



TechRate
AUDIT COMPANY

Smart Contract Security Audit

TechRate

December, 2021

Audit Details



Audited project

SIMBA INU



Deployer address

0xc9821908025c05945b36ef02c44b65f4ef851afb



Client contacts:

SIMBA INU team



Blockchain

Binance Smart Chain



Project website:

<https://simbainu.net/>

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

TechRate was commissioned by SIMBA INU to perform an audit of smart contracts:

<https://bscscan.com/address/0x14e2C19Dd223603dEF5ef4A2a6AF9D1eB03186E2#code>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contracts Details

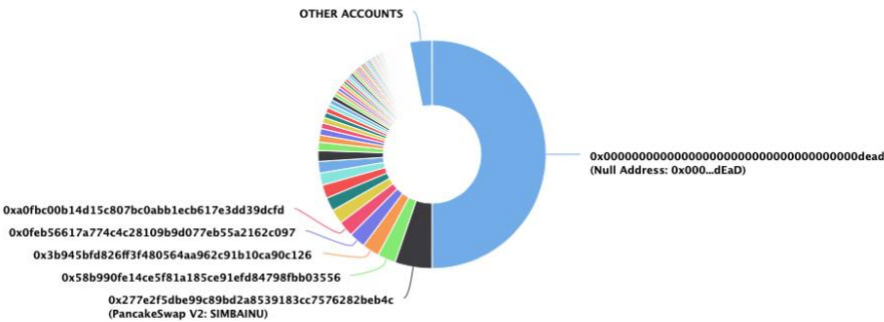
Token contract details for 14.12.2021

Contract name	SIMBA INU
Contract address	0x14e2C19Dd223603dEF5ef4A2a6AF9D1eB03186E2
Total supply	1,000,000,000,000,000
Token ticker	SIMBAINU
Decimals	9
Token holders	1,234
Transactions count	6,485
Top 100 holders dominance	96.84%
USDT	0x55d398326f99059ff775485246999027b3197955
Total fees	10
USDT rewards fee	4
Uniswap V2 pair	0x277e2f5dbe99c89bd2a8539183cc7576282beb4c
Contract deployer address	0xc9821908025c05945b36ef02c44b65f4ef851afb
Contract's current owner address	0xc2cb43dfbcba67d15e8ded23df6551127dede888

SIMBA INU Token Distribution

The top 100 holders collectively own 96.84% (968,359,270,303,202.00 Tokens) of SIMBA INU | Token Total Supply: 1,000,000,000,000,000.00 Token | Total Token Holders: 1,234

SIMBA INU Top 100 Token Holders
Source: BscScan.com

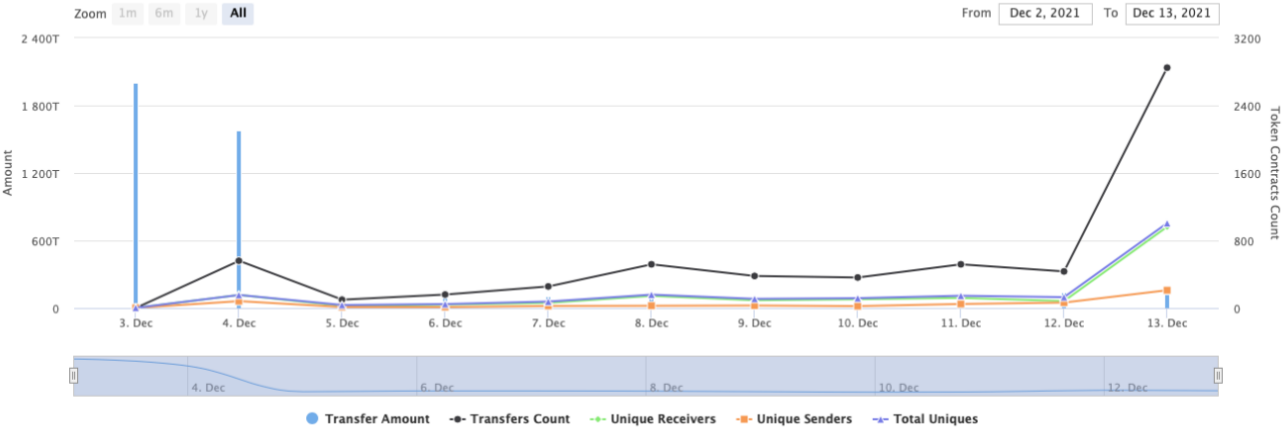


(A total of 968,359,270,303,202.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000,000.00 token)


