AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

BNBsongoku

DATED : 21 MAR 23'

AUDIT SUMMARY

Project name – BNBsongoku

Date: 21 March, 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 Testnet network:
all tests were done on Bsc Testnet network, each test has its transaction has attached to it.

3- Slither : Static Analysis

Testnet Link: Already Launched

Note:
At the time of preparing this audit, the token has already been launched and is being traded. It is important to note that the audit was conducted after the token's introduction on PCSV2. As such, any potential malicious activities by the owner or issues associated with the contract are beyond the scope of this audit.

Token Information

Token Name : BNBsongoku

Token Symbol: BNBsongoku

Decimals: 9

Token Supply: 10000000000000

Token Address:
0x8e09aD03472948E1122f48667F5C7071d27cB3c2

Checksum:
46dda4c1b172d20efb681c3c4ba56a60bd5edb31

Owner:
0x0000000000000000000000000000000000000000
(renounced)

Deployer:
0x39dC36d049F4E4Cd40a50E2b7443e791a6A6E390

TOKEN OVERVIEW

Fees:

Buy Fees: 8%

Sell Fees: 8%

Transfer Fees: 8%

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-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 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

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

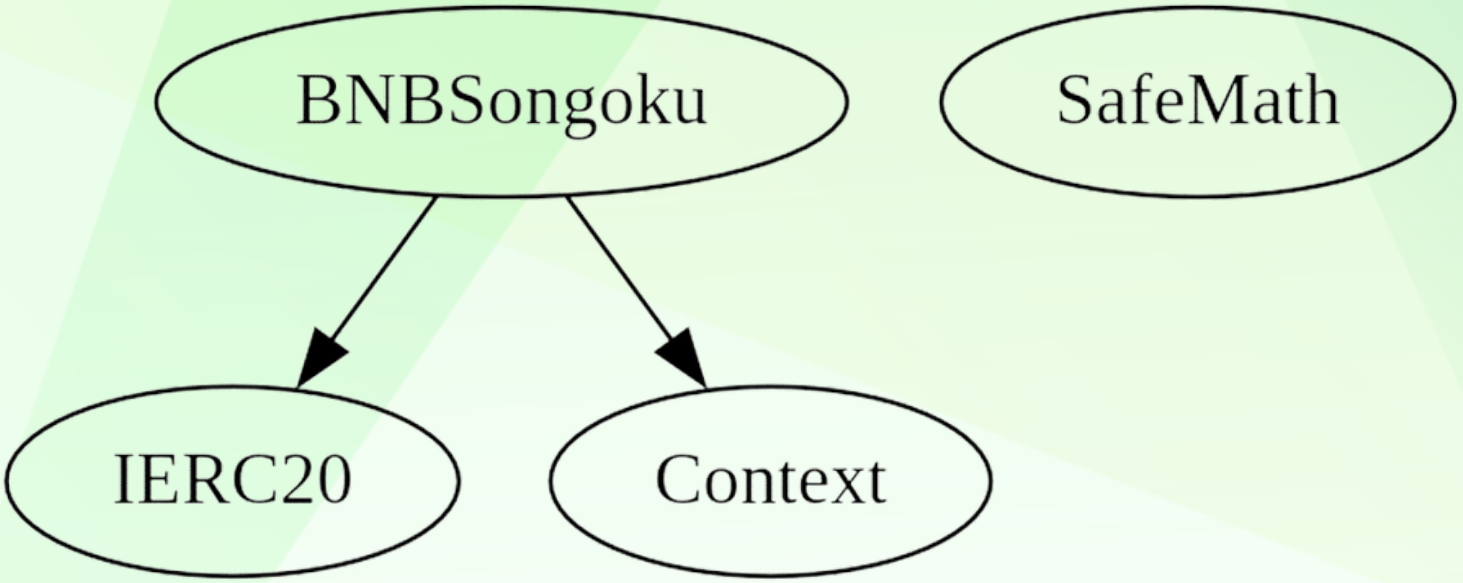
CLASSIFICATION OF RISK

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

- **Ownership is renounced, meaning owner has not control over the contract functions**
- Owner is not able to modify buy/sell/transfer fees (8% 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		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
IERC20	Interface			
└	totalSupply	External ❗		NO❗
└	balanceOf	External ❗		NO❗
└	transfer	External ❗	🛑	NO❗
└	allowance	External ❗		NO❗
└	approve	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗
SafeMath	Library			
└	add	Internal 🔒		
└	sub	Internal 🔒		
└	mul	Internal 🔒		
└	div	Internal 🔒		
└	sub	Internal 🔒		
└	div	Internal 🔒		
Context	Implementation			
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
Address	Library			
└	isContract	Internal 🔒		
└	sendValue	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	functionStaticCall	Internal 🔒		
└	functionStaticCall	Internal 🔒		
└	functionDelegateCall	Internal 🔒	🛑	
└	functionDelegateCall	Internal 🔒	🛑	
└	_verifyCallResult	Private 🔐		
IUniswapV2Factory	Interface			
└	feeTo	External ❗		NO❗
└	feeToSetter	External ❗		NO❗
└	getPair	External ❗		NO❗

