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AUDIT COMPANY

Smart Contract Security Audit

TechRate

June, 2021

Audit Details

Audited project

Reliance Token

Deployer address

0xc0cF9f2789fEDB7fDB76A71ea5877E6617b6d9d5

Client contacts:

Reliance Token team

Blockchain

Binance Smart Chain

Project website:

RelianceToken.org

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 Reliance Token to perform an audit of smart contracts:
https://bscscan.com/address/0x82d530F1f24a902d5d31B6808ad8823ea4F2E4d1#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 04.08.2021

Contract name	Reliance Token
Contract address	0x82d530F1f24a902d5d31B6808ad8823ea4F2E4d1
Total supply	95,418,395.384544
Token ticker	Rely
Decimals	9
Token holders	327
Transactions count	2,023
Top 100 holders dominance	96.45%
Total fees	924082871405539
Contract deployer address	0xc0cF9f2789fEDB7fDB76A71ea5877E6617b6d9d5
Contract's current owner address	0xc0cf9f2789fedb7fdb76a71ea5877e6617b6d9d5

Reliance Token Token Distribution

The top 100 holders collectively own 96.45% (92,029,114.00 Tokens) of Reliance Token

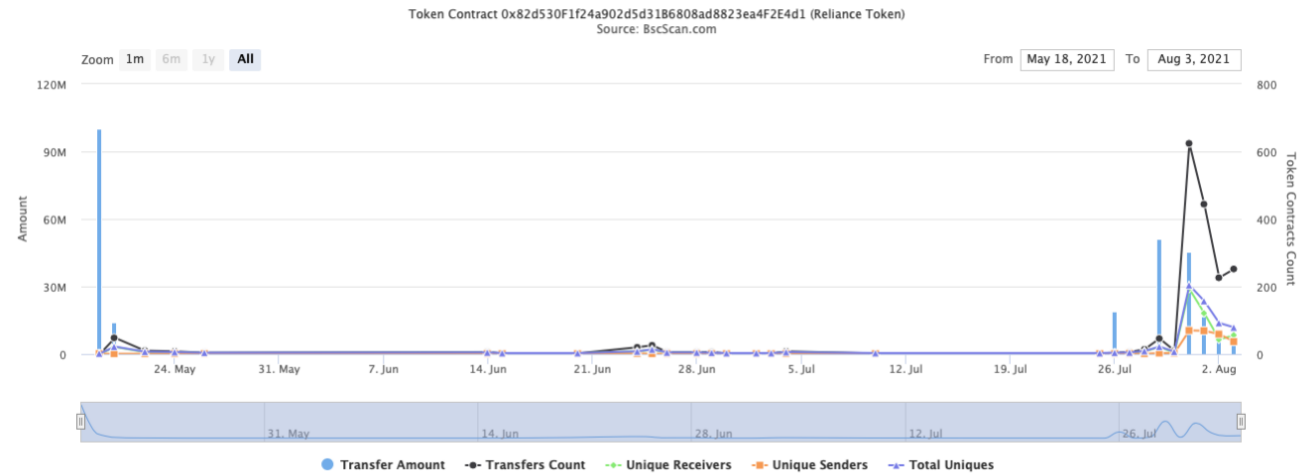
Token Total Supply: 95,418,395.38 Token | Total Token Holders: 327

(A total of 92,029,114.00 tokens held by the top 100 accounts from the total supply of 95,418,395.38 token)

Reliance Token Contract Interaction Details

Time Series: Token Contract Overview

Wed 19, May 2021 - Tue 3, Aug 2021



Reliance Token Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x2d045410f002a95efcee67759a92518fa3fce677	31,054,314.17598377	32.5454%
2	PancakeSwap V2: Rely	6,222,724.552767336	6.5215%
3	Burn Address	3,165,090.064572078	3.3171%
4	0x1258d33f7f3616811543473d0d6977908afe2d6f	3,135,914.113852475	3.2865%
5	0xba98b69a140c078746219d0bbf0bb3b923483374	3,000,042.163848631	3.1441%
6	0x2f5f0b0cf1a76d4492a6e3fad5f465e094ef660a	2,709,101.929245628	2.8392%
7	0x3aafa3329db57096abe8ac8e4ea4fb207d5e96e1	2,013,512.936733187	2.1102%
8	0xace0d0bae57cc93236958b6e23cf0b6c019fa767	1,802,692.397086924	1.8893%
9	0x40f81b1930f0166ffde65c340b6c458ebd23b03e	1,797,387.162090171	1.8837%
10	0x1d3507477bc53cfe391909ef3d69d92aafff3662	1,666,512.369763513	1.7465%

Contract functions details

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ [Int] IBEP20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Lib] SafeMath
  - [Int] add
  - [Int] sub
  - [Int] sub
  - [Int] mul
  - [Int] div
  - [Int] div
  - [Int] mod
  - [Int] mod

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Prv] _functionCallWithValue #

+ Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner

+ Reliance (Context, IBEP20, 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] isExcluded
- [Pub] isCharity
- [Pub] totalFees
- [Pub] totalBurn
- [Pub] totalCharity
- [Pub] deliver #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Ext] excludeAccount #
  - modifiers: onlyOwner
- [Ext] includeAccount #
  - modifiers: onlyOwner
- [Ext] setAsCharityAccount #
  - modifiers: onlyOwner
- [Prv] _approve #
- [Prv] _transfer #
- [Prv] _transferStandard #
- [Prv] _standardTransferContent #
- [Prv] _transferToExcluded #
- [Prv] _excludedFromTransferContent #
- [Prv] _transferFromExcluded #
- [Prv] _excludedToTransferContent #
- [Prv] _transferBothExcluded #
- [Prv] _bothTransferContent #
- [Prv] _reflectFee #
- [Prv] _getValues
- [Prv] _getTBasics
- [Prv] getTTransferAmount
- [Prv] _getRBasics
- [Prv] _getRTransferAmount
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Prv] _sendToCharity #
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Prv] _getTaxFee
- [Prv] _getMaxTxAmount

($) = 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.	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 includeAccount() 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 includeAccount(address account⬆) external onlyOwner() {
    require(_isExcluded[account⬆], "Account is already excluded");
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (_excluded[i] == account⬆) {
            ftrace | funcSig
            _excluded[i] = _excluded[_excluded.length - 1];
            _tOwned[account⬆] = 0;
            _isExcluded[account⬆] = false;
            _excluded.pop();
            break;
        ftrace | funcSig
        }
    }
}
```

- 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) {
    ftrace | funcSig
    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]]);
        ftrace | funcSig
        tSupply = tSupply.sub(_tOwned[_excluded[i]]);
    }
    if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
    return (rSupply, tSupply);
ftrace | funcSig
}
```

Recommendation:

Check that the excluded array length is not too big.

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

- Owner can change charity address.

```
function setAsCharityAccount(address account⬆) external onlyOwner() {
    require(account⬆ != 0x7a250d5630B4cF539739dF2C5dAcb4c659F2488D, 'The Uniswap router can not be the charity account.');
    require(!_isCharity[account⬆], "Account is already charity account");
    _isCharity[account⬆] = true;
    _charity.push(account⬆);
}
```

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://app.unicrypt.network/amm/pancake-v2/pair/0x6a0bF62C6AF3f0Bc4BD7a64B90386DF945324144

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.