



Smart Contract Audit

FOR

Kong Inu

DATED : 17 APRIL 23'



AUDIT SUMMARY

Project name – Kong Inu

Date:17 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	1	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 Testnet 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 Link: Contract has been tested on binance smart chain testnet which can be found in below link:

<https://testnet.bscscan.com/address/0x3E52AEb787C10f9b275E2B361fEEe79b6bF5DceF#code>



Token Information

Token Name : Kong Inu

Token Symbol: KONG

Decimals: 9

Token Supply: 210,000,000,000,000,000

Token Address:

0xAC1Cd89092e04c87f13D6f80fb9A9a506468678e

Checksum:

7b0d6058387825c26af841b8913f24278a52984c

Owner:

0xC344EA9B5ada0E9489626b5Da271d5f6E8103B7f
(at time of audit)



TOKEN OVERVIEW

Fees:

Buy Fees: 10%

Sell Fees: 10%

Transfer Fees: 10%

Fees Privilege: None

Ownership: Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: updating liquidity threshold -
excluding from fees - including in fees - including in
rewards - excluding from rewards



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.

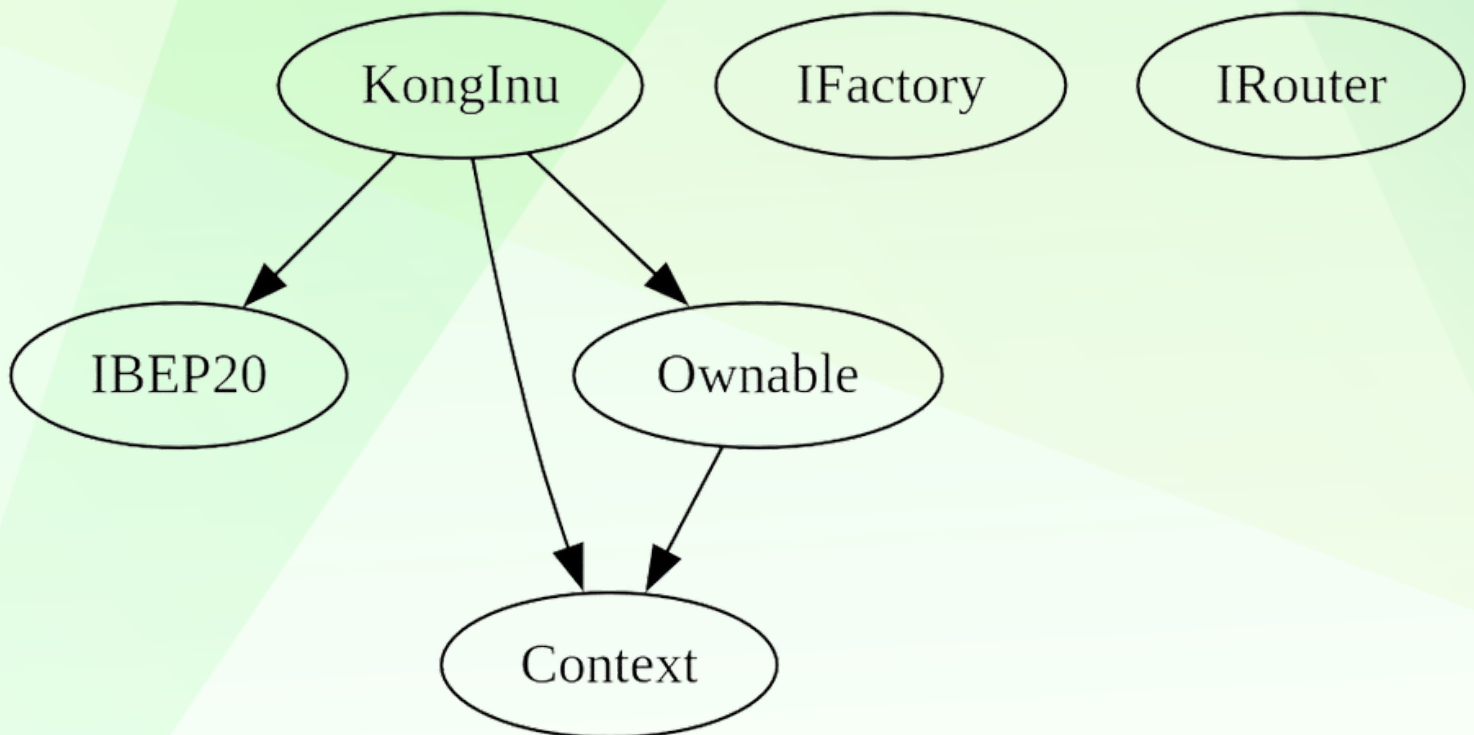
Findings

Severity

Found

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

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to modify buy/sell/transfer fees (10% each)
 - **Owner must enable trading for investors to be able to trade**
 - 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			
└──	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
IBEP20 Interface					
└	totalSupply	External	!		NO !
└	balanceOf	External	!		NO !
└	transfer	External	!		NO !
└	allowance	External	!		NO !
└	approve	External	!		NO !
└	transferFrom	External	!		NO !
Context Implementation					
└	_msgSender	Internal	🔒		
└	_msgData	Internal	🔒		
Ownable Implementation Context					
└	<Constructor>	Public	!		NO !
└	owner	Public	!		NO !
└	renounceOwnership	Public	!		onlyOwner
└	transferOwnership	Public	!		onlyOwner
└	_setOwner	Private	🔒		
IFactory Interface					
└	createPair	External	!		NO !
IRouter Interface					
└	factory	External	!		NO !
└	WETH	External	!		NO !
└	addLiquidityETH	External	!		NO !
