RugFreeCoins Audit

BNBConnections Token

Smart Contract Security Audit

June 24, 2021

Contents

Audit details

Audited project

BNBConnections Token

Contract Address

0x7f1c3c069ed6829cd064c907b3c1a19081345661

Client contact

BNBConnections Team

Blockchain

Binance smart chain

Project website

https://bnbconnections.com/

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 BNBConnections to perform an audit of the smart contract.

https://bscscan.com/token/0x7f1c3c069ed6829cd064c907b3c1a19081345661

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

Throughout the year, many experimental tokens were created on Ethereum and Binance Smart Chain to create cryptocurrencies where each holder can benefit from tokens and build a new economy. The different tokenomics, experimental blocking, and recording schemes have also been launched. Along with these new tokens, scammers have also created rug-pull and scam tokens to steal peoples' money.

Taking all of those factors into consideration, BNBC was built with anti-carpet and anti-dump handles in mind with the following features:

- Anti-whale mechanism
- Passive income
- Anti-big whale dump mechanism
- Dynamic price floor

Tokenomics

- 5% of every trade goes to holders pockets.

Roadmap

May 2021:

- Market research
- idea and plan
- Website development and smart contracts
- BNBC ultra-fair launch
- PancakeSwap List
- small marketing and Team consolidation

June 2021:

- Request listings in currency classifications in CG
- White paper
- Request Audit
- Marketing and community encouragement
- Request listings in currency classifications in CMC and others

July 2021:

- Lottery $BNBC October

October 2021:

- Heavier marketing
- Research the top market influencers. And advertise BNBC.

December 2021:

- NFT market plan
- NFT market boost
- NFT Integration

T1 / T2 / T3 – 2022:

- Focus on more quality marketing
- Make partnerships
- Surprise everyone with a new project
- Development of a special platform for connections between people in various ways. Wait for this surprise!

Target market and the concept

Target market

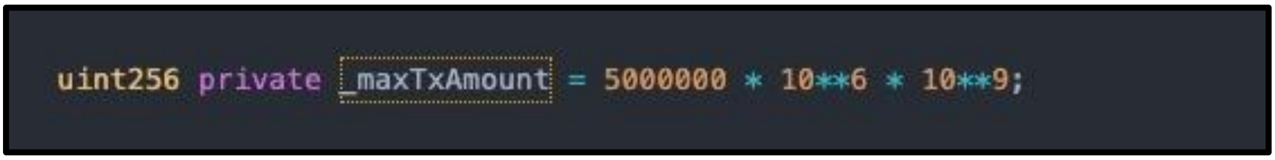
- Anyone who’s interested in Crypto space with long term investment plans.
- Anyone who’s ready to earn a passive income by holding tokens.
- Anyone who’s interested in trading tokens.
- Anyone who’s interested in winning the lottery.

Core concept

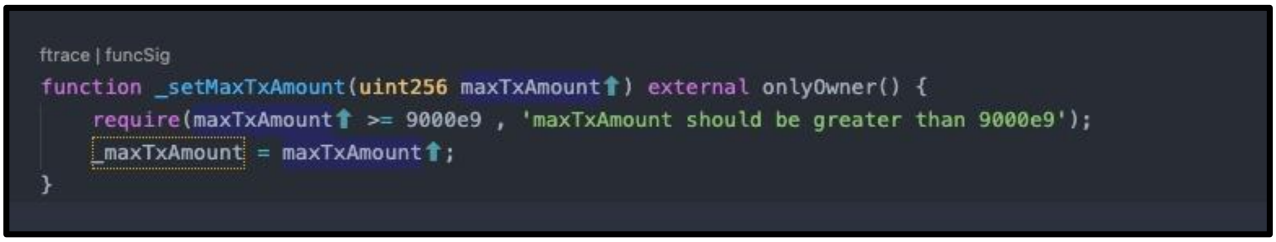
The BNBC project was built to keep the community from getting affected by whale manipulations with the aim of keeping everyone’s investment safe without ending up having losses. In order to do that, BNBC have unique features in place.

Anti-big dump in the BNBC price:

The BNBC token features a dynamic mechanism that calculates the maximum amount of BNBC that a user can sell per transaction. The maximum amount is 5,000,000,000,000 tokens.



```
uint256 private _maxTxAmount = 5000000 * 10**6 * 10**9;
```



```
ftrace | funcSig
function _setMaxTxAmount(uint256 maxTxAmount) external onlyOwner() {
    require(maxTxAmount >= 9000e9 , 'maxTxAmount should be greater than 9000e9');
    _maxTxAmount = maxTxAmount;
}
```

Passive income in the portfolio:

At each transaction, 5% of tokens are transferred to Holders automatically, provided users have BNBC. The amount of tokens received varies depending on the size of the wallet. This means that users' token balances gradually increase over time, generating passive revenue in their portfolios over time.

