



RugFreeCoins Audit



BNBBox Token

Smart Contract Security Audit

January 11, 2022

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Audit details



Audited project

BNBBox Token



Contract Address

0xB1F3815FA399c0Cc7907d190dD4309bcC40132a3



Client contact

BNBBox Team



Blockchain

Binance smart chain



Project website

<https://bnbbox.cc/>

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 disclaimer below – please make sure to read it in full.

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Background

Rugfreecoins was commissioned by Drago Land Token to perform an audit of the smart contract.

<https://bscscan.com/token/0xB1F3815FA399c0Cc7907d190dD4309bcC40132a3>

The focus of this audit is to verify that the smart contract is secure, resilient and working according to the specifications.

The information in this report should be used to understand the risk exposure of the smart contract, project feasibility, long term sustainability and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

About the project

BNBBox is a token built on the Binance Smart Chain with an innovative investment use case the main purpose of which is to seek out constant revenue sources, which in turn, powers the NFT lottery system and auto burn. The project is having a great utility of the NFT lottery platform with a minting Dapp. Each transaction, purchase, and sale incurs a 12% fee .

Features

- ❖ **The NFT lottery fee of 5%** when buying and selling is what allows BNBBox to become the most commonly known and recognized lottery token in the crypto sphere. For a cryptocurrency to grow and gain traction, especially in the Altcoin market, it must have a 'use-case', which only usually comes with the promise of a better future. The BNBBox team is motivated by the idea that the coin will have a use-case from day one with the advanced lottery Dapp in place and wishes to establish itself as the most competitive and well-known NFT lottery token in the industry by enabling every holder to have a fair chance of winning the BNB rewards in every 24 hours, all the while progressively growing a following.
 - The Dapp is with 12 treasure boxes and 3 boxes are with BNB treasure prizes.
 - The boxes will have 50\$, 100\$, and 150\$ worth BNBs that holders can open every 24 hours.
- ❖ The **sustainability fee of 3% when buying and selling for marketing and 2% when buying and selling for dev** is what allows BNBBox to hold the aforementioned promise. Tokens will be swapped into BNB and will be sent to a marketing wallet per transaction. This way, BNBBox will have enough funds to promote the coin and spend for future development without selling tokens as the traditional way.
- ❖ The additional component included under the sustainability section is a liquidity fee of 1% from buying and selling, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.
- ❖ BNBBox has the burn strategy that a 1% fee in each transaction when selling is getting charged that benefits and rewards those who invest long-term. This feature slowly reduces supply making each BNBBox more and more valuable.

Tokenomics

12% fee when buying and selling

- ❖ 5% of trade goes to the NFT lottery pool.
- ❖ 3% of trade goes to the marketing wallet.
- ❖ 2% of trade goes to the dev wallet.
- ❖ 1% of trade goes to the liquidity pool.
- ❖ 1% of trade goes to the burn wallet.

Roadmap

Phase 1

- ❖ Publish the website and roadmap of the project
- ❖ Establishment of all the social networks
- ❖ Marketing campaign
- ❖ Audit
- ❖ Private sale presale
- ❖ Token launch on Pancakeswap

Phase 2

- ❖ NFT collection release with the minting Dapp.
- ❖ NFT Lottery gift platform launch.
- ❖ Listing Coingecko & Coinmarketcap.
- ❖ Daily lottery drawing

Phase 3

- ❖ More extensive marketing campaigns across the world.
- ❖ Onboard more buyers and sellers to the project.
- ❖ CEX listings.
- ❖ NFT marketplace.
- ❖ Play to earn games

Target market and the concept

Target market

- ❖ Anyone who's interested in the Crypto space with long-term investment plans.
- ❖ Anyone who's interested in trading tokens.
- ❖ Anyone who is ready to hold and be eligible to win at the daily NFT lottery prizes in BNB taking part with the treasure box Dapp.
- ❖ Anyone who's interested in collecting NFTs or trading NFTs.
- ❖ Anyone who's interested in taking part with the future plans of the BNBBBox token.
- ❖ Anyone who's interested in making financial transactions with any other party using BNB or BNBBBox as the currency.

Core concept

BNB Box is a Community driven Defi token, programmed to reward token holders and NFT holders in the daily jackpot lottery system through its Frictionless yield and Liquidity Generation Protocol. All holders can take part in the lottery system and win big prizes in BNBs.

