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AUDIT COMPANY

# Smart Contract Security Audit

TechRate

May, 2021

# Audit Details



Audited project

**NewbToken**



Deployer address

**0x4352d296D0B8Ed801c4F327B73e302519755789A**



Client contacts:

**NewbToken team**



Blockchain

**Binance Smart Chain**



Project website:

**[Newbfinance.net](https://Newbfinance.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 NewbToken to perform an audit of smart contracts:

<https://bscscan.com/address/0xa43779cc2f221b0e41d107ae1fc757e470d41e50#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 31.05.2021

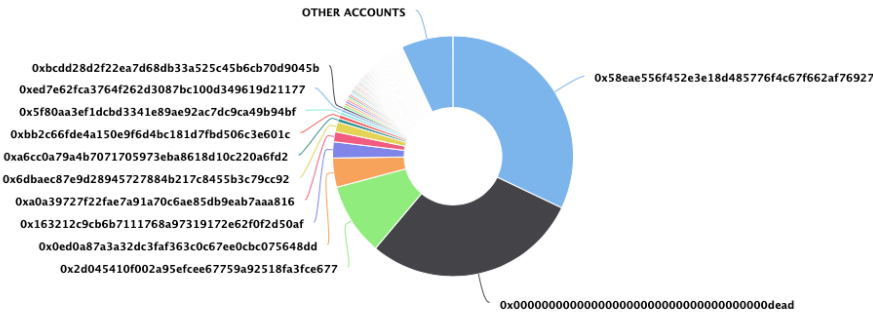
Contract name	NewbToken
Contract address	0xA43779cC2F221b0e41D107ae1fc757E470d41e50
Total supply	9816708465793463587300
Token ticker	NEWB
Decimals	9
Token holders	1,313
Transactions count	12,130
Top 100 holders dominance	93.03%
Tax fee	100
Total fees	273291534206536412700
Contract deployer address	0x4352d296D0B8Ed801c4F327B73e302519755789A
Contract's current owner address	0x02b78b8ada04d75868d2505154e31aa194ea110e

# NewbToken Token Distribution

The top 100 holders collectively own 93.03% (9,132,597,352,383.80 Tokens) of NewbToken

Token Total Supply: 9,816,708,465,793.46 Token | Total Token Holders: 1,313

NewbToken Top 100 Token Holders  
Source: BscScan.com



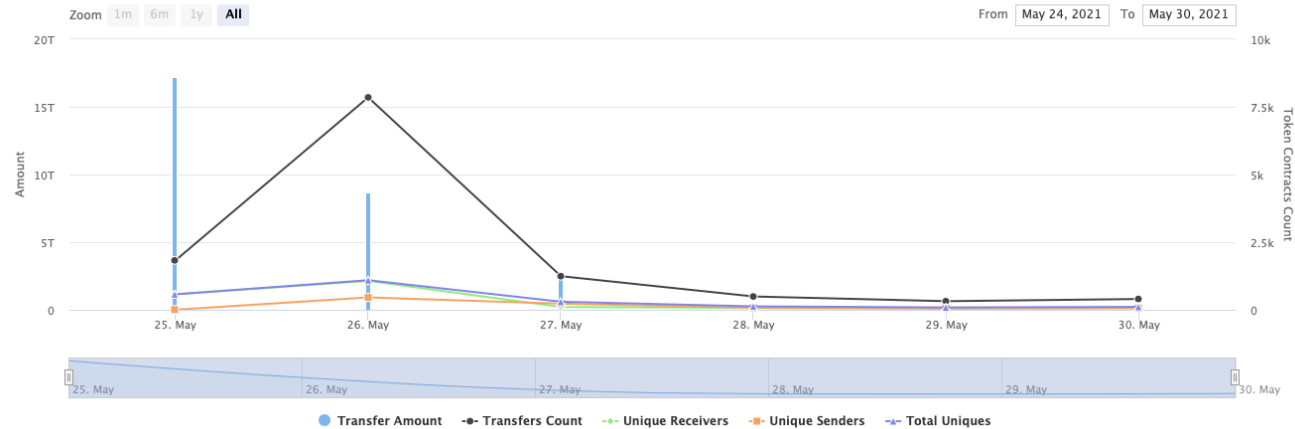
(A total of 9,132,597,352,383.80 tokens held by the top 100 accounts from the total supply of 9,816,708,465,793.46 token)

# NewbToken Contract Interaction Details

Time Series: Token Contract Overview



Tue 25, May 2021 - Sun 30, May 2021

Token Contract 0xa43779cc2f221b0e41d107ae1fc757e470d41e50 (NewbToken)  
Source: BscScan.com





# NewbToken Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	 0x58eae556f452e3e18d485776f4c67f662af76927	3,147,276,099,800.546081847	32.0604%
2	0x00dead	2,854,355,329,949.23857868	29.0765%
3	 0x2d045410f002a95efcee67759a92518fa3fce677	954,485,215,802.590125853	9.7231%
4	0x0ed0a87a3a32dc3fa363c0c67ee0cbc075648dd	384,182,696,290.21994949	3.9136%
5	0x163212c9cb6b7111768a97319172e62f0f2d50af	211,847,155,716.307764849	2.1580%
6	0xa0a39727f22fae7a91a70c6ae85db9eab7aaa816	132,959,714,405.474314659	1.3544%
7	0x6dbaec87e9d28945727884b217c8455b3c79cc92	129,426,278,376	1.3184%
8	0xa6cc0a79a4b7071705973eba8618d10c220a6fd2	49,838,313,348.110887549	0.5077%
9	0xbb2c66fde4a150e9f6d4bc181d7fbd506c3e601c	48,122,528,685.288764983	0.4902%
10	0x5f80aa3ef1dcbd3341e89ae92ac7dc9ca49b94bf	42,873,793,563.725093956	0.4367%



# 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] owner
- [Pub] renounceOwnership #
  - modifiers: onlyOwner
- [Pub] transferOwnership #
  - modifiers: onlyOwner

## + CoinToken (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] totalFees
- [Pub] totalBurn
- [Pub] totalCharity
- [Pub] deliver #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Ext] excludeAccount #
  - modifiers: onlyOwner
- [Ext] includeAccount #
  - modifiers: onlyOwner
- [Ext] setAsCharityAccount #
  - modifiers: onlyOwner
- [Pub] updateFee #
  - 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

(\$) = 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 included");
    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.

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

- Owner can change charity address.

```
function setAsCharityAccount(address account) external onlyOwner() {  
    require(!_isCharity[account], "Account is already charity account");  
    _isCharity[account] = true;  
    FeeAddress = account;  
}
```

- Owner can change fees.

```
function updateFee(uint256 _txFee,uint256 _burnFee,uint256 _charityFee) onlyOwner() public{  
    _TAX_FEE = _txFee* 100;  
    _BURN_FEE = _burnFee * 100;  
    _CHARITY_FEE = _charityFee* 100;  
    ORIG_TAX_FEE = _TAX_FEE;  
    ORIG_BURN_FEE = _BURN_FEE;  
    ORIG_CHARITY_FEE = _CHARITY_FEE;  
}
```

# Conclusion

Smart contracts contain low severity issues!

Liquidity locking details provided by the team:

<https://dxsale.app/app/pages/dxlockview?id=0&add=0x02B78B8aDA04d75868D2505154e31AA194Ea110E&type=tokenlock&chain=BS C>

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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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