

# Smart Contract Audit

**FOR** 

# Starship Doge

**DATED: 25 Apr 23'** 



# **AUDIT SUMMARY**

**Project name** - Starship Doge

Date: 25 April, 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: The code has undergone a lineby-line review by the Ace team.
- 2.Slither: The code has undergone static analysis using Slither.

### Note:

It is important to note that any issues or vulnerabilities identified during the audit are not the responsibility of the auditor, as the **STARSHIPDOGE** is already live and actively traded. The auditor's role is limited to providing an independent evaluation of the smart contract code, as provided by the token's development team, and identifying potential issues or areas for improvement.



# **Token Information**

Token Name: Starship Doge

Token Symbol: STARSHIPDOGE

Decimals: 9

Token Supply: 1,000,000,000,000,000

### **Token Address:**

0x67e4CFD91E4bAa4A6794c7974FeC892247B26D3C

### Checksum:

a57198f035f197a287e782cfefdb4f2dc22dd4ed

### **Owner:**



# **TOKEN OVERVIEW**

Fees:

Buy Fees: 10%

Sell Fees: 10%

Transfer Fees: 10%

Fees Privilige: none

Ownership: renounced

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: no

Other Priviliges: none



# **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-byline 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 isexercised 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**





# **CLASSIFICATION OF RISK**

### Severity

- Critical
- High-Risk
- Medium-Risk
- Low-Risk
- Gas Optimization/Suggestion

### **Description**

These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.

A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.

A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.

A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.

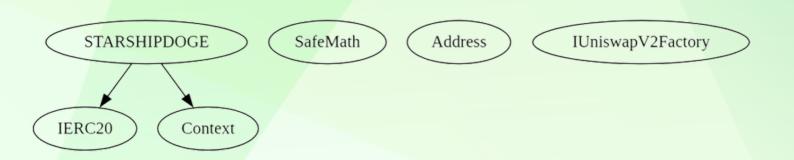
A vulnerability that has an informational character but is not affecting any of the code.

# **Findings**

Severity	Found
◆ Critical	0
◆ High-Risk	0
◆ Medium-Risk	0
♦ Low-Risk	0
<ul><li>Gas Optimization /</li><li>Suggestions</li></ul>	0



# **INHERITANCE TREE**





## **POINTS TO NOTE**

- Ownership is renounced, meaning owner has not control over the contract functions
- Owner is not able to modify buy/sell/transfer fees (10% for each)
- Owner is not able to set max buy/sell/transfer/hold amount
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to disable trades
- Owner is not able to mint new tokens



### **CONTRACT ASSESMENT**

```
| Contract |
                 Type
                               Bases
|<del>:-----:|:-----:|:-----:|:-----:|</del>
        | **Function Name** | **Visibility** | **Mutability** | **Modifiers** | | | | |
| **IERC20** | Interface | |||
| L | totalSupply | External | | NO | |
| L | balanceOf | External | | NO | |
| L | transfer | External | | | NO | |
| | allowance | External | | NO | |
| L | approve | External | | | | NO | |
| L | transferFrom | External | | | NO | |
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| **SafeMath** | Library | | | | |
📙 🗀 add | Internal 🦰 | 🔠
| L | sub | Internal 🦰 | | | |
| L | mul | Internal 🦰 | | | |
| L | div | Internal 🦰 | | |
| L | sub | Internal 🦰 | | |
| L | div | Internal 🦰 | | | |
IIIIIII
| **Context** | Implementation | |||
| L | msgSender | Internal 🦰 | | |
| L | msgData | Internal 🦰 | | |
| **Address** | Library | | | |
| L | isContract | Internal 🦰 | | |
| L | sendValue | Internal 🦲 | 🛑 | |
| L | functionCall | Internal 🦲 | 🦲 | |
| L | functionCall | Internal 🦲 | 🧓 | |
| L | functionCallWithValue | Internal 🖺 | 🛑 | |
| L | functionCallWithValue | Internal 🦰 | 🛑 | |
| L | functionStaticCall | Internal 🦲 | | |
| L | functionStaticCall | Internal 🦲 | | |
| L | functionDelegateCall | Internal 🖺 | 🛑 | |
| L | functionDelegateCall | Internal 🦰 | 🛑 | |
| L | verifyCallResult | Private 🦰 | | |
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| **IUniswapV2Factory** | Interface | | | | | |
| L | feeTo | External | | | NO | |
| L | feeToSetter | External | | NO | |
| L | getPair | External | | NO |
| L | allPairs | External | | NO | |
| L | allPairsLength | External | | NO | |
```