└	swapExactTokensForETHSupportingFeeOnTransferTokens	External	!		NO !
Address Library					
└	sendValue	Internal	🔒		
KongInu Implementation Context, IBEP20, Ownable					
└	<Constructor>	Public	!		NO !
└	name	Public	!		NO !
└	symbol	Public	!		NO !
└	decimals	Public	!		NO !
└	totalSupply	Public	!		NO !
└	balanceOf	Public	!		NO !
└	allowance	Public	!		NO !
└	approve	Public	!		NO !



CONTRACT ASSESMENT

L	transferFrom	Public !	●	NO !
L	increaseAllowance	Public !	●	NO !
L	decreaseAllowance	Public !	●	NO !
L	transfer	Public !	●	NO !
L	isExcludedFromReward	Public !		NO !
L	reflectionFromToken	Public !		NO !
L	EnableTrading	External !	●	onlyOwner
L	updatedecline	External !	●	onlyOwner
L	tokenFromReflection	Public !		NO !
L	excludeFromReward	Public !	●	onlyOwner
L	includeInReward	External !	●	onlyOwner
L	excludeFromFee	Public !	●	onlyOwner
L	includeInFee	Public !	●	onlyOwner
L	isExcludedFromFee	Public !		NO !
L	_reflectRfi	Private 🔒	●	
L	_takeLiquidity	Private 🔒	●	
L	_takeMarketing	Private 🔒	●	
L	_takeOps	Private 🔒	●	
L	_takeDev	Private 🔒	●	
L	_getValues	Private 🔒		
L	_getTValues	Private 🔒		
L	_getRValues1	Private 🔒		
L	_getRValues2	Private 🔒		
L	_getRate	Private 🔒		
L	_getCurrentSupply	Private 🔒		
L	_approve	Private 🔒	●	
L	_transfer	Private 🔒	●	
L	_tokenTransfer	Private 🔒	●	
L	swapAndLiquify	Private 🔒	●	lockTheSwap
L	addLiquidity	Private 🔒	●	
L	swapTokensForBNB	Private 🔒	●	
L	bulkExcludeFee	External !	●	onlyOwner
L	updateMarketingWallet	External !	●	onlyOwner
L	updateDevWallet	External !	●	onlyOwner
L	updateOpsWallet	External !	●	onlyOwner
L	updateSwapTokensAtAmount	External !	●	onlyOwner
L	updateSwapEnabled	External !	●	onlyOwner
L	rescueBNB	External !	●	onlyOwner
L	rescueAnyBEP20Tokens	Public !	●	onlyOwner
L	<Receive Ether>	External !	🇸🇬	NO !



CONTRACT ASSESMENT

Legend

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

Token Distribution

It should be noted that the owner currently holds 100% of the total supply. However, information about the distribution of these tokens is not available, and it is recommended that investors exercise caution when considering this aspect.