SIMBA INU Contract Interaction Details

Time Series: Token Contract Overview Fri 3, Dec 2021 - Mon 13, Dec 2021

Token Contract 0x14e2C19Dd223603dEF5ef4A2a6AF9D1e803186E2 (SIMBA INU)
Source: BscScan.com



SIMBA INU Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Null Address: 0x000...dEaD	500,000,000,000,000	50.0000%
2	 PancakeSwap V2: SIMBAINU	52,671,452,058,810.911266787	5.2671%
3	0x58b990fe14ce5f81a185ce91efd84798fbb03556	25,802,468,017,367.929384371	2.5802%
4	0x3b945bfd826ff3f480564aa962c91b10ca90c126	24,238,200,000,200.082831834	2.4238%
5	0x0feb56617a774c4c28109b9d077eb55a2162c097	23,210,465,999,998	2.3210%
6	0xa0fbc00b14d15c807bc0abb1ecb617e3dd39dcfd	22,090,745,352,098.777744794	2.2091%
7	0xf4b02a502e3bc32b41ff86ea4529b9d357705539	20,414,866,282,308.025299203	2.0415%
8	0x85699a60bb8a366eebf2aef76fc16e79c3688bf5	19,109,603,606,674.456063987	1.9110%
9	0xb4755189bb1b8f9bf27796b77c1f85069e5b878e	18,970,000,000,000	1.8970%
10	0x225674fd75dd65cc2bf6ade7d2d54b6fa56bda7f	17,072,816,311,257.2	1.7073%



Contract functions details

- + [Int] IERC20
 - [Ext] totalSupply
 - [Ext] balanceOf
 - [Ext] transfer #
 - [Ext] allowance
 - [Ext] approve #
 - [Ext] transferFrom #
- + [Int] IERC20Metadata (IERC20)
 - [Ext] name
 - [Ext] symbol
 - [Ext] decimals
- + Context
 - [Int] _msgSender
 - [Int] _msgData
- + Ownable (Context)
 - [Pub] <Constructor> #
 - [Pub] owner
 - [Pub] renounceOwnership #
 - modifiers: onlyOwner
 - [Pub] transferOwnership #
 - modifiers: onlyOwner
- + [Lib] SafeMath
 - [Int] add
 - [Int] sub
 - [Int] sub
 - [Int] mul
 - [Int] div
 - [Int] div
 - [Int] mod
 - [Int] mod
- + [Lib] IterableMapping
 - [Pub] get
 - [Pub] getIndexOfKey
 - [Pub] getKeyAtIndex
 - [Pub] size
 - [Pub] set #
 - [Pub] remove #
- + [Lib] SafeMathUint
 - [Int] toInt256Safe
- + [Lib] SafeMathInt
 - [Int] mul
 - [Int] div
 - [Int] sub
 - [Int] add

