



**TechRate**  
AUDIT COMPANY

# Smart Contract Security Audit

TechRate

June, 2021

# Audit Details



Audited project

**BoxerInu**



Deployer address

**0xBb39C963850b27BbA662d3a60f7C4137b7add018**



Client contacts:

**BoxerInu team**



Blockchain

**Binance Smart Chain**



Project website:

**[boxerinu.finance](https://boxerinu.finance)**

# 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 BoxerInu to perform an audit of smart contracts:

<https://bscscan.com/address/0x192E9321b6244D204D4301AfA507EB29CA84D9ef#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

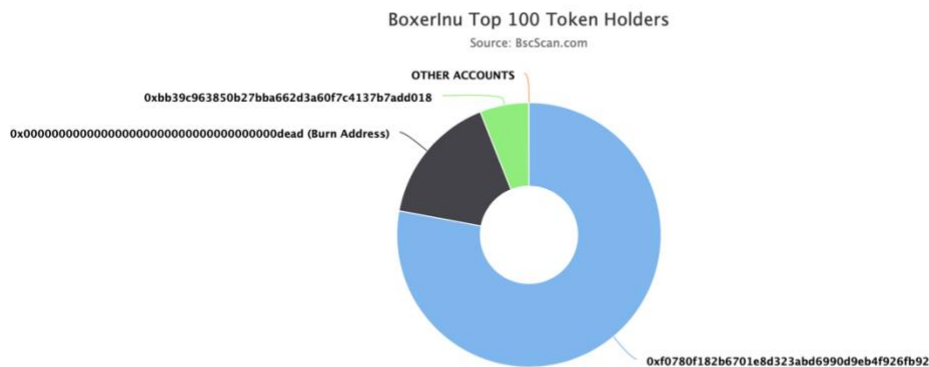
## Token contract details for 19.06.2021

Contract name	BoxerInu
Contract address	0x192E9321b6244D204D4301AfA507EB29CA84D9ef
Total supply	1,000,000,000,000,000
Token ticker	BOXER
Decimals	9
Token holders	3
Transactions count	3
Top 100 holders dominance	100.00%
Liquidity fee	3
Tax fee	4
Total fees	0
Uniswap V2 pair	0x47a785fe954563df474dd871234aedc19f86afa0
Contract deployer address	0xBb39C963850b27BbA662d3a60f7C4137b7add018
Contract's current owner address	0xbb39c963850b27bba662d3a60f7c4137b7add018

# BASE3 Token Distribution

The top 100 holders collectively own 100.00% (1,000,000,000,000,000.00 Tokens) of BoxerInu

Token Total Supply: 1,000,000,000,000,000.00 Token | Total Token Holders: 3



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

# BASE3 Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	<a href="#">0xf0780f182b6701e8d323abd6990d9eb4f926fb92</a>	779,230,769,230,769.7	77.9231%
2	<a href="#">Burn Address</a>	160,769,230,769,231	16.0769%
3	<a href="#">0xbb39c963850b27bba662d3a60f7c4137b7add018</a>	59,999,999,999,999.3	6.0000%