### **CONTRACT ASSESMENT**

```
| L | createPair | External | | | NO | |
| L | setFeeTo | External | | | NO | |
| L | setFeeToSetter | External | | | NO | |
111111
| **IUniswapV2Pair** | Interface | | | | |
| | name | External | | NO | |
| | symbol | External | | NO | |
| | decimals | External | | NO | |
| L | totalSupply | External | | NO | |
| L | balanceOf | External | | NO | |
| L | allowance | External | | NO | |
📙 | approve | External 📗 | 🛑 | NO 📗
📘 | transfer | External 📗 | 🛑 | NO 📗
| L | transferFrom | External | | | NO | | |
| L | DOMAIN_SEPARATOR | External | | NO | |
| L | PERMIT_TYPEHASH | External | | NO | |
| L | nonces | External | | NO | |
| L | permit | External | | | NO | |
| L | MINIMUM LIQUIDITY | External | | NO | |
| L | factory | External | | NO | |
| L | token0 | External | | NO | |
| L | token1 | External | | NO | |
| L | getReserves | External | | NO | |
| L | price0CumulativeLast | External | | NO | |
| L | price1CumulativeLast | External | | NO | |
| L | kLast | External | | NO | |
| L | burn | External | | | NO | |
| L | swap | External | | | | NO | |
| L | skim | External | | | NO | |
| L | sync | External | | | NO | |
| L | initialize | External | | | NO | |
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| **IUniswapV2Router01** | Interface | | | | | | |
| L | factory | External | | | NO | |
| L | WETH | External | | NO | |
| L | addLiquidity | External | | | | NO | |
| L | removeLiquidity | External | | | NO | |
| L | removeLiquidityETH | External | | | NO | |
| L | removeLiquidityWithPermit | External | | | NO | |
| L | removeLiquidityETHWithPermit | External | | | NO | |
```



### **CONTRACT ASSESMENT**

```
| L | swapExactTokensForTokens | External | | | NO | |
| | swapTokensForExactTokens | External | | | | NO | |
| | getAmountOut | External | | NO
| | getAmountIn | External | | NO | |
| L | getAmountsOut | External | | NO | |
| L | getAmountsIn | External | | NO | |
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**IUniswapV2Router02** | Interface | IUniswapV2Router01 | | |
| | removeLiquidityETHSupportingFeeOnTransferTokens | External | | | NO | | |
| | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External | | | | NO | |
| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External | | | | NO | |
| L | swapExactETHForTokensSupportingFeeOnTransferTokens | External | | 🔟 | NO | |
| L | swapExactTokensForETHSupportingFeeOnTransferTokens | External | | | | NO | |
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| **STARSHIPDOGE** | Implementation | Context, IERC20 | | | | | |
| L | owner | Public | | NO | |
| L | renounceOwnership | Public | | ( NO | |
| L | <Constructor> | Public | | | | NO | |
| L | name | Public | | | NO | |
| L | symbol | Public | | NO | |
| L | decimals | Public | | NO | |
| L | totalSupply | Public | | NO | |
| L | balanceOf | Public | | NO | |
| L | transfer | Public | | | NO | |
| L | allowance | Public | | NO | |
| L | approve | Public | | 🛑 | NO | |
| L | transferFrom | Public | | | NO | |
| L | increaseAllowance | Public | | | NO | |
| L | decreaseAllowance | Public | | | NO | |
| L | <Receive Ether> | External | | I NO | |
| L | getCurrentSupply | Private 🦳 | | |
| L | _transfer | Private 🦳 | 🛑 | |
| L | sendToWallet | Private 🦳 | 🧓 | |
| L | swapAndLiquify | Private 📍 | 🛑 | lockTheSwap |
| L | swapTokensForBNB | Private 🤔 | 🛑 | |
| L | addLiquidity | Private 🦳 | 🧓 | |
| L | remove_Random_Tokens | Public | | ( ) | NO | |
| L | tokenTransfer | Private 🦳 | 🦲 | |
```



