



Smart Contract Audit

FOR

Musk vs Zuck

DATED : 24 June 23'



AUDIT SUMMARY

Project name – Musk vs Zuck

Date: 24 June, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: **Passed**

Issues Found

| Status | Critical | High | Medium | Low | Suggestion |
|--------------|----------|------|--------|-----|------------|
| Open | 0 | 0 | 0 | 0 | 0 |
| Acknowledged | 0 | 0 | 0 | 0 | 0 |
| Resolved | 0 | 0 | 0 | 0 | 0 |



USED TOOLS

Tools:

1- Manual Review:

a line by line code review has been performed by audit ace team.

2- BSC Test Network:

all tests were done on BSC Test network, each test has its transaction has attached to it.

3- Slither : Static Analysis

Testnet Link: all tests were done using this contract, tests are done on BSC Testnet

<https://testnet.bscscan.com/token/0xb0D77eAD03e4f75CD9e66067EdC3c3F518738b65>



Token Information

Token Name : Musk vs Zuck

Token Symbol: MUSKvsZUCK

Decimals: 9

Token Supply:100,000,000,000,000

Token Address:

0x2891B63a8eD0d09C07205505580d65768677BC37

Checksum:

a53705f3eb183560fbd781b3424a8bd538c2271c

Owner:

0x1F4D5f72068f0575F900D5004Bc9649b0E3800b8



TOKEN OVERVIEW

Fees:

Buy Fees: 0-3%

Sell Fees: 0-3%

Transfer Fees: 0%

Fees Privilege: Owner

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: none

Blacklist: No

Other Privileges:

- changing swap threshold
 - Modifying fees
-
-



AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
 - Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
 - Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
 - Test coverage analysis determines whether the test cases are covering the code and how much code is exercised when we run the test cases.
 - Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
 - Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.
-

VULNERABILITY CHECKLIST

- | | |
|--|---|
|  Return values of low-level calls |  Gasless Send |
|  Private modifier |  Using block.timestamp |
|  Multiple Sends |  Re-entrancy |
|  Using Suicide |  Tautology or contradiction |
|  Gas Limitand Loops |  Timestamp Dependence |
|  Address hardcoded |  Revert/require functions |
|  Exception Disorder |  Use of tx.origin |
|  Using inline assembly |  Integer overflow/underflow |
|  Divide before multiply |  Dangerous strict equalities |
|  Missing Zero Address Validation |  Using SHA3 |
|  Compiler version not fixed |  Using throw |
-



CLASSIFICATION OF RISK

Severity

Description

| | |
|--------------------------------|--|
| ◆ Critical | These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away. |
| ◆ High-Risk | A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way. |
| ◆ Medium-Risk | A vulnerability that could affect the desired outcome of executing the contract in a specific scenario. |
| ◆ Low-Risk | A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective. |
| ◆ Gas Optimization /Suggestion | A vulnerability that has an informational character but is not affecting any of the code. |

