



**TechRate**

AUDIT COMPANY

# Smart Contract Security Audit

[TechRate](#)

January, 2022

# Audit Details



Audited project

**JeToken**



Deployer address

**0x7a394f2d92d387393bcfd902464077559e87aaa0**



Client contacts:

**JeToken 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.

**DISCLAIMER:** By reading this report or any part of it, you agree to the terms of this disclaimer. If you do not agree to the terms, then please immediately cease reading this report, and delete and destroy any and all copies of this report downloaded and/or printed by you. This report is provided for information purposes only and on a non-reliance basis, and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and TechRate and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers and other representatives) (TechRate) owe no duty of care towards you or any other person, nor does TechRate make any warranty or representation to any person on the accuracy or completeness of the report. The report is provided "as is", without any conditions, warranties or other terms of any kind except as set out in this disclaimer, and TechRate hereby excludes all representations, warranties, conditions and other terms (including, without limitation, the warranties implied by law of satisfactory quality, fitness for purpose and the use of reasonable care and skill) which, but for this clause, might have effect in relation to the report. Except and only to the extent that it is prohibited by law, TechRate hereby excludes all liability and responsibility, and neither you nor any other person shall have any claim against TechRate, for any amount or kind of loss or damage that may result to you or any other person (including without limitation, any direct, indirect, special, punitive, consequential or pure economic loss or damages, or any loss of income, profits, goodwill, data, contracts, use of money, or business interruption, and whether in delict, tort (including without limitation negligence), contract, breach of statutory duty, misrepresentation (whether innocent or negligent) or otherwise under any claim of any nature whatsoever in any jurisdiction) in any way arising from or connected with this report and the use, inability to use or the results of use of this report, and any reliance on this report.

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 JeToken to perform an audit of smart contracts:

<https://bscscan.com/address/0x0f005dfe97c5041e538b7075915b2ee706677c26#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 15.01.2021

---

Contract name	JeToken
Contract address	0x0f005Dfe97c5041E538B7075915b2eE706677C26
Total supply	100,000,000,000
Token ticker	JETS
Decimals	9
Token holders	4,353
Transactions count	50,674
Top 100 holders dominance	96.81%
Liquidity fee	25
RFI fee	20
Operation/Marketing/Buyback fees	0/30/25
Uniswap V2 pair	0xcaa8cbc6ddfa6c3a695f1c16238cece0b3d8da9f
Contract deployer address	0x7a394f2d92d387393bcfd902464077559e87aaa0
Contract's current owner address	0x7a394f2d92d387393bcfd902464077559e87aaa0

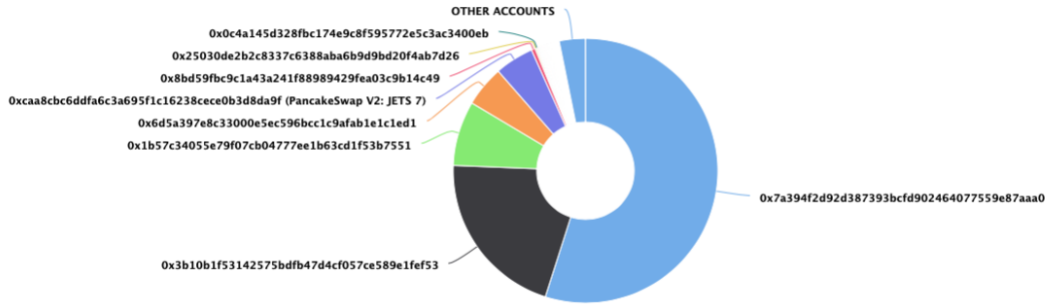
# JeToken Token Distribution

The top 100 holders collectively own 96.81% (96,808,156,653.98 Tokens) of JeToken

Token Total Supply: 100,000,000,000.00 Token | Total Token Holders: 4,353

### JeToken Top 100 Token Holders

Source: BscScan.com



(A total of 96,808,156,653.98 tokens held by the top 100 accounts from the total supply of 100,000,000,000.00 token)