- [Int] abs
- [Int] toUint256Safe
- + [Int] DividendPayingTokenInterface
 - [Ext] dividendOf
 - [Ext] withdrawDividend #
- + [Int] DividendPayingTokenOptionalInterface
 - [Ext] withdrawableDividendOf
 - [Ext] withdrawnDividendOf
 - [Ext] accumulativeDividendOf
- + [Int] IUniswapV2Pair
 - [Ext] name
 - [Ext] symbol
 - [Ext] decimals
 - [Ext] totalSupply
 - [Ext] balanceOf
 - [Ext] allowance
 - [Ext] approve #
 - [Ext] transfer #
 - [Ext] transferFrom #
 - [Ext] DOMAIN_SEPARATOR
 - [Ext] PERMIT_TYPEHASH
 - [Ext] nonces
 - [Ext] permit #
 - [Ext] MINIMUM_LIQUIDITY
 - [Ext] factory
 - [Ext] token0
 - [Ext] token1
 - [Ext] getReserves
 - [Ext] price0CumulativeLast
 - [Ext] price1CumulativeLast
 - [Ext] kLast
 - [Ext] mint #
 - [Ext] burn #
 - [Ext] swap #
 - [Ext] skim #
 - [Ext] sync #
 - [Ext] initialize #
- + [Int] IUniswapV2Factory
 - [Ext] feeTo
 - [Ext] feeToSetter
 - [Ext] getPair
 - [Ext] allPairs
 - [Ext] allPairsLength
 - [Ext] createPair #
 - [Ext] setFeeTo #
 - [Ext] setFeeToSetter #
- + [Int] IUniswapV2Router01
 - [Ext] factory
 - [Ext] WETH
 - [Ext] addLiquidity #

- [Ext] addLiquidityETH (\$)
 - [Ext] removeLiquidity #
 - [Ext] removeLiquidityETH #
 - [Ext] removeLiquidityWithPermit #
 - [Ext] removeLiquidityETHWithPermit #
 - [Ext] swapExactTokensForTokens #
 - [Ext] swapTokensForExactTokens #
 - [Ext] swapExactETHForTokens (\$)
 - [Ext] swapTokensForExactETH #
 - [Ext] swapExactTokensForETH #
 - [Ext] swapETHForExactTokens (\$)
 - [Ext] quote
 - [Ext] getAmountOut
 - [Ext] getAmountIn
 - [Ext] getAmountsOut
 - [Ext] getAmountsIn
- + [Int] IUniswapV2Router02 (IUniswapV2Router01)
- [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
 - [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
 - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
 - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
 - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
- + ERC20 (Context, IERC20, IERC20Metadata)
- [Pub] <Constructor> #
 - [Pub] name
 - [Pub] symbol
 - [Pub] decimals
 - [Pub] totalSupply
 - [Pub] balanceOf
 - [Pub] transfer #
 - [Pub] allowance
 - [Pub] approve #
 - [Pub] transferFrom #
 - [Pub] increaseAllowance #
 - [Pub] decreaseAllowance #
 - [Int] _transfer #
 - [Int] _mint #
 - [Int] _burn #
 - [Int] _approve #
 - [Int] _beforeTokenTransfer #
- + DividendPayingToken (ERC20, Ownable, DividendPayingTokenInterface, DividendPayingTokenOptionalInterface)
- [Pub] <Constructor> #
 - modifiers: ERC20
 - [Pub] distributeUSDTDividends #
 - modifiers: onlyOwner
 - [Pub] withdrawDividend #
 - [Int] _withdrawDividendOfUser #
 - [Pub] dividendOf
 - [Pub] withdrawableDividendOf
 - [Pub] withdrawnDividendOf
 - [Pub] accumulativeDividendOf