Findings

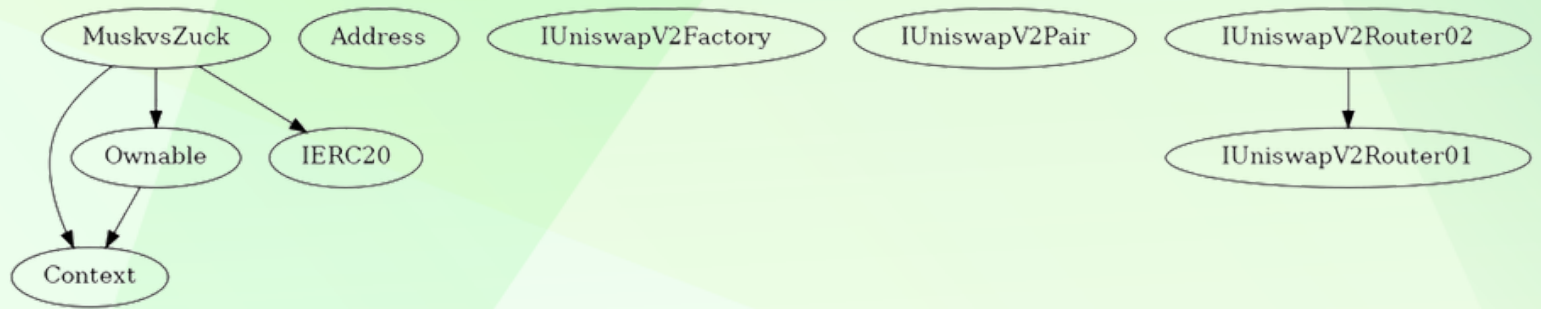
Severity

Found

| | |
|-------------------------------------|---|
| ◆ Critical | 0 |
| ◆ High-Risk | 0 |
| ◆ Medium-Risk | 0 |
| ◆ Low-Risk | 0 |
| ◆ Gas Optimization / Suggestions | 0 |



INHERITANCE TREE























POINTS TO NOTE

- owner is not able to set buy/sell fees more than 3%
 - owner is not able to set transfer fees (0%)
 - owner is not able to blacklist an arbitrary wallet
 - owner is not able to set limit for buy/sell/transfer/holding amounts
 - owner is not able to mint new tokens
 - owner is not able to disable trades
 - owner can exclude/include an address from fees
 - owner can set staking address
 - owner can lock/unlock tokens for staking
 - owner can update buy/sell fees
 - owner can set swap tokens at amount
 - owner can enable/disable swap
 - owner can claim stuck tokens
 - owner can exclude/include an address from rewards
 - owner can transfer ownership
 - owner can renounce ownership
-

CONTRACT ASSESMENT

| Contract | Type | Bases | | | |
|---|------------------------------|-----------------------|-----------------------|----------------------|-----------|
| :-----: :-----: :-----: :-----: :-----: | | | | | |
| L | **Function Name** | **Visibility** | **Mutability** | **Modifiers** | |
| | | | | | |
| | **Context** | Implementation | | | |
| L | _msgSender | Internal | | | |
| L | _msgData | Internal | | | |
| | | | | | |
| | **Ownable** | Implementation | Context | | |
| L | <Constructor> | Public | ! | | NO! |
| L | owner | Public | ! | | NO! |
| L | renounceOwnership | Public | ! | | onlyOwner |
| L | transferOwnership | Public | ! | | onlyOwner |
| | | | | | |
| | **IERC20** | Interface | | | |
| L | totalSupply | External | ! | | NO! |
| L | balanceOf | External | ! | | NO! |
| L | transfer | External | ! | | NO! |
| L | allowance | External | ! | | NO! |
| L | approve | External | ! | | NO! |
| L | transferFrom | External | ! | | NO! |
| | | | | | |
| | **Address** | Library | | | |
| L | isContract | Internal | | | |
| L | sendValue | Internal | | | |
| L | functionCall | Internal | | | |
| L | functionCall | Internal | | | |
| L | functionCallWithValue | Internal | | | |
| L | functionCallWithValue | Internal | | | |
| L | _functionCallWithValue | Private | | | |
| | | | | | |
| | **IUniswapV2Factory** | Interface | | | |
| L | feeTo | External | ! | | NO! |
| L | feeToSetter | External | ! | | NO! |
| L | getPair | External | ! | | NO! |
| L | allPairs | External | ! | | NO! |
| L | allPairsLength | External | ! | | NO! |
| L | createPair | External | ! | | NO! |
| L | setFeeTo | External | ! | | NO! |
| L | setFeeToSetter | External | ! | | NO! |
| | | | | | |
| | **IUniswapV2Pair** | Interface | | | |

