



Smart Contract Audit

FOR
UNIBOT2
DATED : 30 July 23'



AUDIT SUMMARY

Project name -UNIBOT2

Date: 30 July, 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	1
Acknowledged	0	0	0	0	0
Resolved	0	1	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 conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.

3- Slither :

The code has undergone static analysis using Slither.

Testnet version:

The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:

<https://testnet.bscscan.com/token/0x634b275F6A83F8E1FC25581aCB08086213be4Fe4>



Token Information

Token Name : Unibot 2.0

Token Symbol: UNIBOT2

Decimals: 18

Token Supply: 100,000,000

Token Address:

0xA3CF968B08DAd9f41275a99bbdda8FF002eb0ACa

Checksum:

fb4b0aca845e30bcf71fb9972e23e762248b1ac1

Owner:

0xE26F72ba141Db9b9f3066e04c1C1a25502bae9C5

(at time of writing the audit)

Deployer:

0xE26F72ba141Db9b9f3066e04c1C1a25502bae9C5



TOKEN OVERVIEW

Fees:

Buy Fees: 0%

Sell Fees: 0%

Transfer Fees: 0%

Fees Privilege: owner

Ownership: owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: no

Blacklist: No

Other Privileges: Initial distribution of the tokens





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 Limit and 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



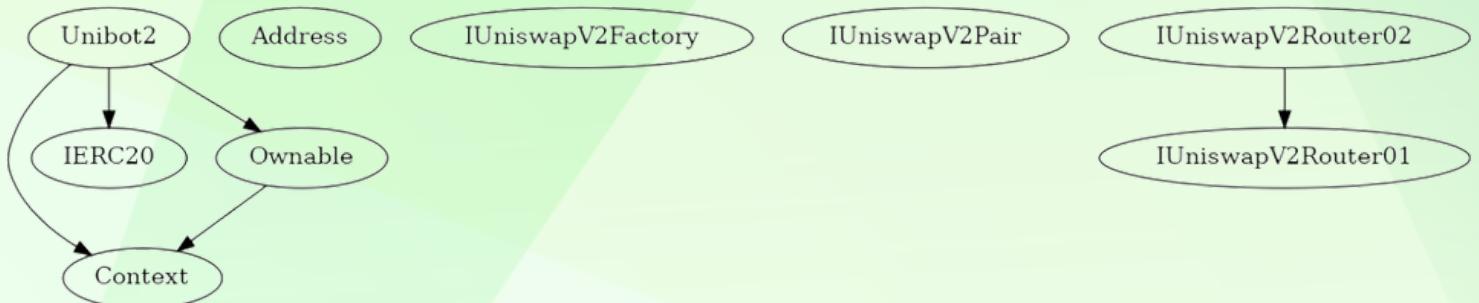
CLASSIFICATION OF RISK

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	1
◆ Medium-Risk	0
◆ Low-Risk	0
◆ Gas Optimization / Suggestions	1

INHERITANCE TREE





POINTS TO NOTE

- Owner is not able to set fee on buy/sell/transfers (0% all fees)
- Owner is not able to blacklist an address
- Owner is not able to disable buy/sell/transfers
- Owner is not able to set max wallet limit and minimum wallet limits
- Owner is not able to mint new tokens

CONTRACT ASSESSMENT

Contract	Type	Bases			
<hr/>					
L **Function Name** **Visibility** **Mutability** **Modifiers**					
<hr/>					
Context Implementation					
L _msgSender Internal 🔒					
L _msgData Internal 🔒					
<hr/>					
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 !					
<hr/>					
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 verifyCallResultFromTarget Internal 🔒					
L verifyCallResult Internal 🔒					
L _revert Private 🔒					
<hr/>					
Ownable Implementation Context					
L <Constructor> Public ! 🔴 NO !					
L owner Public ! NO !					
L _checkOwner Internal 🔒					
L renounceOwnership Public ! 🔴 onlyOwner					

CONTRACT ASSESSMENT

```

| L | transferOwnership | Public ! | 🔒 | onlyOwner |
| L | _transferOwnership | Internal 🔒 | 🔒 ||

||||| |
| **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 | ||
| L | name | External ! | NO ! |
| L | symbol | External ! | NO ! |
| L | decimals | External ! | NO ! |
| L | totalSupply | External ! | NO ! |
| L | balanceOf | External ! | NO ! |
| L | allowance | External ! | NO ! |
| L | approve | External ! | 🔒 | NO ! |
| L | 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 ! | 🔒 |