Sustainable mechanism

The **sustainability fee of 3% when buying and selling for marketing and the 2% fee for the dev** is what allows BNBBBox to promote the token and use funds to further the development of the platform. Tokens will be swapped into BNB and will be sent to a marketing wallet and dev wallet. This way, BNB Box will have access to the funds without selling tokens as the traditional way, which will enable them to consume funds without hurting the project.

The liquidity fee of 1%, which is a redistribution mechanism that ensures the trading pool always has sufficient liquidity.

BNBBBox has the burn strategy that 1% fee in each transaction when buying and selling is getting charged that benefits and rewards those who invest long-term. This feature slowly reduces supply making each BNB Box more and more valuable.

NFT Lottery mechanism

Holders can buy randomly generated NFTs from the minting Dapp and be eligible for the NFT lottery system.

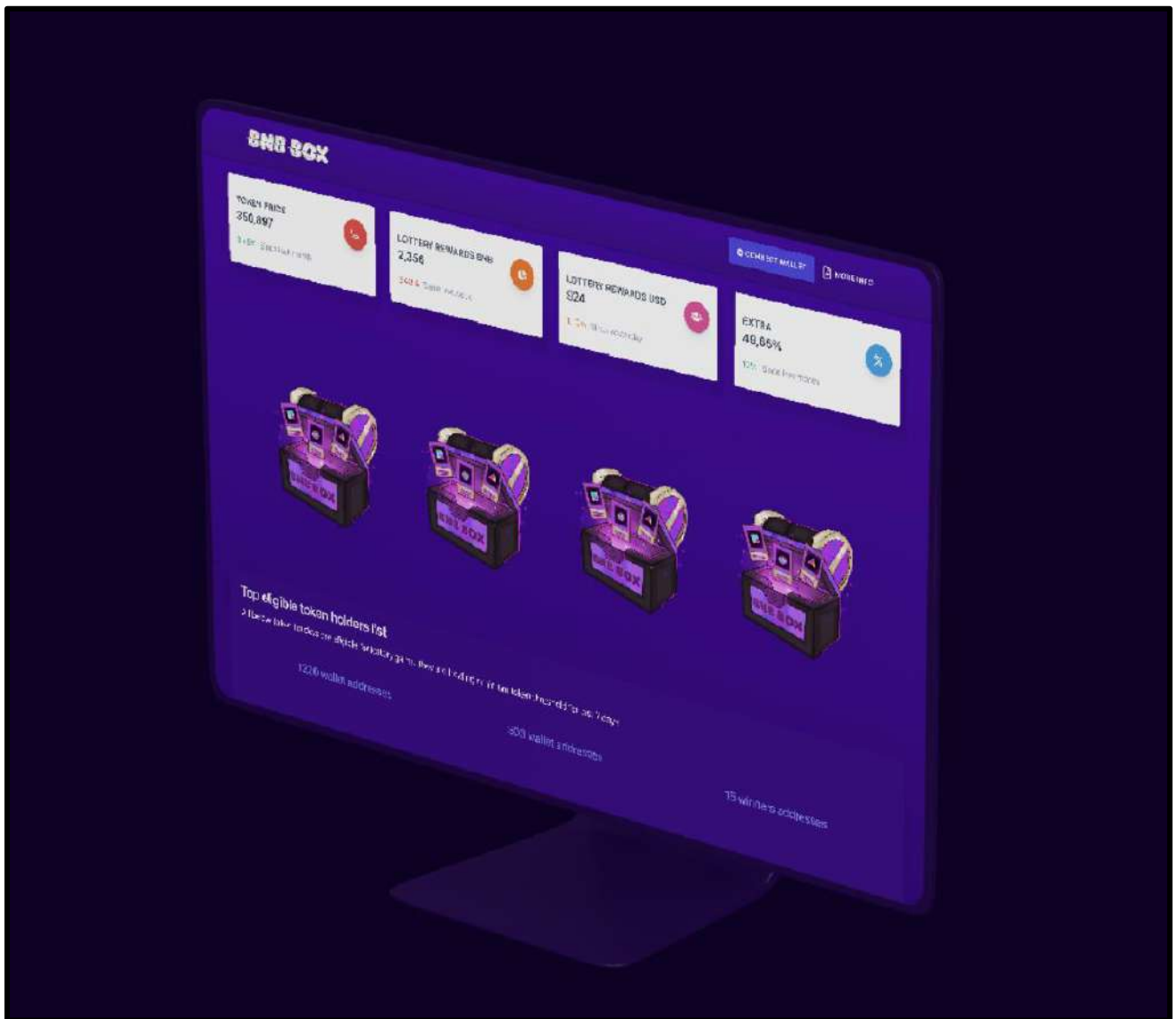
COMING SOON

NFT "FESTIVE SCROOGE"

The first NFT collection "Festive scrooge" is coming soon.
It's going to be available for minting for 24hrs after the
PancakeSwap launch.



