



**TechRate**  
AUDIT COMPANY

# Smart Contract Security Audit

# Audit Details



Audited project  
**BunnyJunior**



Deployer address  
**0x6359F9059c94Ce8f04f9cf0745f9c88ba9197212**



Client contacts:  
**BunnyJunior team**



Blockchain  
**Binance Smart Chain**



Project website:  
**Not provided**

# 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 BunnyJunior to perform an audit of smart contracts:

<https://bscscan.com/address/0xc2247ef25cdbea9c9eacac23c6e150c7c6e8cfd6#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 07.08.2021

Contract name	BunnyJun
Contract address	0xc2247EF25CDbEA9c9eaCaC23c6E150c7C6e8CFD6
Total supply	100,000,000,000
Token ticker	BunnyJunior
Decimals	18
Token holders	2
Transactions count	2
Top 100 holders dominance	100.00%
Liquidity fee	4
Bunny rewards fee	12
Marketing fee	4
Total fees	20
Dividend tracker	0x52fbe51a68805ba9b17eec00e59a97f86d1a346f
Uniswap V2 pair	0xd968f91ada26e349bf6b6c3cfa3b87e02953e3d7
Contract deployer address	0x6359F9059c94Ce8f04f9cf0745f9c88ba9197212
Contract's current owner address	0x6359f9059c94ce8f04f9cf0745f9c88ba9197212

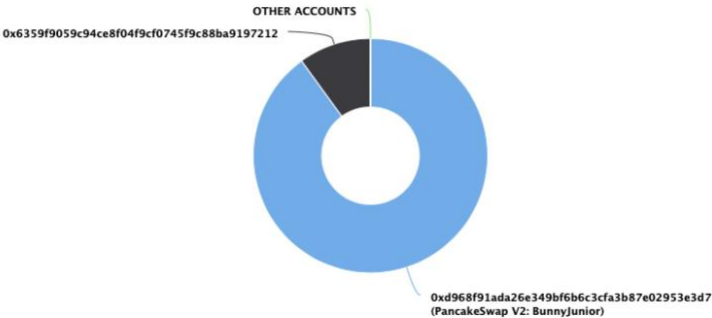
# BunnyJunior Token Distribution

The top 100 holders collectively own 100.00% (100,000,000,000.00 Tokens) of BunnyJunior

Token Total Supply: 100,000,000,000.00 Token | Total Token Holders: 2

BunnyJunior Top 100 Token Holders

Source: BscScan.com



(A total of 100,000,000,000.00 tokens held by the top 100 accounts from the total supply of 100,000,000,000.00 token)

# BunnyJunior Contract Interaction Details

Time Series: Token Contract Overview

Tue 3, Aug 2021 - Tue 3, Aug 2021

Token Contract 0xc2247ef25cdbea9c9eacac23c6e150c7c6e8cfd6 (BunnyJunior)  
Source: BscScan.com



# BunnyJunior Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	<a href="#">PancakeSwap V2: BunnyJunior</a>	90,000,000,000	90.0000%
2	<a href="#">0x6359f9059c94ce8f04f9cf0745f9c88ba9197212</a>	10,000,000,000	10.0000%





# Contract functions details

- + [Lib] SafeMathUint
  - [Int] toInt256Safe
- + [Lib] SafeMathInt
  - [Int] mul
  - [Int] div
  - [Int] sub
  - [Int] add
  - [Int] abs
  - [Int] toUint256Safe
- + [Lib] SafeMath
  - [Int] add
  - [Int] sub
  - [Int] sub
  - [Int] mul
  - [Int] div
  - [Int] div
  - [Int] mod
  - [Int] mod
- + Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
- + [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 #

- + [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 #

- + [Lib] IterableMapping
  - [Pub] get
  - [Pub] getIndexOfKey
  - [Pub] getKeyAtIndex
  - [Pub] size
  - [Pub] set #
  - [Pub] remove #

- + [Int] IERC20Metadata (IERC20)
  - [Ext] name

- [Ext] symbol
- [Ext] decimals

+ [Int] IERC20

- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

+ 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 #

+ [Int] DividendPayingTokenOptionalInterface

- [Ext] withdrawableDividendOf
- [Ext] withdrawnDividendOf
- [Ext] accumulativeDividendOf