CONTRACT ASSESMENT

└	allPairs	External ❗			NO❗
└	allPairsLength	External ❗			NO❗
└	createPair	External ❗	🛑		NO❗
└	setFeeTo	External ❗	🛑		NO❗
└	setFeeToSetter	External ❗	🛑		NO❗
IUniswapV2Pair	Interface			
└	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❗

CONTRACT ASSESMENT

└	removeLiquidityWithPermit	External ❗	🛑	NO❗
└	removeLiquidityETHWithPermit	External ❗	🛑	NO❗
└	swapExactTokensForTokens	External ❗	🛑	NO❗
└	swapTokensForExactTokens	External ❗	🛑	NO❗
└	swapExactETHForTokens	External ❗	💵	NO❗
└	swapTokensForExactETH	External ❗	🛑	NO❗
└	swapExactTokensForETH	External ❗	🛑	NO❗
└	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❗
BNBSongoku	Implementation	Context, IERC20		
└	owner	Public ❗		NO❗
└	renounceOwnership	Public ❗	🛑	NO❗
└	<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❗
└	<Receive Ether>	External ❗	💵	NO❗
└	_getCurrentSupply	Private 🔐		
└	_approve	Private 🔐	🛑	
└	_transfer	Private 🔐	🛑	
└	sendToWallet	Private 🔐	🛑	