Holders should be holding at least 100,000 tokens to be eligible for the lottery, and the treasure boxes will be unlocked for the holders only if they hold 100,000 tokens and at least 1 NFT. There's 12 treasure boxes and 3 boxes containing prizes worth 150\$, 100\$ and 50\$ in BNB. The winning probability is 20% for a holder and the boxes will get unlocked every 24 hours.



The concept encourages,

- ❖ Investors, to hold the tokens and NFTs for a long time, which makes them believe in the project and keep the hopes high of expecting to win a huge prize at once.
- ❖ The concept is revolutionary and certainly can get the attraction of new investors as the project progresses along.
- ❖ Project market price and market cap can keep stable if everything goes according to the plan since keeping tokens will seem more profitable than selling.

Potential to grow with score points

1.	Project efficiency	10/10
2.	Project uniqueness	9/10
3	Information quality	10/10
4	Service quality	10/10
5	System quality	10/10
6	Impact on the community	10/10
7	Impact on the business	10/10
8	Preparing for the future	9/10
Total Points		9.75/10

Contract details

Token contract details for 11th January 2022
























Contract name	BNBBox
Contract address	0xB1F3815FA399c0Cc7907d190dD4309bcC40132a3
Token supply	1,000,000,000
Token ticker	\$BNBBOX
Decimals	9
Token holders	2
Transaction count	1
Dev wallet	0x046f1458e75c16141ea35eff17735aff9ae7a3e7
Lottery wallet	0x75df5847982bf7ee6244799fa69bd9022124515d
Marketing wallet	0x046f1458e75c16141ea35eff17735aff9ae7a3e7
Contract deployer address	0x97361F6979756A647458DC3EAAB802Db416997a3
Contract's current owner address	0xf54a377ff9d07c86cc3d7fe3938bd4ca67185621













Contract code function details
























No	Category	Item	Result
1	Coding conventions	BRC20 Token standards	pass
		compile errors	pass
		Compiler version security	pass
		visibility specifiers	pass
		Gas consumption	pass
		SafeMath features	pass
		Fallback usage	pass
		tx.origin usage	pass
		deprecated items	pass
		Redundant code	pass
		Overriding variables	pass
2	Function call audit	Authorization of function call	pass
		Low level function (call/delegate call) security	pass
		Returned value security	pass
		Selfdestruct function security	pass
3	Business security	Access control of owners	pass
		Business logics	pass
		Business implementations	pass
4	Integer overflow/underflow		pass
5	Reentrancy		pass
6	Exceptional reachable state		pass
7	Transaction ordering dependence		pass
8	Block properties dependence		pass
9	Pseudo random number generator (PRNG)		pass
10	DoS (Denial of Service)		pass
11	Token vesting implementation		pass
12	Fake deposit		pass
13	Event security		pass























Contract description table









Below table represents the summary of the contracts and methods in the token contract. We scanned the whole contract and listed down all the Interfaces, functions and implementations with its visibility and mutability.


























Contract	Type	Bases		
L	Function Name	Visibility	Mutability	Modifiers
IUniswapV2Factory	Interface			
L	feeTo	External 		NO 
L	feeToSetter	External 		NO 
L	getPair	External 		NO 
L	allPairs	External 		NO 
L	allPairsLength	External 		NO 
L	createPair	External 		NO 
L	setFeeTo	External 		NO 
L	setFeeToSetter	External 		NO 
IUniswapV2Router01	Interface			
L	factory	External 		NO 
L	WETH	External 		NO 





