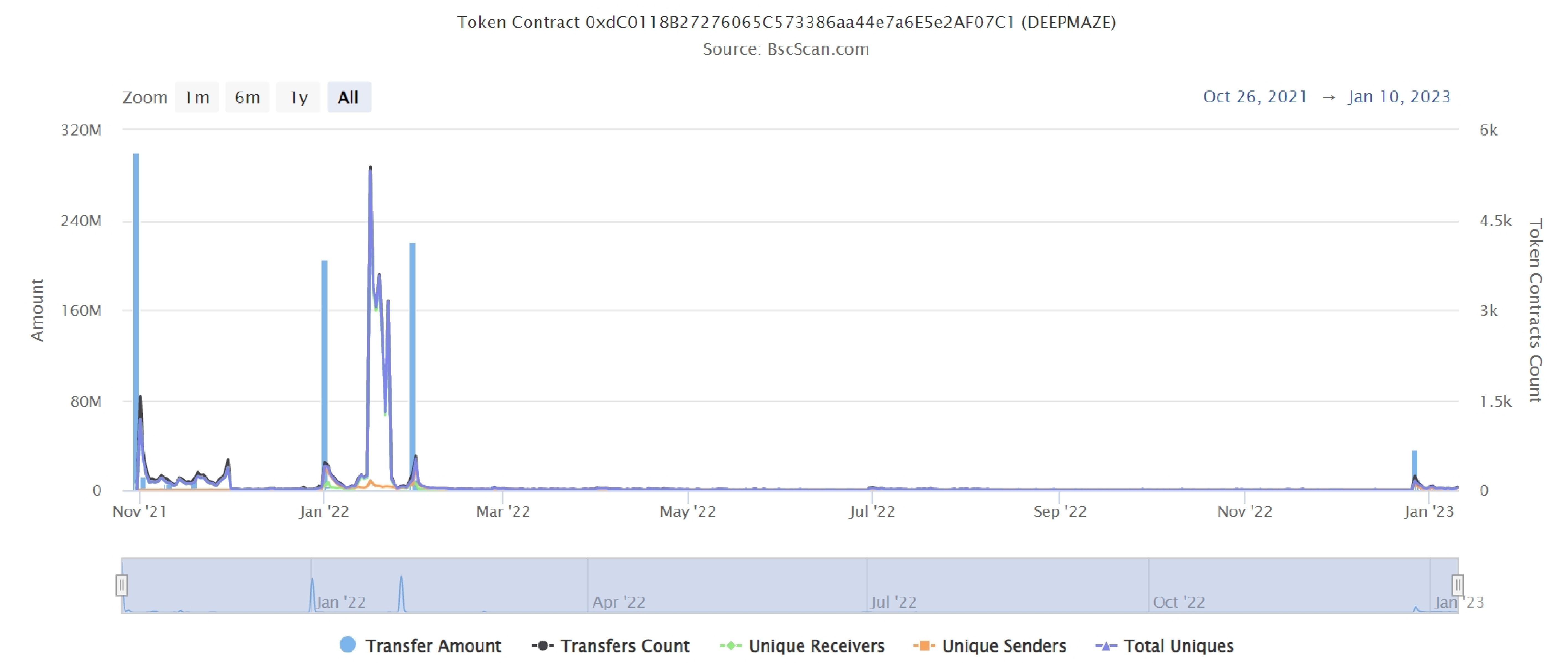
Rank	Address	Quantity (Token)	Percentage
1	 DEEPMAZE: DPZ Token	634,797,479.226709421763351356	72.8046%
2	 0x57d1906fe745e1278639aad9fa554fbbf5339fdc	189,355,851.595736184747667943	21.7171%
3	 PancakeSwap V2: DPZ	23,172,339.274676916289489627	2.6576%
4	0x5f114e184aabb70b684263adf4dddeb08982b082	608,838.719090624929735645	0.0698%
5	0xc84cc4f63e127657b82b014cf1aae11c68284fda	402,599.653648878289127389	0.0462%
6	0x4cf20a8d7aa5f447e43d65d974c666d150fceabb	366,796.499806418565882882	0.0421%
7	0x43b1f45a1b6b2f28b7846ef4edfd806c49451056	356,295.036989356340638337	0.0409%
8	0x3adc362a77c178db4486d499797b80055c8ecf19	322,196.673318372990732025	0.0370%
9	0x7087a89a9d4b2e3e2ab9013ef2e0defa2f9c4422	292,170.922328710908739089	0.0335%
10	0x2097aca279107e26b8916e1700187cb3f7beb989	282,374.18227893294388646	0.0324%
11	0xb6a90dd5323296a5fc40d155abffadb6c4cb210	241,207.189826854723797724	0.0277%
12	0x2b9a1c2d24d7e286ed5dbda2494ecd8aa68b421	232,276.842121416091752265	0.0266%
13	0xcee9b340a441d867a6bc23e36afb54c59afaba7e	231,559.259047167497827047	0.0266%
14	0x00a7055c5543ae488a416872d23cf929b5771999	227,487.729055764412569215	0.0261%
15	0x99f5261406718df9bb28681d43cab4c8427725fc	217,359.461543200179361243	0.0249%
16	0x780ca43255598c897e75209df3b102522ea6b70f	207,047.470712744211455064	0.0237%
17	0x873d099b44a6c97b9cdd0600306b9ba5b16bbb61	185,287.407760536425055448	0.0213%
18	0x0867f8db0916b27dba938ea7474d4db8b008e652	162,825.471287841242434303	0.0187%
19	0x5574ab815c45ee3ee0984d20e70ca55311375ab0	151,981.296979933229310403	0.0174%
20	0xd86aac64a8fe929af7a4f433d437d3af1c9533d7	151,341.940004025121293936	0.0174%