CONTRACT ASSESMENT

```
|  | name | External ! | | NO ! |
|  | symbol | External ! | | NO ! |
|  | decimals | External ! | | NO ! |
|  | totalSupply | External ! | | NO ! |
|  | balanceOf | External ! | | NO ! |
|  | allowance | External ! | | NO ! |
|  | approve | External ! |  | NO ! |
|  | transfer | External ! |  | NO ! |
|  | transferFrom | External ! |  | NO ! |
|  | DOMAIN_SEPARATOR | External ! | | NO ! |
|  | PERMIT_TYPEHASH | External ! | | NO ! |
|  | nonces | External ! | | NO ! |
|  | permit | External ! |  | NO ! |
|  | MINIMUM_LIQUIDITY | External ! | | NO ! |
|  | factory | External ! | | NO ! |
|  | token0 | External ! | | NO ! |
|  | token1 | External ! | | NO ! |
|  | getReserves | External ! | | NO ! |
|  | price0CumulativeLast | External ! | | NO ! |
|  | price1CumulativeLast | External ! | | NO ! |
|  | kLast | External ! | | NO ! |
|  | burn | External ! |  | NO ! |
|  | swap | External ! |  | NO ! |
|  | skim | External ! |  | NO ! |
|  | sync | External ! |  | NO ! |
|  | initialize | External ! |  | NO ! |
| | | |
| **IUniswapV2Router01** | Interface | | |
|  | factory | External ! | | NO ! |
|  | WETH | External ! | | NO ! |
|  | addLiquidity | External ! |  | NO ! |
|  | addLiquidityETH | External ! |  | NO ! |
|  | removeLiquidity | External ! |  | NO ! |
|  | removeLiquidityETH | External ! |  | NO ! |
|  | removeLiquidityWithPermit | External ! |  | NO ! |
|  | removeLiquidityETHWithPermit | External ! |  | NO ! |
|  | swapExactTokensForTokens | External ! |  | NO ! |
|  | swapTokensForExactTokens | External ! |  | NO ! |
|  | swapExactETHForTokens | External ! |  | NO ! |
|  | swapTokensForExactETH | External ! |  | NO ! |
|  | swapExactTokensForETH | External ! |  | NO ! |
```

CONTRACT ASSESMENT












































```

|  | swapETHForExactTokens | External ! |  | NO! |
|  | quote | External ! | | NO! |
|  | getAmountOut | External ! | | NO! |
|  | getAmountIn | External ! | | NO! |
|  | getAmountsOut | External ! | | NO! |
|  | getAmountsIn | External ! | | NO! |
|  |  |
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 |  |
|  | removeLiquidityETHSupportingFeeOnTransferTokens | External ! |  | NO! |
|  | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ! |  | NO! |
|  | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ! |  | NO! |
|  | swapExactETHForTokensSupportingFeeOnTransferTokens | External ! |  | NO! |
|  | swapExactTokensForETHSupportingFeeOnTransferTokens | External ! |  | NO! |
|  |  |
| **MuskvsZuck** | Implementation | Context, IERC20, Ownable |  |
|  | <Constructor> | Public ! |  | NO! |
|  | name | Public ! | | NO! |
|  | symbol | Public ! | | NO! |
|  | decimals | Public ! | | NO! |
|  | totalSupply | Public ! | | NO! |
|  | balanceOf | Public ! | | NO! |
|  | transfer | Public ! |  | NO! |
|  | allowance | Public ! | | NO! |
|  | approve | Public ! |  | NO! |
|  | transferFrom | Public ! |  | NO! |
|  | increaseAllowance | Public ! |  | NO! |
|  | decreaseAllowance | Public ! |  | NO! |
|  | isExcludedFromReward | Public ! | | NO! |
|  | totalReflectionDistributed | Public ! | | NO! |
|  | deliver | Public ! |  | NO! |
|  | reflectionFromToken | Public ! | | NO! |
|  | tokenFromReflection | Public ! | | NO! |
|  | excludeFromReward | Public ! |  | onlyOwner |
|  | includeInReward | External ! |  | onlyOwner |
|  | <Receive Ether> | External ! |  | NO! |
|  | claimStuckTokens | External ! |  | NO! |
|  | updateFeeBuy | Public ! |  | onlyOwner |
|  | updateFeeSell | Public ! |  | onlyOwner |
|  | _reflectFee | Private  |  |
|  | _getValues | Private  |  |
|  | _getTValues | Private  |  |