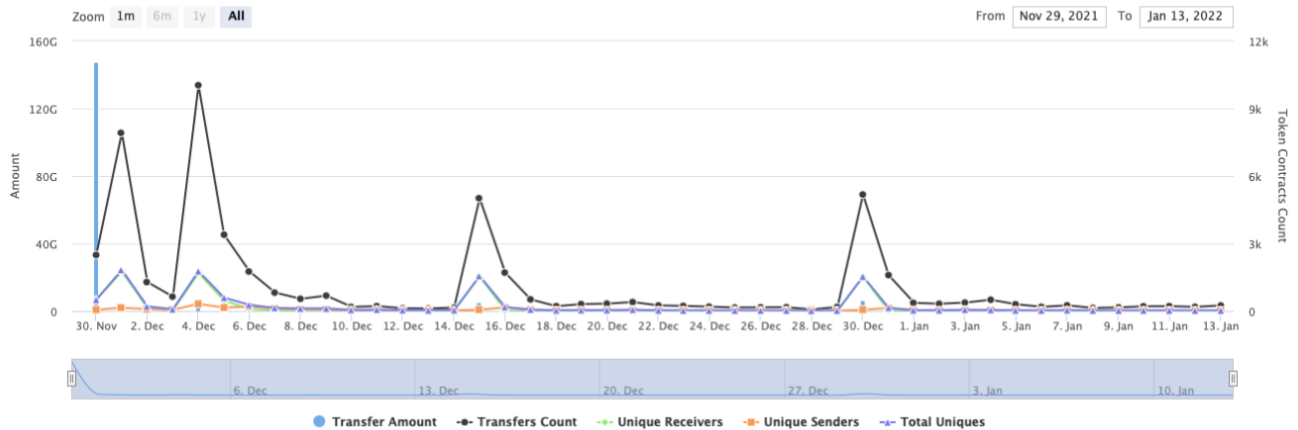
# JeToken Contract Interaction Details

Time Series: Token Contract Overview


Tue 30, Nov 2021 - Thu 13, Jan 2022

### Token Contract 0x0f005dfe97c5041e538b7075915b2ee706677c26 (JeToken)

Source: BscScan.com



# JeToken Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	<a href="#">0x7a394f2d92d387393bcd902464077559e87aaa0</a>	54,924,763,552.654903827	54.9248%
2	<a href="#">0x3b10b1f53142575bdfb47d4cf057ce589e1fef53</a>	20,711,238,395.322495083	20.7112%
3	<a href="#">0x1b57c34055e79f07cb04777ee1b63cd1f53b7551</a>	7,919,132,416.238490367	7.9191%
4	<a href="#">0x6d5a397e8c33000e5ec596bcc1c9afab1e1c1ed1</a>	5,000,000,000	5.0000%
5	 PancakeSwap V2: JETS 7	4,749,533,171.102169974	4.7495%
6	<a href="#">0x8bd59fbc9c1a43a241f88989429fea03c9b14c49</a>	470,530,486.111181965	0.4705%
7	<a href="#">0x25030de2b2c8337c6388aba6b9d9bd20f4ab7d26</a>	163,011,923.631296056	0.1630%
8	<a href="#">0x0c4a145d328fbc174e9c8f595772e5c3ac3400eb</a>	141,774,675.218297598	0.1418%
9	<a href="#">0x7b8c3c6b310b9dd7cfed139f6f4e3748a4ef197b</a>	130,883,214.135901395	0.1309%
10	<a href="#">0xcfdbe2aabce5059d28bb924e3adc80ab3dcb1b</a>	128,936,979.414005852	0.1289%



# Contract functions details

- + [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #
- + [Lib] SafeMath
  - [Int] tryAdd
  - [Int] trySub
  - [Int] tryMul
  - [Int] tryDiv
  - [Int] tryMod
  - [Int] add
  - [Int] sub
  - [Int] mul
  - [Int] div
  - [Int] mod
  - [Int] sub
  - [Int] div
  - [Int] mod
- + Context
  - [Int] \_msgSender
  - [Int] \_msgData
- + [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Int] functionDelegateCall #
  - [Int] functionDelegateCall #
  - [Prv] \_verifyCallResult
- + Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [Prv] \_setOwner #
- + [Int] IFactory
  - [Ext] createPair #



- [Ext] getPair
- + [Int] IRouter
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidityETH (\$)
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
- + JeToken (Context, IERC20, Ownable)
  - [Pub] <Constructor> #
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals
  - [Pub] totalSupply
  - [Pub] balanceOf
  - [Pub] transfer #
  - [Pub] allowance
  - [Pub] approve #
  - [Pub] transferFrom #
  - [Pub] increaseAllowance #
  - [Pub] decreaseAllowance #
  - [Pub] isExcludedFromReward
  - [Pub] deliver #
  - [Pub] reflectionFromToken
  - [Ext] startTrading #
    - modifiers: onlyOwner
  - [Pub] tokenFromReflection
  - [Pub] excludeFromReward #
    - modifiers: onlyOwner
  - [Ext] includeInReward #
    - modifiers: onlyOwner
  - [Pub] excludeFromFee #
    - modifiers: onlyOwner
  - [Pub] includeInFee #
    - modifiers: onlyOwner
  - [Pub] isExcludedFromFee
  - [Ext] setMaxWalletPercent #
    - modifiers: onlyOwner
  - [Ext] setFeeRates #
    - modifiers: onlyOwner
  - [Ext] setSellFeeRates #
    - modifiers: onlyOwner
  - [Prv] \_reflectRfi #
  - [Prv] \_takeOperations #
  - [Prv] \_takeBuyback #
  - [Prv] \_takeLiquidity #
  - [Prv] \_takeMarketing #
  - [Prv] \_getValues
  - [Prv] \_getTValues
  - [Prv] \_getRValues
  - [Prv] \_getRate
  - [Prv] \_getCurrentSupply
  - [Prv] \_approve #
  - [Prv] \_transfer #