DEEPMAZE Token Distribution

DEEPMAZE Contract overview

Time Series: Token Contract Overview

Sun 31, Oct 2021 - Tue 10, Jan 2023



Contract functions details

+[Int] IERC20

- [Ext] totalSupply
- [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

+Context

- [Int] _msgSender
- [Int] _msgData

+[Lib] Address

- [Int] isContract
- [Int] sendValue #
- [Int] functionCall #
- [Int] functionCall #
- [Int] functionCallWithValue #
- [Int] functionCallWithValue #
- [Pvt] _functionCallWithValue #

+Ownable (Context)

- [Pub] <constructor>#
- [Pub] owner
- [Pub] renounceOwnership #
 - modifiers: onlyOwner
- [Pub] transferOwnership #
 - modifiers: onlyOwner
- [Pub] getUnlockTime

Contract functions details

- [Pub] lock #
 - modifiers: onlyOwner
- [Pub] unlock #

+ [Int] IUniswapV2Factory

- [Ext] feeTo
- [Ext] feeToSetter
- [Ext] getpair
- [Ext] allPairs
- [Ext] allPairsLength
- [Ext] createPair #
- [Ext] setFeeTo #
- [Ext] setFeeToSetter #

+ [Int] IUniswapV2Pair

- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] allowance
- [Ext] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] DOMAIN_SEPARATOR
- [Ext] PERMIT_TYPEHASH
- [Ext] nonces
- [Ext] permit #
- [Ext] MINIMUM_LIQUIDITY
- [Ext] factory
- [Ext] token0
- [Ext] token1
- [Ext] getReserves
- [Ext] price0CumulativeLast
- [Ext] price1CumulativeLast
- [Ext] kLast
- [Ext] mint #
- [Ext] burn #
- [Ext] swap #