```



CONTRACT ASSESMENT

```

| ^ | _getRValues | Private  | | |
| ^ | _getRate | Private  | | |
| ^ | _getCurrentSupply | Private  | | |
| ^ | _takeLiquidity | Private   | | |
| ^ | _takeMarketing | Private   | | |
| ^ | calculateTaxFee | Private  | | |
| ^ | calculateLiquidityFee | Private  | | |
| ^ | calculateMarketingFee | Private  | | |
| ^ | removeAllFee | Private   | | |
| ^ | setBuyFee | Private   | | |
| ^ | setSellFee | Private   | | |
| ^ | isExcludedFromFee | Public  | | NO  | |
| ^ | _approve | Private   | | |
| ^ | _transfer | Private   | | |
| ^ | swapAndLiquify | Private   | | |
| ^ | swapAndSendMarketing | Private   | | |
| ^ | setSwapTokensAtAmount | External   | onlyOwner |
| ^ | setSwapEnabled | External   | onlyOwner |
| ^ | _tokenTransfer | Private   | | |
| ^ | _transferStandard | Private   | | |
| ^ | _transferToExcluded | Private   | | |
| ^ | _transferFromExcluded | Private   | | |
| ^ | _transferBothExcluded | Private   | | |
| ^ | excludeFromFees | External   | onlyOwner |
| ^ | isContract | Internal  | | |

```

Legend

| Symbol | Meaning |
|---|---------------------------|
| :-----: ----- | |
|  | Function can modify state |
|  | Function is payable |