- [Int] _transfer #
- [Int] _mint #
- [Int] _burn #
- [Int] _setBalance #
- + SIMBAINU (ERC20, Ownable)
 - [Pub] <Constructor> #
 - modifiers: ERC20
 - [Pub] updateDividendTracker #
 - modifiers: onlyOwner
 - [Pub] updateUniswapV2Router #
 - modifiers: onlyOwner
 - [Pub] excludeFromFees #
 - modifiers: onlyOwner
 - [Ext] excludeFromDividends #
 - modifiers: onlyOwner
 - [Ext] setMaxTxAmount #
 - modifiers: onlyOwner
 - [Ext] setUSDTRewardsFee #
 - modifiers: onlyOwner
 - [Ext] setLiquidityFee #
 - modifiers: onlyOwner
 - [Ext] setMarketingFee #
 - modifiers: onlyOwner
 - [Ext] setMarketingWallet #
 - modifiers: onlyOwner
 - [Ext] setSwapTokensAtAmount #
 - modifiers: onlyOwner
 - [Pub] setAutomatedMarketMakerPair #
 - modifiers: onlyOwner
 - [Prv] _setAutomatedMarketMakerPair #
 - [Pub] updateGasForProcessing #
 - modifiers: onlyOwner
 - [Ext] updateClaimWait #
 - modifiers: onlyOwner
 - [Ext] getClaimWait
 - [Ext] getTotalDividendsDistributed
 - [Pub] isExcludedFromFees
 - [Pub] withdrawableDividendOf
 - [Pub] dividendTokenBalanceOf
 - [Ext] getAccountDividendsInfo
 - [Ext] getAccountDividendsInfoAtIndex
 - [Ext] processDividendTracker #
 - [Ext] claim #
 - [Ext] getLastProcessedIndex
 - [Ext] getNumberOfDividendTokenHolders
 - [Int] _transfer #
 - [Int] utilizeFee #
 - [Prv] addToLiquidity #
 - [Prv] swapTokensForEth #
 - [Prv] sendDividends #
 - [Ext] <Fallback> (\$)
- + SIMBAINUDividendTracker (Ownable, DividendPayingToken)
 - [Pub] <Constructor> #

- modifiers: DividendPayingToken
- [Int] _transfer #
- [Pub] withdrawDividend #
- [Ext] excludeFromDividends #
 - modifiers: onlyOwner
- [Ext] updateClaimWait #
 - modifiers: onlyOwner
- [Ext] getLastProcessedIndex
- [Ext] getNumberOfTokenHolders
- [Pub] getAccount
- [Pub] getAccountAtIndex
- [Prv] canAutoClaim
- [Ext] setBalance #
 - modifiers: onlyOwner
- [Pub] process #
- [Pub] processAccount #
 - modifiers: onlyOwner

(\$) = payable function

= non-constant function

Issues Checking Status

Issue description	Checking status
1. Compiler errors.	Passed
2. Race conditions and Reentrancy. Cross-function race conditions.	Passed
3. Possible delays in data delivery.	Passed
4. Oracle calls.	Passed
5. Front running.	Passed
6. Timestamp dependence.	Passed
7. Integer Overflow and Underflow.	Passed
8. DoS with Revert.	Passed
9. DoS with block gas limit.	Passed
10. Methods execution permissions.	Passed
11. Economy model of the contract.	Passed
12. The impact of the exchange rate on the logic.	Passed
13. Private user data leaks.	Passed
14. Malicious Event log.	Passed
15. Scoping and Declarations.	Passed
16. Uninitialized storage pointers.	Passed
17. Arithmetic accuracy.	Passed
18. Design Logic.	Passed
19. Cross-function race conditions.	Passed
20. Safe Open Zeppelin contracts implementation and usage.	Passed
21. Fallback function security.	Passed

Security Issues

✓ High Severity Issues

No high severity issues found.

✓ Medium Severity Issues

No medium severity issues found.

✓ Medium Severity Issues

No medium severity issues found.

Notes:

- Owner can change dividend tracker that could be not audited and some functions may work in different ways.
- Liquidity proportion vary on difference between `address(this).balance` and `swapTokensAtAmount`.

Owner privileges (In the period when the owner is not renounced)

- Owner can change dividend tracker.
- Owner can change Uniswap router address.
- Owner can exclude from the fees.
- Owner can exclude from dividends.
- Owner can change max transaction amount.
- Owner can change fees(maximum total fee is 10).
- Owner can change marketing wallet.
- Owner can change `swapTokensAtAmount`.
- Owner can exclude and include addresses in `automatedMarketMakerPairs` array.
- Owner can change gas for processing.
- Owner can update `claimWait` value.

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details are provided by the team:

<https://dxsale.app/app/v3/dxlockview?id=0&add=0xc2Cb43dFBcBa67D15e8DED23df6551127DEDe888&type=lplock&chain=BSC>

TechRate note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.



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