



TechRate
AUDIT COMPANY

Smart Contract Security Audit

TechRate

November, 2021

Audit Details



Audited project

Shinomics



Deployer address

0xb4906c0b6d801e62fcb3bd40ae057f8532ab87f3



Client contacts:

Shinomics team



Blockchain

Binance Smart Chain



Project website:

<https://www.shinomics.app/>

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 Shinomics to perform an audit of smart contracts:

<https://bscscan.com/address/0x84BbAd0Fe2770790f2b587196c6ECB270E776647#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 26.11.2021

Contract name	Shinomics
Contract address	0x84BbAd0Fe2770790f2b587196c6ECB270E776647
Total supply	1,000,000,000,000
Token ticker	Shin
Decimals	9
Token holders	785
Transactions count	6,518
Top 100 holders dominance	85.78%
Launched at	12484514
Autoliquidity fee receiver	0x101788c20a39166bad8b306d1317a2bd3a7fbef3
Marketing fee receiver	0xb4906c0b6d801e62fcb3bd40ae057f8532ab87f3
Pair	0xd4a174980bdc16d53eb4d6ad0bb73fd2e407a45f
Contract deployer address	0xb4906c0b6d801e62fcb3bd40ae057f8532ab87f3
Contract's current owner address	0xb4906c0b6d801e62fcb3bd40ae057f8532ab87f3

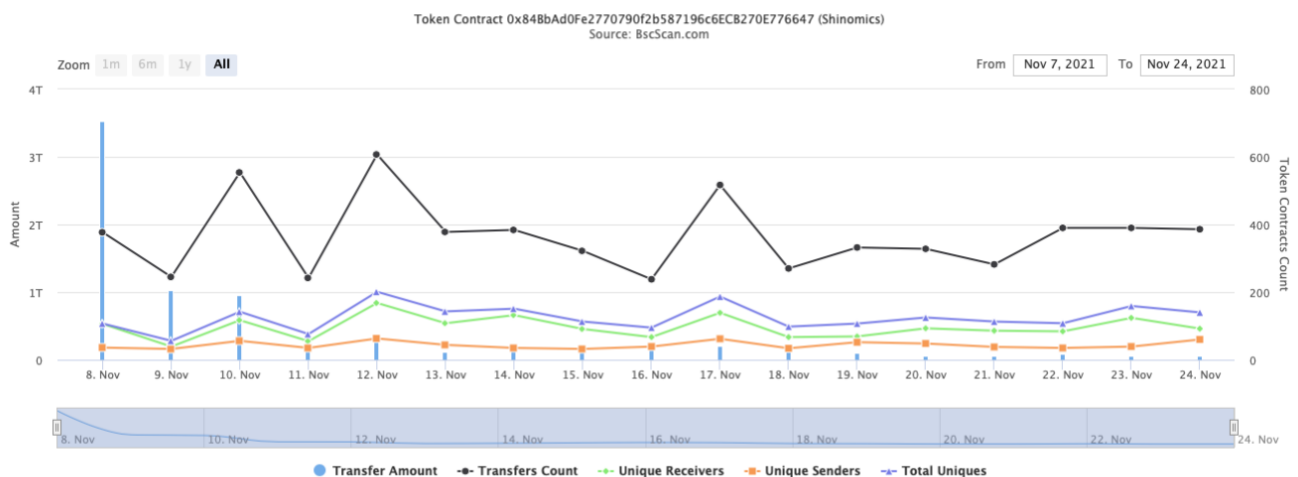
💡 Token Total Supply: 1,000,000,000,000.00 Token | Total Token Holders: 786

(A total of 857,838,648,411.84 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000.00 token)



Shinomics Contract Interaction Details

Time Series: Token Contract Overview

Mon 8, Nov 2021 - Wed 24, Nov 2021



Shinomics Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Burn Address	103,054,700,927.601418642	10.3055%
2	 KIPS: Locked Wallet	81,465,501,349.57533	8.1466%
3	 PancakeSwap V2: Shin 28	30,514,632,265.78013369	3.0515%
4	0xc958040e29b47a93a998b4dd80489623f7809730	28,000,000,000.624737333	2.8000%
5	0xe8f753214a7bc1d305873e6707e20bcf54eb1961	25,382,785,959.61071178	2.5383%
6	0xca18666cd710ef5e22a46ff8bda58209dd62597c	25,259,437,274.114197873	2.5259%
7	0xcd84b2408b6aaf28d2fc13e4b9a7f682ff3f5fbc	25,109,977,572.877453306	2.5110%
8	0x70b41ed503991a5dbe1dfe1a3f729009f29be112	24,572,305,598.481404114	2.4572%
9	0x347c3fdb618ccdef7090dfba01f934fab46edb2	21,912,914,690.277549008	2.1913%
10	0x0cd393a23d2828c9e0671738e142227ab329f8fb	21,424,602,676.430097554	2.1425%