STATIC ANALYSIS

```
Variable MuskvsZuck.reflectionFromToken(uint256,bool).rTransferAmount (contracts/Token.sol#509) is too similar to MuskvsZuck._transferToExcluded(address,addre
ss,uint256).tTransferAmount (contracts/Token.sol#830)
Variable MuskvsZuck._transferFromExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#841) is too similar to MuskvsZuck._getValues(uint256).
tTransferAmount (contracts/Token.sol#581)
Variable MuskvsZuck._transferFromExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#841) is too similar to MuskvsZuck._transferStandard(ad
dress,address,uint256).tTransferAmount (contracts/Token.sol#820)
Variable MuskvsZuck._getRValues(uint256,uint256,uint256,uint256,uint256).rTransferAmount (contracts/Token.sol#599) is too similar to MuskvsZuck._transferStand
ard(address,address,uint256).tTransferAmount (contracts/Token.sol#820)
Variable MuskvsZuck._getValues(uint256).rTransferAmount (contracts/Token.sol#582) is too similar to MuskvsZuck._transferToExcluded(address,address,uint256).tT
ransferAmount (contracts/Token.sol#830)
Variable MuskvsZuck.reflectionFromToken(uint256,bool).rTransferAmount (contracts/Token.sol#509) is too similar to MuskvsZuck._getTValues(uint256).tTransferAmo
unt (contracts/Token.sol#590)
Variable MuskvsZuck.reflectionFromToken(uint256,bool).rTransferAmount (contracts/Token.sol#509) is too similar to MuskvsZuck._transferFromExcluded(address,add
ress,uint256).tTransferAmount (contracts/Token.sol#841)
Variable MuskvsZuck._transferBothExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#852) is too similar to MuskvsZuck._transferToExcluded(
address,address,uint256).tTransferAmount (contracts/Token.sol#830)
Variable MuskvsZuck._getValues(uint256).rTransferAmount (contracts/Token.sol#582) is too similar to MuskvsZuck._getTValues(uint256).tTransferAmount (contracts
/Token.sol#590)
Variable MuskvsZuck._getValues(uint256).rTransferAmount (contracts/Token.sol#582) is too similar to MuskvsZuck._transferFromExcluded(address,address,uint256).
tTransferAmount (contracts/Token.sol#841)
Variable MuskvsZuck._transferFromExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#841) is too similar to MuskvsZuck._transferToExcluded(
address,address,uint256).tTransferAmount (contracts/Token.sol#830)
Variable MuskvsZuck.reflectionFromToken(uint256,bool).rTransferAmount (contracts/Token.sol#509) is too similar to MuskvsZuck._transferBothExcluded(address,add
ress,uint256).tTransferAmount (contracts/Token.sol#852)
Variable MuskvsZuck._transferToExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#830) is too similar to MuskvsZuck._transferStandard(addr
ess,address,uint256).tTransferAmount (contracts/Token.sol#820)
Variable MuskvsZuck._getValues(uint256).rTransferAmount (contracts/Token.sol#582) is too similar to MuskvsZuck._transferBothExcluded(address,address,uint256).
tTransferAmount (contracts/Token.sol#852)
Variable MuskvsZuck._transferBothExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#852) is too similar to MuskvsZuck._getTValues(uint256)
.tTransferAmount (contracts/Token.sol#590)
Variable MuskvsZuck._transferBothExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#852) is too similar to MuskvsZuck._transferFromExclude
d(address,address,uint256).tTransferAmount (contracts/Token.sol#841)
Variable MuskvsZuck.reflectionFromToken(uint256,bool).rTransferAmount (contracts/Token.sol#509) is too similar to MuskvsZuck._getValues(uint256).tTransferAmou
nt (contracts/Token.sol#581)
Variable MuskvsZuck._transferFromExcluded(address,address,uint256).rTransferAmount (contracts/Token.sol#841) is too similar to MuskvsZuck._getTValues(uint256)
.tTransferAmount (contracts/Token.sol#590)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar
```

```
MuskvsZuck.DEAD (contracts/Token.sol#368) should be constant
MuskvsZuck._decimals (contracts/Token.sol#343) should be constant
MuskvsZuck._name (contracts/Token.sol#341) should be constant
MuskvsZuck._symbol (contracts/Token.sol#342) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
```

```
MuskvsZuck.DEV (contracts/Token.sol#369) should be immutable
MuskvsZuck._tTotal (contracts/Token.sol#346) should be immutable
MuskvsZuck.mk (contracts/Token.sol#366) should be immutable
MuskvsZuck.totalBuyFees (contracts/Token.sol#363) should be immutable
MuskvsZuck.totalSellFees (contracts/Token.sol#364) should be immutable
MuskvsZuck.uniswapV2Pair (contracts/Token.sol#372) should be immutable
MuskvsZuck.uniswapV2Router (contracts/Token.sol#371) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
```

Result => A static analysis of contract's source code has been performed using slither,

No major issues were found in the output



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):

<https://testnet.bscscan.com/tx/0x7c13c233a3c49e20069a4cbaeb3ae601f0e23e3480b7dfea52c599e2c92c791d>

2- Buying when excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xa84454ffbe2a28e169403cf02a18da655922b41c3c9fe2a8b4fa84da5bba75e4>

3- Selling when excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xf0bc7f31928209f5734e375d84a6544f74e3498fae9ba1f4a0c87b32dc3c7771>

4- Transferring when excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xe03e4c46bdd76418eccc1d55e85c0e703402964a2e995fa1ad220cbb0551bf43>

5- Buying when not excluded from fees (0-3% tax) (passed):

<https://testnet.bscscan.com/tx/0xeddfbf7df477ecd58d0fa8999f193d5461900c012b22be6e8496b645f8b3581e>

6- Selling when not excluded from fees (0-3% tax) (passed):

<https://testnet.bscscan.com/tx/0xe591cfe9c0b17023236c771c638827a27133e31b2e45e4e046a8375947fc55c6>



FUNCTIONAL TESTING

7- Transferring when not excluded from fees (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x080e4032b723863be064baf6ba79cc99d12146e6f0680357e3c1bc174b86774e>

8-Internal swap (BNB fee + auto liquidity)(passed):

<https://testnet.bscscan.com/tx/0xe591cfe9c0b17023236c771c638827a27133e31b2e45e4e046a8375947fc55c6>



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