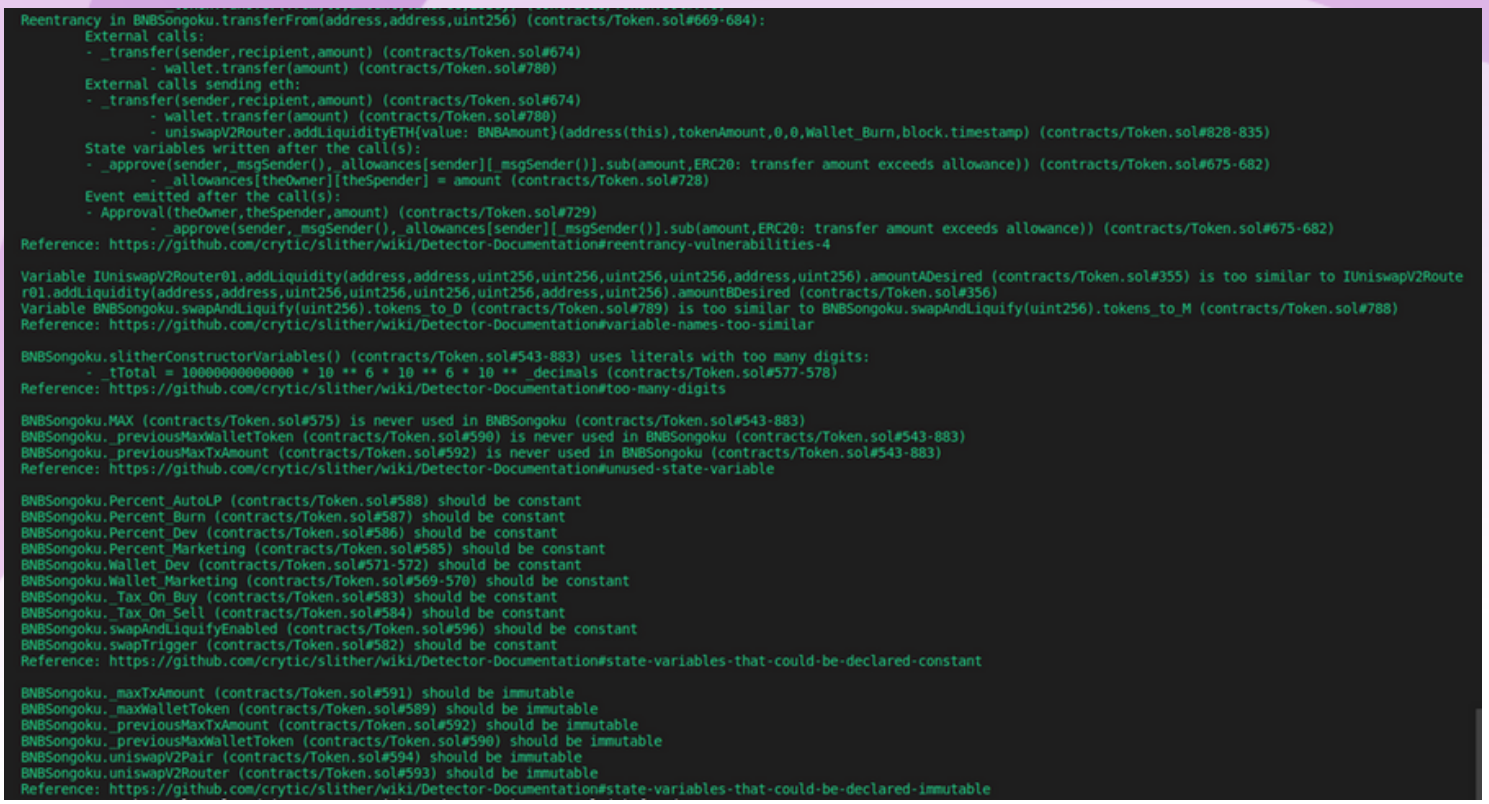
CONTRACT ASSESMENT

└	swapAndLiquify	Private 🔐	🛑	lockTheSwap
└	swapTokensForBNB	Private 🔐	🛑	
└	addLiquidity	Private 🔐	🛑	
└	remove_Random_Tokens	Public ❗	🛑	NO❗
└	_tokenTransfer	Private 🔐	🛑	

Legend

Symbol	Meaning
🛑	Function can modify state
💵	Function is payable

STATIC ANALYSIS



```
Reentrancy in BNBSongoku.transferFrom(address,address,uint256) (contracts/Token.sol#669-684):
        External calls:
        - _transfer(sender,recipient,amount) (contracts/Token.sol#674)
                - wallet.transfer(amount) (contracts/Token.sol#780)
        External calls sending eth:
        - _transfer(sender,recipient,amount) (contracts/Token.sol#674)
                - wallet.transfer(amount) (contracts/Token.sol#780)
                - uniswapV2Router.addLiquidityETH{value: BNBAmount}(address(this),tokenAmount,0,0,Wallet_Burn,block.timestamp) (contracts/Token.sol#828-835)
        State variables written after the call(s):
        - _approve(sender,_msgSender(),_allowances[sender][_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#675-682)
                - _allowances[theOwner][theSpender] = amount (contracts/Token.sol#728)
        Event emitted after the call(s):
        - Approval(theOwner,theSpender,amount) (contracts/Token.sol#729)
                - _approve(sender,_msgSender(),_allowances[sender][_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (contracts/Token.sol#675-682)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-4

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#355) is too similar to IUniswapV2Route
r01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#356)
Variable BNBSongoku.swapAndLiquify(uint256).tokens_to_D (contracts/Token.sol#789) is too similar to BNBSongoku.swapAndLiquify(uint256).tokens_to_M (contracts/Token.sol#788)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

BNBSongoku.slitherConstructorVariables() (contracts/Token.sol#543-883) uses literals with too many digits:
        - _tTotal = 10000000000000 * 10 ** 6 * 10 ** 6 * 10 ** _decimals (contracts/Token.sol#577-578)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

BNBSongoku.MAX (contracts/Token.sol#575) is never used in BNBSongoku (contracts/Token.sol#543-883)
BNBSongoku._previousMaxWalletToken (contracts/Token.sol#590) is never used in BNBSongoku (contracts/Token.sol#543-883)
BNBSongoku._previousMaxTxAmount (contracts/Token.sol#592) is never used in BNBSongoku (contracts/Token.sol#543-883)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable

BNBSongoku.Percent_AutoLP (contracts/Token.sol#588) should be constant
BNBSongoku.Percent_Burn (contracts/Token.sol#587) should be constant
BNBSongoku.Percent_Dev (contracts/Token.sol#586) should be constant
BNBSongoku.Percent_Marketing (contracts/Token.sol#585) should be constant
BNBSongoku.Wallet_Dev (contracts/Token.sol#571-572) should be constant
BNBSongoku.Wallet_Marketing (contracts/Token.sol#569-570) should be constant
BNBSongoku._Tax_On_Buy (contracts/Token.sol#583) should be constant
BNBSongoku._Tax_On_Sell (contracts/Token.sol#584) should be constant
BNBSongoku.swapAndLiquifyEnabled (contracts/Token.sol#596) should be constant
BNBSongoku.swapTrigger (contracts/Token.sol#582) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant

BNBSongoku._maxTxAmount (contracts/Token.sol#591) should be immutable
BNBSongoku._maxWalletToken (contracts/Token.sol#589) should be immutable
BNBSongoku._previousMaxTxAmount (contracts/Token.sol#592) should be immutable
BNBSongoku._previousMaxWalletToken (contracts/Token.sol#590) should be immutable
BNBSongoku.uniswapV2Pair (contracts/Token.sol#594) should be immutable
BNBSongoku.uniswapV2Router (contracts/Token.sol#593) 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

Token is already launched at time of writing this audit and is being traded with an active (BNB/Itachi) pool at PCS v2. buying/selling/burning/transferring/internal swap seem to be working as expected.

At the time of preparing this audit, the token has already been launched and is being traded. It is important to note that the audit was conducted after the token's introduction on PCSV2. As such, any potential malicious activities by the owner or issues associated with the contract are beyond the scope of this audit.

MANUAL TESTING

No Issues Found

Social Media Overview

Here are the Social Media Accounts of BNBsongoku

https://t.me/BNBSONGOKU

https://twitter.com/BNBSongoku

https://bnbsongoku.com

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