Contract functions details

- [Ext] skim #
- [Ext] sync #
- [Ext] initialize #

+ [Int] IUniswapV2Router01

- [Ext] factory
- [Ext] WETH
- [Ext] addLiquidity #
- [Ext] addLiquidityETH (\$)
- [Ext] removeLiquidity #
- [Ext] removeLiquidityETH #
- [Ext] removeLiquidityWithPermit #
- [Ext] removeLiquidityETHWithPermit #
- [Ext] swapExactTokensForTokens #
- [Ext] swapTokensForExactTokens #
- [Ext] swapExactETHForTokens (\$)
- [Ext] swapTokensForExactETH #
- [Ext] swapExactTokensForETH #
- [Ext] swapETHForExactTokens (\$)
- [Ext] quote
- [Ext] getAmountOut
- [Ext] getAmountIn
- [Ext] getAmountsOut
- [Ext] getAmountsIn

+ [Int] IUniswapV2Router02 (IUniswapV2Router01)

- [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
- [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
- [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
- [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
- [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ DeepMaze (Context, IERC20, Ownable)

- [Pub] <Constructor> #
- [Pub] setStarted #
 - modifiers: onlyOwner
- [Pub] setPause #
 - modifiers: onlyOwner
- [Pub] setPrice #
 - modifiers: onlyOwner

Contract functions details

- [Pub] setEnds #
 - modifiers: onlyOwner
- [Pub] setTransferOk #
 - modifiers: onlyOwner
- [Pub] startPresale #
 - modifiers: onlyOwner
- [Pub] calculateAmountPurchased
- [Pub] burnReflection #
 - modifiers: onlyOwner
- [Pub] buy_presale (\$)
- [Pub] setLiquidityThreshold #
 - modifiers: onlyOwner
- [Pub] endPresale #
 - modifiers: onlyOwner
- [Pub] name
- [Pub] symbol
- [Pub] getPresaleTokensR
- [Pub] getPresaleTokens
- [Pub] decimals
- [Pub] totalSupply
- [Pub] totalCrowdPool
- [Pub] getRtotal
- [Pub] getTotalDistributed
- [Pub] getCrowdingPool
- [Pub] getRemainingCrowdingPool
- [Pub] getPendingPool
- [Pub] getAccumulatedLiquidityPool
- [Pub] getPoolDecay
- [Pub] getRate
- [Pub] getLiquidityThreshold
- [Pub] getMaxTxThreshold
- [Pub] getLiquidityProvided
- [Pub] getTokensSwapped
- [Pub] getBnbProvided
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #

Contract functions details

- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Pub] getTokenFromReflection
- [Ext] setLiquidityFeePercent #
 - modifiers: onlyOwner
- [Ext] setCrowdRatePercent #
 - modifiers: onlyOwner
- [Ext] setMaxTxThreshold #
 - modifiers: onlyOwner
- [Pub] setLiquidityProvisionEnabled #
 - modifiers: onlyGateKeeper
- [Ext]< Fallback> (\$)
- [Pvt] _approve #
- [Pvt] _transfer #
- [Pub] getBNBBalance
- [Ext] checkBNB (\$)
 - modifiers: onlyGateKeeper
- [Pvt] LiquidityProvision #
 - modifiers: lockTheLiquidityProvision
- [Pvt] swapTokensForBnb #
- [Pvt] addLiquidity #
- [Pub] setRouterAddress #
 - modifiers: onlyGateKeeper
- [Pvt] _tokenTransfer #
- [Pvt] _get_tokens_to_distribute #
- [Pvt] _transferStandard #

(\$)= 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	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 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

- Deepmaze Coin Contract:
 - Gatekeeper address can enable/disable LiquidityProvisionEnabled.
 - Gatekeeper address can withdraw contract BNBs.
 - Gatekeeper address can change router address.
 - Owner can enable/disable started and paused.
 - Owner can change price, minimum and ends value.
 - Owner can enable/disable transferok.
 - Owner can start and end presale.
 - Owner can burn tokens.
 - Owner can change liquidityThreshold.
 - Owner can change _liquidityFee and _crowdingRate.
 - Owner can change the maximum transaction amount.

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.

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.