L	addLiquidity	External ⚠		NO⚠
L	addLiquidityETH	External ⚠		NO⚠
L	removeLiquidity	External ⚠		NO⚠
L	removeLiquidityETH	External ⚠		NO⚠
L	removeLiquidityWithPermit	External ⚠		NO⚠
L	removeLiquidityETHWithPermit	External ⚠		NO⚠
L	swapExactTokensForTokens	External ⚠		NO⚠
L	swapTokensForExactTokens	External ⚠		NO⚠
L	swapExactETHForTokens	External ⚠		NO⚠
L	swapTokensForExactETH	External ⚠		NO⚠
L	swapExactTokensForETH	External ⚠		NO⚠
L	swapETHForExactTokens	External ⚠		NO⚠
L	quote	External ⚠		NO⚠
L	getAmountOut	External ⚠		NO⚠
L	getAmountIn	External ⚠		NO⚠
L	getAmountsOut	External ⚠		NO⚠
L	getAmountsIn	External ⚠		NO⚠

IUniswapV2Router02	Interface	IUniswapV2Router01		
L	removeLiquidityETHSupportingFeeOnTransferTokens	External 		NO 
L	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External 		NO 
L	swapExactTokensForTokensSupportingFeeOnTransferTokens	External 		NO 
L	swapExactETHForTokensSupportingFeeOnTransferTokens	External 		NO 
L	swapExactTokensForETHSupportingFeeOnTransferTokens	External 		NO 
SafeMath	Library			
L	tryAdd	Internal 		
L	trySub	Internal 		
L	tryMul	Internal 		
L	tryDiv	Internal 		
L	tryMod	Internal 		
L	add	Internal 		
L	sub	Internal 		
L	mul	Internal 		



L	div	Internal 		
L	mod	Internal 		
L	sub	Internal 		
L	div	Internal 		
L	mod	Internal 		
IERC20	Interface			
L	totalSupply	External 		NO 
L	balanceOf	External 		NO 
L	transfer	External 		NO 
L	allowance	External 		NO 
L	approve	External 		NO 
L	transferFrom	External 		NO 
Context	Implementation			
L	_msgSender	Internal 		
L	_msgData	Internal 		
Ownable	Implementation	Context		

L		Public 🔒		NO 🔒
L	owner	Public 🔒		NO 🔒
L	renounceOwnership	Public 🔒		onlyOwner
L	transferOwnership	Public 🔒		onlyOwner
L	_transferOwnership	Internal 🔒		
BnbBox	Implementation	IERC20, Ownable		
L		Public 🔒		NO 🔒
L		External 🔒		NO 🔒
L	totalSupply	External 🔒		NO 🔒
L	name	Public 🔒		NO 🔒
L	symbol	Public 🔒		NO 🔒
L	decimals	Public 🔒		NO 🔒
L	currentBalance	Public 🔒		NO 🔒
L	balanceOf	Public 🔒		NO 🔒
L	allowance	External 🔒		NO 🔒
L	approve	Public 🔒		NO 🔒
L	_approve	Internal 🔒		

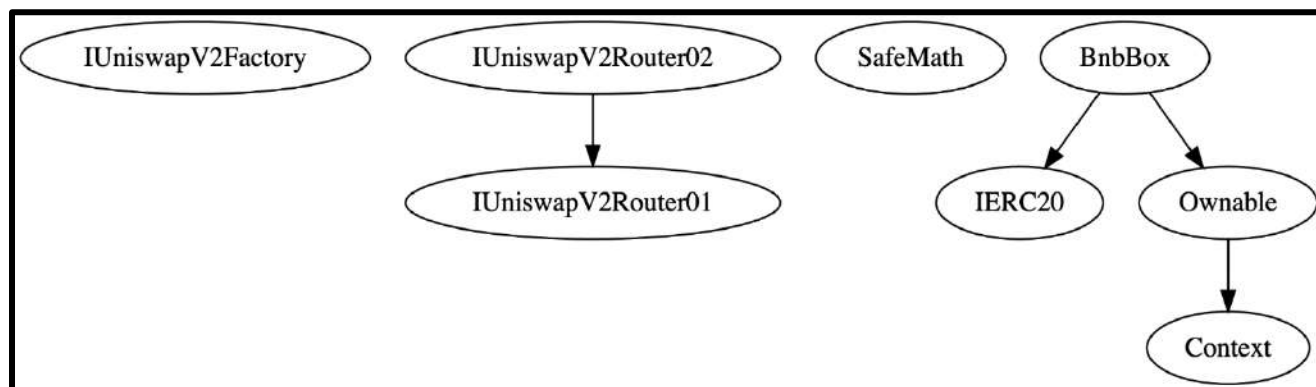
L	approveMax	External !		NO!
L	transfer	External !		NO!
L	transferFrom	External !		NO!
L	_transferFrom	Internal 		
L	_basicTransfer	Internal 		
L	shouldTakeFee	Internal 		
L	takeFee	Internal 		
L	shouldSwapBack	Internal 		
L	clearStuckBalance	External !		onlyOwner
L	updateBuyFees	Public !		onlyOwner
L	updateSellFees	Public !		onlyOwner
L	tradingStatus	Public !		onlyOwner
L	whitelistPreSale	Public !		onlyOwner
L	swapBackInBnb	Internal 		swapping
L	swapAndLiquify	Private 		
L	swapTokensForEth	Private 		
L	addLiquidity	Private 		
L	setIsFeeExempt	External !		onlyOwner