STATIC ANALYSIS

```
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-3
KongInu.includeInReward(address) (contracts/Token.sol#406-417) has costly operations inside a loop:
- _excluded.pop() (contracts/Token.sol#413)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#costly-operations-inside-a-loop

Context._msgData() (contracts/Token.sol#50-53) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

KongInu._rTotal (contracts/Token.sol#169) is set pre-construction with a non-constant function or state variable:
- (MAX - (MAX % _tTotal))
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#function-initializing-state

Pragma version^0.8.17 (contracts/Token.sol#11) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.19 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#130-141):
- (success) = recipient.call{value: amount}() (contracts/Token.sol#136)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IRouter.WETH() (contracts/Token.sol#106) is not in mixedCase
Struct KongInu.valuesFromGetValues (contracts/Token.sol#206-220) is not in CapWords
Function KongInu.EnableTrading() (contracts/Token.sol#372-377) is not in mixedCase
Parameter KongInu.updatedDeadline(uint256)._deadline (contracts/Token.sol#379) is not in mixedCase
Parameter KongInu.updateSwapEnabled(bool)._enabled (contracts/Token.sol#795) is not in mixedCase
Parameter KongInu.rescueAnyBEP20Tokens(address,address,uint256)._tokenAddr (contracts/Token.sol#807) is not in mixedCase
Parameter KongInu.rescueAnyBEP20Tokens(address,address,uint256)._to (contracts/Token.sol#808) is not in mixedCase
Parameter KongInu.rescueAnyBEP20Tokens(address,address,uint256)._amount (contracts/Token.sol#809) is not in mixedCase
Constant KongInu._decimals (contracts/Token.sol#165) is not in UPPER_CASE_WITH_UNDERSCORES
Variable KongInu.genesis_block (contracts/Token.sol#173) is not in mixedCase
Constant KongInu._name (contracts/Token.sol#181) is not in UPPER_CASE_WITH_UNDERSCORES
Constant KongInu._symbol (contracts/Token.sol#182) 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#51)" inContext (contracts/Token.sol#45-54)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements

KongInu._lastSell (contracts/Token.sol#160) is never used in KongInu (contracts/Token.sol#144-819)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

KongInu._tTotal (contracts/Token.sol#168) should be constant
KongInu.deadWallet (contracts/Token.sol#176) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant

KongInu.pair (contracts/Token.sol#163) should be immutable
KongInu.router (contracts/Token.sol#162) 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 issues found



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

1- Adding liquidity (passed):

<https://testnet.bscscan.com/tx/0xe796ffa88e06cfb489e5438c2cdd63a5849f37fac3df5af6dab906af5adee7be>

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

<https://testnet.bscscan.com/tx/0xa57f2e06f169dbc968282d4a0c4cff963f80d4d7b8e4129fbc283030c238f85a>

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

<https://testnet.bscscan.com/tx/0x530562a01d4302bee0c3d63baac9a8d2c1471260f3f21affb5d897328ea34501>

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

<https://testnet.bscscan.com/tx/0x8efbe2b7093e23aebe65070c88185f3158f6f62f2488bb01159ecd280e6d17a6>

5- Buying when not excluded from fees (10% tax) (passed):

<https://testnet.bscscan.com/tx/0xb6c23ff15b98fc49951a7a60cf5e0ce08529a0dd7de6d3026e82bb1b9a491e00>

6- Selling when not excluded from fees (10% tax) (passed):

<https://testnet.bscscan.com/tx/0x33b1bdd799b37188210cf453b30edc1428bb79d7e8b0bac1ec10b97baf492f7d>



FUNCTIONAL TESTING

7- Transferring when not excluded from fees (10% tax) (passed):

<https://testnet.bscscan.com/tx/0x07fa8f110f42be3a4a8566a28084962a03aef12145238a49737a99ef4c831b8d>

8- Internal swap (passed):

All fee wallets received BNB

<https://testnet.bscscan.com/address/0xe0a8b9318c60dcd3a533c462a25ae2ab453fc302#internaltx>

MANUAL TESTING

Logical - Setting swap threshold to 0

Severity: High

Function: updateSwapTokensAtAmount

Lines: 787

Status: Not Resolved

Overview:

setting swap threshold to 0 can disable sells if contract balance is more than threshold.

```
function updateSwapTokensAtAmount(uint256 amount) external onlyOwner {
    require(
        amount <= 42e14,
        "Cannot set swap threshold amount higher than 1% of tokens"
    );
    swapTokensAtAmount = amount * 10 ** _decimals;
}
```

Recommendation:

ensure that swap threshold can not be zero.

Example:

```
function updateSwapTokensAtAmount(uint256 amount) external onlyOwner {
    require(
        amount <= 42e14,
        "Cannot set swap threshold amount higher than 1% of tokens"
    );
    require(
        amount > 0,
        "Cannot set swap threshold amount to 0"
    );
    swapTokensAtAmount = amount * 10 ** _decimals;
}
```



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