```

CONTRACT ASSESSMENT

```

| L | swap | External ! |  | NO ! |
| L | skim | External ! |  | NO ! |
| L | sync | External ! |  | NO ! |
| L | initialize | External ! |  | NO ! |
|||||
| **IUniswapV2Router01** | Interface | ||
| L | factory | External ! | NO ! |
| L | WETH | External ! | NO ! |
| L | addLiquidity | External ! |  | NO ! |
| L | addLiquidityETH | External ! |  | NO ! |
| L | removeLiquidity | External ! |  | NO ! |
| L | removeLiquidityETH | External ! |  | NO ! |
| L | removeLiquidityWithPermit | External ! |  | NO ! |
| L | removeLiquidityETHWithPermit | External ! |  | NO ! |
| L | swapExactTokensForTokens | External ! |  | NO ! |
| L | swapTokensForExactTokens | External ! |  | NO ! |
| L | swapExactETHForTokens | External ! |  | NO ! |
| L | swapTokensForExactETH | External ! |  | NO ! |
| L | swapExactTokensForETH | External ! |  | NO ! |
| L | swapETHForExactTokens | External ! |  | NO ! |
| L | quote | External ! | NO ! |
| L | getAmountOut | External ! | NO ! |
| L | getAmountIn | External ! | NO ! |
| L | getAmountsOut | External ! | NO ! |
| L | getAmountsIn | External ! | NO ! |
|||||
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 ||
| L | removeLiquidityETHSupportingFeeOnTransferTokens | External ! |  | NO ! |
| L | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ! |  | NO ! |
| L | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ! |  | NO ! |
| L | swapExactETHForTokensSupportingFeeOnTransferTokens | External ! |  | NO ! |
| L | swapExactTokensForETHSupportingFeeOnTransferTokens | External ! |  | NO ! |
|||||
| **Unibot2** | Implementation | Context, IERC20, Ownable ||
| L | <Constructor> | Public ! |  | NO ! |
| L | totalSupply | Public ! | NO ! |

```

CONTRACT ASSESSMENT

```

| 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 | _approve | Private 🔑 | 🔞 || |
| L | _transfer | Private 🔑 | 🔞 || |
| L | swapAndLiquify | Public ! | 🔞 | lockTheSwap |
| L | swapTokensForEth | Private 🔑 | 🔞 || |
| L | _tokenTransfer | Private 🔑 | 🔞 || |
| L | isExcludedFromFee | External ! | NO ! |
| L | excludeFromFee | External ! | 🔞 | onlyOwner |
| L | includeInFee | External ! | 🔞 | onlyOwner |
| L | setTokensToSwap | External ! | 🔞 | onlyOwner |
| L | setSwapAndLiquifyEnabled | External ! | 🔞 | onlyOwner |
| L | setMarketingWallet | External ! | 🔞 | onlyOwner |
| L | transferToAddressETH | Private 🔑 | 🔞 || |
| L | <Receive Ether> | External ! | 💸 | NO ! |
| L | swapETHForTokens | Private 🔑 | 🔞 || |
| L | recoverETHfromContract | External ! | 🔞 | onlyOwner |
| L | recoverTokensFromContract | External ! | 🔞 | onlyOwner |
| L | enableTrading | External ! | 🔞 | onlyOwner |

```

Legend

Symbol	Meaning
---	-----
🔴	Function can modify state
💸	Function is payable



STATIC ANALYSIS

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-3>

XSHIB.excludeFromFee(address) (contracts/Token.sol#703-707) compares to a boolean constant:
- require(bool,string)(exemptFee[account] != true, Account is already excluded) (contracts/Token.sol#704)
XSHIB.includeFromFee(address) (contracts/Token.sol#709-713) compares to a boolean constant:
- require(bool,string)(exemptFee[account] != false, Account is already included) (contracts/Token.sol#710)
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#boolean-equality>

Context._msgData() (contracts/Token.sol#23-26) is never used and should be removed
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code>

Pragma version^0.8.17 (contracts/Token.sol#16) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.21 is not recommended for deployment
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity>

Low level call in Address.sendValue(address,uint256) (contracts/Token.sol#334-342):
- (success) = recipient.call{value: amount}() (contracts/Token.sol#337)
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls>