+ [Int] DividendPayingTokenInterface

- [Ext] dividendOf
- [Ext] withdrawDividend #

+ DividendPayingToken (ERC20, Ownable, DividendPayingTokenInterface, DividendPayingTokenOptionalInterface)

- [Pub] <Constructor> #
  - modifiers: ERC20
- [Pub] distributeBunnyDividends #
  - modifiers: onlyOwner
- [Pub] withdrawDividend #
- [Int] \_withdrawDividendOfUser #
- [Pub] dividendOf
- [Pub] withdrawableDividendOf
- [Pub] withdrawnDividendOf
- [Pub] accumulativeDividendOf
- [Int] \_transfer #
- [Int] \_mint #
- [Int] \_burn #
- [Int] \_setBalance #

## + Context

- [Int] \_msgSender
- [Int] \_msgData

## + BunnyJun (ERC20, Ownable)

- [Pub] <Constructor> #
  - modifiers: ERC20
- [Ext] <Fallback> (\$)
- [Pub] updateDividendTracker #
  - modifiers: onlyOwner
- [Pub] updateUniswapV2Router #
  - modifiers: onlyOwner
- [Pub] excludeFromFees #
  - modifiers: onlyOwner
- [Pub] excludeMultipleAccountsFromFees #
  - modifiers: onlyOwner
- [Ext] setMarketingWallet #
  - modifiers: onlyOwner
- [Ext] setBunnyRewardsFee #
  - modifiers: onlyOwner
- [Ext] setLiquiditFee #
  - modifiers: onlyOwner
- [Ext] setMaxWalletLimit #
  - modifiers: onlyOwner
- [Ext] setMarketingFee #
  - modifiers: onlyOwner
- [Ext] setMaxTxAmount #
  - modifiers: onlyOwner
- [Pub] setAutomatedMarketMakerPair #
  - modifiers: onlyOwner
- [Ext] blacklistAddress #
  - modifiers: onlyOwner
- [Prv] \_setAutomatedMarketMakerPair #
- [Pub] updateGasForProcessing #
  - modifiers: onlyOwner
- [Ext] updateClaimWait #
  - modifiers: onlyOwner
- [Ext] getClaimWait
- [Ext] getTotalDividendsDistributed
- [Pub] isExcludedFromFees
- [Pub] withdrawableDividendOf
- [Pub] dividendTokenBalanceOf
- [Ext] excludeFromDividends #
  - modifiers: onlyOwner
- [Ext] getAccountDividendsInfo
- [Ext] getAccountDividendsInfoAtIndex
- [Ext] processDividendTracker #
- [Ext] claim #
- [Ext] getLastProcessedIndex
- [Ext] getNumberOfDividendTokenHolders
- [Int] \_transfer #
- [Prv] swapAndSendToFee #
- [Prv] swapAndLiquify #
- [Prv] swapTokensForEth #

- [Prv] swapTokensForBunny #
- [Prv] addLiquidity #
- [Prv] swapAndSendDividends #
- + BunnyDividendTracker (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.	Low issue
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

### 1. Out of gas

Issue:

- The function `excludeMultipleAccountsFromFees()` uses the loop to exclude multiple accounts from fees. Function will be aborted with `OUT_OF_GAS` exception if there will be a long addresses list.

## Notes:

- Dividend tracker may be changed. So that logic of `setBalance` and other functions could be another and not audited.

## 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 and include addresses in `automatedMarketMakerPairs` array.
- Owner can change Bunny rewards, marketing, liquidity fee.
- Owner can change max wallet limit.
- Owner can change max transaction amount.
- Owner can blacklist addresses.
- Owner can change gas for processing.
- Owner can update `claimWait` value.
- Owner can change marketing wallet.
- Owner can exclude from dividends.

# 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/v2\\_9/dxlockview?id=0&add=0x6359F9059c94Ce8f04f9cf0745f9c88ba9197212&type=tokenlock&chain=BSC](https://dxsale.app/app/v2_9/dxlockview?id=0&add=0x6359F9059c94Ce8f04f9cf0745f9c88ba9197212&type=tokenlock&chain=BSC)

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## *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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