L	changeMarketingWallet	External !		onlyOwner
L	changeDevWallet	External !		onlyOwner
L	changeLotteryWallet	External !		onlyOwner
L	setSwapBackSettings	External !		onlyOwner

Legend

Symbol	Meaning
	Function can modify state
	Function is payable

Inheritance Hierarchy



Security issue checking status

- ❖ **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

- ❖ The owner can get the contract BNB balance to the owner's wallet.

```
ftrace | funcSig
function clearStuckBalance(uint256 amountPercentage↑) external onlyOwner {
    uint256 amountBNB = address(this).balance;
    payable(msg.sender).transfer((amountBNB * amountPercentage↑) / 100);
}
```

- ❖ The owner can update all buy and sell fees.

```
ftrace | funcSig
function updateBuyFees(
    uint256 boxFee↑,
    uint256 marketing↑,
    uint256 liquidity↑,
    uint256 burn↑,
    uint256 dev↑
) public onlyOwner {
    buyBnbBoxFee = boxFee↑;
    buyMarketingFee = marketing↑;
    buyLiquidityFee = liquidity↑;
    buyDevFee = dev↑;
    buyBurnFee = burn↑;
    buyTotalFees = boxFee↑.add(marketing↑).add(liquidity↑).add(burn↑).add(dev↑);
}

ftrace | funcSig
function updateSellFees(
    uint256 boxFee↑,
    uint256 marketing↑,
    uint256 liquidity↑,
    uint256 burn↑,
    uint256 dev↑
) public onlyOwner {
    sellBnbBoxFee = boxFee↑;
    sellMarketingFee = marketing↑;
    sellLiquidityFee = liquidity↑;
    sellDevFee = dev↑;
    sellBurnFee = burn↑;
    sellTotalFees = boxFee↑.add(marketing↑).add(liquidity↑).add(burn↑).add(dev↑);
}
```

- ❖ The owner can enable/disable trading.

```
// switch Trading
ftrace | funcSig
function tradingStatus(bool _status↑) public onlyOwner {
    tradingOpen = _status↑;
}
```

- ❖ The owner can whitelist presale address.

```
ftrace | funcSig
function whitelistPresale(address _preSale↑) public onlyOwner {
    isFeeExempt[_preSale↑] = true;
    isAuthorized[_preSale↑] = true;
}
```

- ❖ The owner can exclude wallets from fees.

```
ftrace | funcSig
function setIsFeeExempt(address holder↑, bool exempt↑) external onlyOwner {
    isFeeExempt[holder↑] = exempt↑;
}
```

- ❖ The owner can change marketing, dev, and lottery wallets.

```
ftrace | funcSig
function changeMarketingWallet(address _marketingFeeReceiver↑)
    external
    onlyOwner
{
    marketingFeeReceiver = _marketingFeeReceiver↑;
}

ftrace | funcSig
function changeDevWallet(address newWallet↑) external onlyOwner {
    devFeeReceiver = newWallet↑;
}

ftrace | funcSig
function changeLotteryWallet(address newWallet↑) external onlyOwner {
    lotteryWallet = newWallet↑;
}
```


- ❖ The owner can change swap point and enable/disable swapping.

```
ftrace | funcSig
function setSwapBackSettings(bool _enabled↑, uint256 _amount↑)
    external
    onlyOwner
{
    swapEnabled = _enabled↑;
    swapThreshold = _amount↑;
}
```

Audit conclusion

While conducting the audit of the BNB Box Token smart contract, it was observed that there is nothing alarming with the code.