Contract functions details

+ [Lib] SafeMath

- [Int] add
- [Int] sub
- [Int] sub
- [Int] mul
- [Int] div
- [Int] div

+ [Int] IBEP20

- [Ext] totalSupply
- [Ext] decimals
- [Ext] symbol
- [Ext] name
- [Ext] getOwner
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

+ Auth

- [Pub] <Constructor> #
- [Pub] authorize #
 - modifiers: onlyOwner
- [Pub] unauthorize #
 - modifiers: onlyOwner
- [Pub] isOwner
- [Pub] isAuthorized
- [Pub] transferOwnership #
 - modifiers: onlyOwner

+ [Int] IDEXFactory

- [Ext] createPair #

+ [Int] IDEXRouter

- [Ext] factory
- [Ext] WETH
- [Ext] addLiquidity #
- [Ext] addLiquidityETH (\$)
- [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
- [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
- [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ [Int] IDividendDistributor

- [Ext] setDistributionCriteria #
- [Ext] setShare #
- [Ext] deposit (\$)
- [Ext] process #

+ DividendDistributor (IDividendDistributor)

- [Pub] <Constructor> #

- [Ext] setDistributionCriteria #
 - modifiers: onlyToken
 - [Ext] setShare #
 - modifiers: onlyToken
 - [Ext] deposit (\$)
 - modifiers: onlyToken
 - [Ext] process #
 - modifiers: onlyToken
 - [Int] shouldDistribute
 - [Int] distributeDividend #
 - [Ext] claimDividend #
 - modifiers: onlyToken
 - [Pub] getUnpaidEarnings
 - [Int] getCumulativeDividends
 - [Int] addShareholder #
 - [Int] removeShareholder #
- + Shinomics (IBEP20, Auth)
- [Pub] <Constructor> #
 - modifiers: Auth
 - [Ext] <Fallback> (\$)
 - [Ext] totalSupply
 - [Ext] decimals
 - [Ext] symbol
 - [Ext] name
 - [Ext] getOwner
 - [Pub] balanceOf
 - [Ext] allowance
 - [Pub] approve #
 - [Ext] approveMax #
 - [Ext] transfer #
 - [Ext] transferFrom #
 - [Int] _transferFrom #
 - [Int] _basicTransfer #
 - [Int] checkTxLimit
 - [Int] shouldTakeFee
 - [Pub] getTotalFee
 - [Pub] getMultipliedFee
 - [Int] takeFee #
 - [Int] shouldSwapBack
 - [Int] swapBack #
 - modifiers: swapping
 - [Int] shouldAutoBuyback
 - [Ext] triggerManualBuyback #
 - modifiers: authorized
 - [Ext] clearBuybackMultiplier #
 - modifiers: authorized
 - [Int] triggerAutoBuyback #
 - [Int] buyTokens #
 - modifiers: swapping
 - [Ext] setAutoBuybackSettings #
 - modifiers: authorized
 - [Ext] setBuybackMultiplierSettings #
 - modifiers: authorized
 - [Int] launched

- [Int] launch #
- [Ext] setTxLimit #
 - modifiers: authorized
- [Ext] setLsDividendExempt #
 - modifiers: authorized
- [Ext] setLsFeeExempt #
 - modifiers: authorized
- [Ext] setLsTxLimitExempt #
 - modifiers: authorized
- [Ext] setFees #
 - modifiers: authorized
- [Ext] setFeeReceivers #
 - modifiers: authorized
- [Ext] setSwapBackSettings #
 - modifiers: authorized
- [Ext] setTargetLiquidity #
 - modifiers: authorized
- [Ext] manualSend #
 - modifiers: authorized
- [Ext] setDistributionCriteria #
 - modifiers: authorized
- [Ext] claimDividend #
- [Pub] getUnpaidEarnings
- [Ext] setDistributorSettings #
 - modifiers: authorized
- [Pub] getCirculatingSupply
- [Pub] getLiquidityBacking
- [Pub] isOverLiquified

(\$) = 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.

✓ Low Severity Issues

No low severity issues found.

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

- Owner can call `triggerManualBuyback` that's initiate buyback.
- Owner can clean buyback multiplier.
- Owner can change auto buyback settings.
- Owner can change buyback multiplier settings.
- Owner can change the maximum transaction amount.
- Owner can include in and exclude from dividends.
- Owner can include in and exclude from fee and transaction amount.
- Owner can change fees.
- Owner can change fee receivers.
- Owner can change swap threshold and disable/enable swap.
- Owner can change target liquidity values.
- Owner can change distribution criteria.
- Owner can change distribution GAS.

Conclusion

Smart contracts contain owner privileges! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details provided by the team:

<https://dxsale.app/app/v3/dxlockview?id=1&add=0x06BDE0596F883f5B197c8b1B0ADcf2B7ccc3f192&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.