Variable ERC20._balances (contracts/Token.sol#72) is not in mixedCase
Variable ERC20._allowances (contracts/Token.sol#74) is not in mixedCase
Function IRouter.WETH() (contracts/Token.sol#392) is not in mixedCase
Event XSHIB/includeFromFeeUpdated(address) (contracts/Token.sol#446) is not in CapWords
Function XSHIB.Liquify(uint256,XSHIB.Taxes) (contracts/Token.sol#585-623) is not in mixedCase
Function XSHIB.SetBuyTaxes(uint256,uint256) (contracts/Token.sol#662-668) is not in mixedCase
Parameter XSHIB.SetBuyTaxes(uint256,uint256).marketing (contracts/Token.sol#663) is not in mixedCase
Parameter XSHIB.SetBuyTaxes(uint256,uint256).liquidity (contracts/Token.sol#664) is not in mixedCase
Function XSHIB.SetSellTaxes(uint256,uint256) (contracts/Token.sol#670-676) is not in mixedCase
Parameter XSHIB.SetSellTaxes(uint256,uint256).marketing (contracts/Token.sol#671) is not in mixedCase
Parameter XSHIB.SetSellTaxes(uint256,uint256).liquidity (contracts/Token.sol#672) is not in mixedCase
Function XSHIB.UpdateMarketingWallet(address) (contracts/Token.sol#678-683) is not in mixedCase
Parameter XSHIB.UpdateMarketingWallet(address).newWallet (contracts/Token.sol#678) is not in mixedCase
Parameter XSHIB.updateLiquidityTreshold(uint256).new_amount (contracts/Token.sol#685) is not in mixedCase
Constant XSHIB.Contract_Version (contracts/Token.sol#428) is not in UPPER_CASE_WITH_UNDERSCORES
Constant XSHIB.Contract_Dev (contracts/Token.sol#429) is not in UPPER_CASE_WITH_UNDERSCORES
Constant XSHIB.Contract_Edition (contracts/Token.sol#430) is not in UPPER_CASE_WITH_UNDERSCORES
Constant XSHIB.deadWallet (contracts/Token.sol#433-434) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions>

Redundant expression "this (contracts/Token.sol#24)" inContext (contracts/Token.sol#18-27)
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements>

XSHIB.constructor() (contracts/Token.sol#458-476) uses literals with too many digits:
- _tokengeneration(msg.sender,10000000 * 10 ** decimals()) (contracts/Token.sol#459)
XSHIB.updateLiquidityTreshold(uint256) (contracts/Token.sol#685-695) uses literals with too many digits:
- require(bool,string)(new_amount <= 1000000,Swap threshold amount should be lower or equal to 1% of tokens) (contracts/Token.sol#686-689)
Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits>

XSHIB.pair (contracts/Token.sol#419) should be immutable
XSHIB.router (contracts/Token.sol#418) 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

1- Adding liquidity (**passed**):

<https://testnet.bscscan.com/tx/0x08e4d8b47f21b374c24b36f482405788e69e2085a4f06eb95ef8620515194ec2>

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

<https://testnet.bscscan.com/tx/0x9b5219a3ce827ed6eb8cccd5926233d26c04d591bfc409124820409c818dc634>

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

<https://testnet.bscscan.com/tx/0x9b5219a3ce827ed6eb8cccd5926233d26c04d591bfc409124820409c818dc634>

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

<https://testnet.bscscan.com/tx/0xc5b4bca0f8d4b3c17b7b9d388d822d967045a9885edc03e1bd3dcb739310f108>

5- Buying (0% tax) (**passed**):

<https://testnet.bscscan.com/tx/0xf74a79461b231b8d5d922696e08946fd0fcacb502d92594532ba85b5a589ae35>

6- Selling (0% tax) (**passed**):

<https://testnet.bscscan.com/tx/0x158205313e6819b8b76adfa97a9e7f82c220c7299f131255014eaab9b7a444da>



FUNCTIONAL TESTING

7- Transferring (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xf189cc93b3f319e1dd097fe6c932046b33d4b0df5b9ef153fd8e56c41f3a6ced>



MANUAL TESTING

Centralization – Enabling Trades

Severity: **High**

function: enableTrading

Status: Resolved (Trades are enabled)

Overview:

Owner of the contract must enable trades manually for investors, otherwise no one would be able to buy/sell/transfer their tokens (even owner of whitelisted wallets)

```
function enableTrading() external onlyOwner {  
    require(!tradingEnabled, "Trading already enabled.");  
    tradingEnabled = true;  
    swapAndLiquifyEnabled = true;  
    emit AuditLog("We have Enabled Trading and Automatic Swaps:",  
msg.sender);  
}
```

Suggestion

It's suggested to either enable trades prior to presale, or transfer ownership of the contract to a certified pinsksale safu developer to guarantee enabling of trades.



MANUAL TESTING

Logical – Rejecting ETH and marketing wallet

Severity: Informational

function: enableTrading

Status: Open (not applicable)

Overview:

if Marketing wallet is set to a contract that rejects ether:

```
Contract example {  
    receive() external payable {  
        revert("ether is not accepted!");  
    }  
}
```

swapAndLiquify will be reverted which then disables sell/transfers

Suggestion

Ignore whether a call to marketing wallet was successful or not:

```
function transferToAddressETH(address payable recipient, uint256 amount) private {  
    (bool succ,) = recipient.call{value: amount}("");  
    require(succ, "Transfer failed."); //Delete this line  
}
```



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