# Contract functions details

- + [Int] IERC20
  - [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
- + Context
  - [Int] \_msgSender
  - [Int] \_msgData
- + [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Prv] \_functionCallWithValue #
- + Ownable (Context)
  - [Int] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [Pub] geUnlockTime
  - [Pub] lock #
    - modifiers: onlyOwner
  - [Pub] unlock #
- + [Int] IUniswapV2Factory
  - [Ext] feeTo
  - [Ext] feeToSetter
  - [Ext] getPair
  - [Ext] allPairs
  - [Ext] allPairsLength
  - [Ext] createPair #
  - [Ext] setFeeTo #
  - [Ext] setFeeToSetter #

```
+ [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] 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 #

#### + BoxerInu (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] totalFees
- [Pub] totalBurn
- [Pub] deliver #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Pub] excludeFromReward #
  - modifiers: onlyOwner
- [Ext] includeInReward #
  - modifiers: onlyOwner
- [Ext] <Fallback> (\$)
- [Prv] \_distributeFee #
- [Prv] \_getValues
- [Prv] \_getTValues
- [Prv] \_getRValues
- [Prv] \_getRate
- [Prv] \_getCurrentSupply
- [Prv] \_takeLiquidity #
- [Prv] calculateTaxFee
- [Prv] calculateBurnFee
- [Prv] calculateCharityFee
- [Prv] calculateLiquidityFee
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Pub] isExcludedFromFee
- [Prv] \_approve #
- [Prv] \_transfer #
- [Prv] swapAndLiquify #
  - modifiers: lockTheSwap
- [Prv] swapTokensForEth #
- [Prv] addLiquidity #
- [Prv] \_tokenTransfer #
- [Prv] \_transferStandard #
- [Prv] \_transferToExcluded #
- [Prv] \_transferFromExcluded #
- [Prv] \_transferBothExcluded #
- [Pub] excludeFromFee #
  - modifiers: onlyOwner
- [Pub] includeInFee #

- modifiers: onlyOwner
- [Ext] enableAllFees #
  - modifiers: onlyOwner
- [Ext] disableAllFees #
  - modifiers: onlyOwner
- [Ext] setBoxerCharityWallet #
  - modifiers: onlyOwner
- [Ext] setMaxTxPercent #
  - modifiers: onlyOwner
- [Pub] setSwapAndLiquifyEnabled #
  - 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.	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 disable and enable the fees.

```
ftrace | funcSig
function enableAllFees() external onlyOwner() {
    _taxFee = 4;
    _previousTaxFee = _taxFee;
    _burnFee = 1;
    _previousBurnFee = _taxFee;
    _charityFee = 2;
    _previousCharityFee = _charityFee;
    _liquidityFee = 3;
    _previousLiquidityFee = _liquidityFee;
    setSwapAndLiquifyEnabled(true);
}

ftrace | funcSig
function disableAllFees() external onlyOwner() {
    _taxFee = 0;
    _previousTaxFee = _taxFee;
    _burnFee = 0;
    _previousBurnFee = _taxFee;
    _charityFee = 0;
    _previousCharityFee = _charityFee;
    _liquidityFee = 0;
    _previousLiquidityFee = _liquidityFee;
    setSwapAndLiquifyEnabled(false);
}
```

- Owner can change the maximum transaction amount.

```
function setMaxTxPercent(uint256 maxTxPercent↑) external onlyOwner() {
    require(maxTxPercent↑ > 10, "Cannot set transaction amount less than 10 percent!");
    _maxTxAmount = _tTotal.mul(maxTxPercent↑).div(
        10**2
    );
}
```

- Owner can exclude from the fee.

```
function excludeFromFee(address account↑) public onlyOwner {
    _isExcludedFromFee[account↑] = true;
}
```

- Owner can change charity wallet.

```
function setBoxerCharityWallet(address newWallet↑) external onlyOwner() {
    _charityWallet = newWallet↑;
}
```

- Owner can enable and disable swapAndLiquify block.

```
function excludeFromFee(address account↑) public onlyOwner {
    _isExcludedFromFee[account↑] = true;
}
```

- Owner can lock and unlock. By the way, using these functions the owner could retake privileges even after the ownership was renounced.

```
//Locks the contract for owner for the amount of time provided
function lock(uint256 time) public virtual onlyOwner {
    _previousOwner = _owner;
    _owner = address(0);
    _lockTime = now + time;
    emit OwnershipTransferred(_owner, address(0));
}

//Unlocks the contract for owner when _lockTime is exceeds
function unlock() public virtual {
    require(_previousOwner == msg.sender, "You don't have permission to unlock");
    require(now > _lockTime, "Contract is locked until 7 days");
    emit OwnershipTransferred(_owner, _previousOwner);
    _owner = _previousOwner;
}
```

# Conclusion

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

Liquidity locking details NOT provided by the team.

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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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