### STATIC ANALYSIS

```
External calls:
- transfer(sender, recipient, amount) (contracts/Token.sol#672)
- wallet.transfer(amount) (contracts/Token.sol#672)
- wallet.transfer(amount) (contracts/Token.sol#672)
- vallet.transfer(amount) (contracts/Token.sol#672)
- wallet.transfer(amount) (contracts/Token.sol#672)
- wallet.transfer(amount) (contracts/Token.sol#778)
- uniswapt/ZRouter.addLiquidityETH(value: BMEAmount)(address(this),tokenAmount,0,0,Wallet_Burn,block.timestamp) (contracts/Token.sol#826-833)
State variables written after the call(s):
- approve(sender, msgSender(), allowances[sender][ msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#673-680)
- allowances[theower][theoSpender] = amount (contracts/Token.sol#726)
Event emitted after the call(s):
- Approval(theOwner, theSpender, msgSender(), allowances[sender][ msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#727)
- approvelsender, msgSender(), allowances[sender][ msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#727)
- approvelsender, msgSender(), allowances[sender][ msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#727)
- approve(sender, msgSender(), allowances[sender][ msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#673-680)

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-4
Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#353) is too similar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#354)
Variable STARSHIPDOGE.swapAndLiquify(uint256).tokens_to_0 (contracts/Token.sol#786)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar
STARSHIPDOGE.slitherConstructorVariables() (contracts/Token.sol#541-881) uses literals with too many digits:
- tTotal = 10000000000000 * 10 ** 6 * 10 ** 6 * 10 ** _decimals (contracts/Token.sol#575-576)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits
STARSHIPDOGE.MAX (contracts/Token.sol#573) is never used in STARSHIPDOGE (contracts/Token.sol#541-881) STARSHIPDOGE.previousMaxWalletToken (contracts/Token.sol#583) is never used in STARSHIPDOGE (contracts/Token.sol#541-857ARSHIPDOGE).previousMaxTXABOUNT (contracts/Token.sol#541-881) Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable
                                                                                                                                                                                                                                                                                                                                                                           rts/Token.sol#541-881)
STARSHIPDOGE.Percent_AutoLP (contracts/Token.sol#586) should be constant
STARSHIPDOGE.Percent_Burn (contracts/Token.sol#585) should be constant
STARSHIPDOGE.Percent_Dev (contracts/Token.sol#584) should be constant
STARSHIPDOGE.Percent_Marketing (contracts/Token.sol#589.3) should be constant
STARSHIPDOGE.Wallet_Dev (contracts/Token.sol#569.570) should be constant
STARSHIPDOGE.Mallet_Marketing (contracts/Token.sol#567.588) should be constant
STARSHIPDOGE.Tax_On_Buy (contracts/Token.sol#581) should be constant
STARSHIPDOGE.Tax_On_Sell (contracts/Token.sol#582) should be constant
STARSHIPDOGE.SwapAndLiquifyEnabled (contracts/Token.sol#584) should be constant
STARSHIPDOGE.SwapTrigger (contracts/Token.sol#594) should be constant
STARSHIPDOGE.SwapTrigger (contracts/Token.sol#598) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
STARSHIPDOGE._maxTxAmount (contracts/Token.sol#589) should be immutable STARSHIPDOGE._maxWalletToken (contracts/Token.sol#587) should be immutable STARSHIPDOGE._previousMaxTxAmount (contracts/Token.sol#590) should be immutable STARSHIPDOGE.previousMaxWalletToken (contracts/Token.sol#580) should be immutable STARSHIPDOGE.uniswapV2Pair (contracts/Token.sol#592) should be immutable STARSHIPDOGE.uniswapV2Pair (contracts/Token.sol#591) should be immutable Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-vari
```

entation#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**

As the token is already live and actively traded, with no apparent issues affecting its functionality or trading, we have determined that performing unit tests on the smart contract is not necessary for this audit. Our focus has been on reviewing the smart contract code and its compliance with the ERC20 standard, as well as identifying potential vulnerabilities and areas for improvement.



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