- [Prv] \_tokenTransfer #
- [Prv] buyBackTokens #
  - modifiers: lockTheSwap
- [Prv] swapETHForTokens #
- [Prv] swapAndLiquify #
  - modifiers: lockTheSwap
- [Prv] addLiquidity #
- [Prv] swapTokensForBNB #
- [Ext] updateMarketingWallet #
  - modifiers: onlyOwner
- [Ext] updateOperationsWallet #
  - modifiers: onlyOwner
- [Ext] setMaxBuyAndSellAmount #
  - modifiers: onlyOwner
- [Ext] updateSwapTokensAtAmount #
  - modifiers: onlyOwner
- [Ext] updateSwapEnabled #
  - modifiers: onlyOwner
- [Ext] updateTradingEnabled #
  - modifiers: onlyOwner
- [Ext] updateBuybackEnabled #
  - modifiers: onlyOwner
- [Ext] setAntibot #
  - modifiers: onlyOwner
- [Ext] setBuybackUpperLimit #
  - modifiers: onlyOwner
- [Pub] isBot
- [Ext] rescueBNB #
  - modifiers: onlyOwner
- [Ext] rescueBEP20Tokens #
  - modifiers: onlyOwner
- [Ext] setRouterAddress #
  - modifiers: onlyOwner
- [Ext] <Fallback> (\$)

(\$) = 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 issues
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.	Low issues
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 `includeInReward()` uses the loop to find and remove addresses from the `_excluded` list. Function will be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

```
function includeInReward(address account↑) external onlyOwner {
    require(!_isExcluded[account↑], "Account is not excluded");
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (_excluded[i] == account↑) {
            _excluded[i] = _excluded[_excluded.length - 1];
            tOwned[account↑] = 0;
            _isExcluded[account↑] = false;
            _excluded.pop();
            break;
        }
    }
}
```

- The function `_getCurrentSupply` also uses the loop for evaluating total supply. It also could be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

```
function _getCurrentSupply() private view returns (uint256, uint256) {
    uint256 rSupply = rTotal;
    uint256 tSupply = tTotal;
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (
            rOwned[_excluded[i]] > rSupply ||
            tOwned[_excluded[i]] > tSupply
        ) return (_rTotal, _tTotal);
        rSupply = rSupply.sub(rOwned[_excluded[i]]);
        tSupply = tSupply.sub(tOwned[_excluded[i]]);
    }
    if (rSupply < rTotal.div(_tTotal)) return (_rTotal, _tTotal);
    return (rSupply, tSupply);
}
```

Recommendation:

Check that the excluded array length is not too big.

## 2. Buy/sell issue

### Issue:

- The function `_transfer()` checks buy and sell max amounts with equal conditions.

```
if (
  from != owner() &&
  to != owner() &&
  to != address(0) &&
  to != address(0xdead) &&
  from == pair
) {
  require(amount <= maxBuyAmount, "you are exceeding maxBuyAmount");
  uint256 walletCurrentBalance = balanceOf(to);
  require(
    walletCurrentBalance + amount <= _maxWalletSize,
    "Exceeds maximum wallet token amount"
  );
}

if (
  from != owner() &&
  to != owner() &&
  to != address(0) &&
  to != address(0xdead) &&
  from == pair
) {
  require(
    amount <= maxSellAmount,
    "Amount is exceeding maxSellAmount"
  );
}
```

### Recommendation:

Check logic of this part of transfer function.

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

- Owner can start trading.
- Owner can change fee rates.
- Owner can exclude from the fee.
- Owner can change `_maxWalletSize` value.
- Owner can change marketing and operations wallet address.
- Owner can change `maxBuyAmount` and `maxSellAmount`.
- Owner can change `swapTokensAtAmount`.
- Owner can enable/disable `swapEnabled` and `buyBackEnabled`.
- Owner can include in `_isBot` array.
- Owner can change `buyBackUpperLimit`.
- Owner can change router address.
- Owner can withdraw contract tokens and BNBs.

# Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details provided by the team:

<https://www.pinksale.finance/#/pinklock/record/4321?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.*



[Techrate1](#)



[Techrate](#)



[Techrate\\_audits](#)