Dynamic price floor:

BNBC has a dynamic price floor mechanism, which dynamically calculates BNBC's floor price in PancakeSwap. Due to the floor price mechanism, any transaction that could reduce the price of BNBC to the floor price will be burned. This will prevent whales from controlling the currency's value.

Coin burning mechanism:

Tokens go to the burn wallet in each transaction and the token burn is also increasing with time since the burn wallet size is getting increased, which leads to decrease the total supply in circulation. Prices also will go higher when the supply is lower.

Lottery platform (upcoming)

Potential to grow with score points

1.	Project efficiency	7/10
2.	Project uniqueness	7/10
3	Information quality	6/10
4	Service quality	7/10
5	System quality	7/10
6	Impact on the community	7/10
7	Impact on the business	7/10
8	Preparing for the future	7/10
Total Points		**6.88/10**

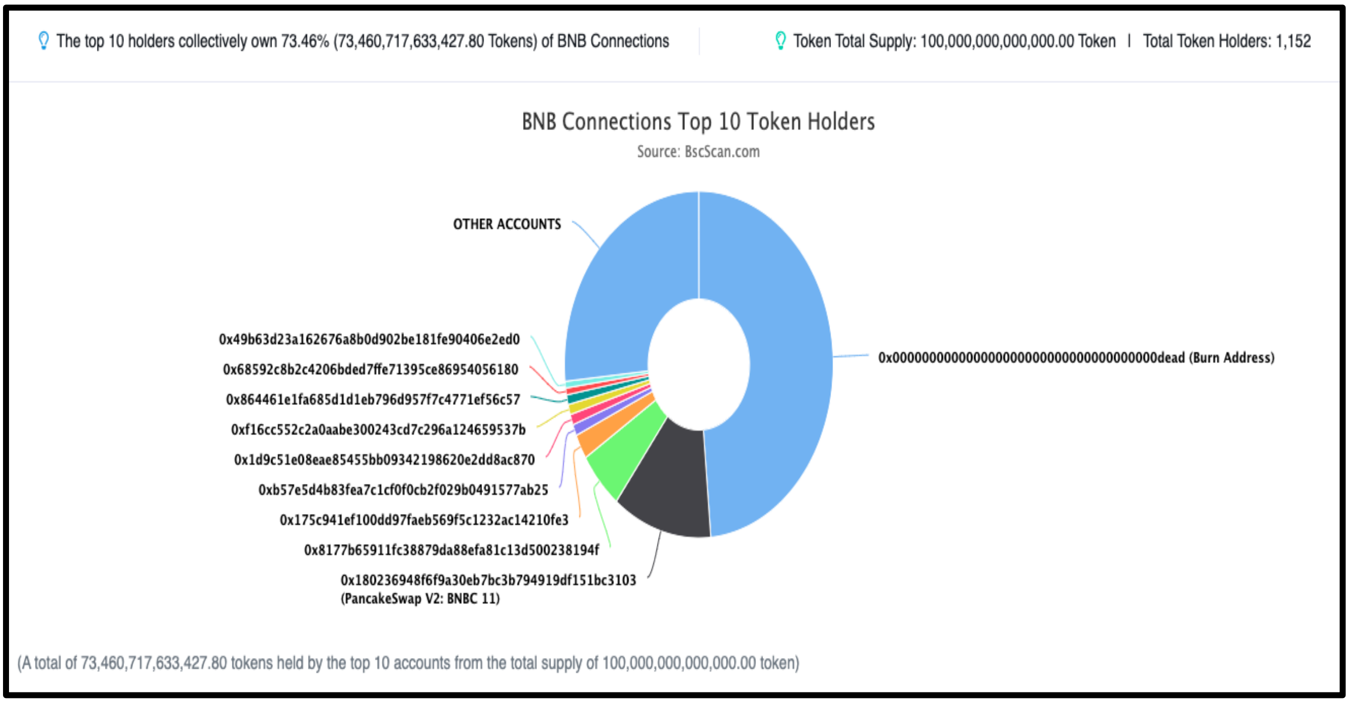
Contract details

Token contract details for 24th June 2021

Contract name	BNB Connections
Contract address	0x7f1c3c069ed6829cd064c907b3c1a19081345661
Token supply	100,000,000,000,000
Token ticker	BNBC
Decimals	9
Token holders	1,152
Transaction count	4,640
Top 100% holders dominance	91.53%
Contract deployer address	0x0d71A65f9420492Be2cE6DEB0b082d82c94Fa2e5
Contract's current owner address	Ownership renounced

Top token holders

Top 10 Token Holders



The top 10 holders collectively own 73.46% (73,460,717,633,427.80 Tokens) of BNB Connections

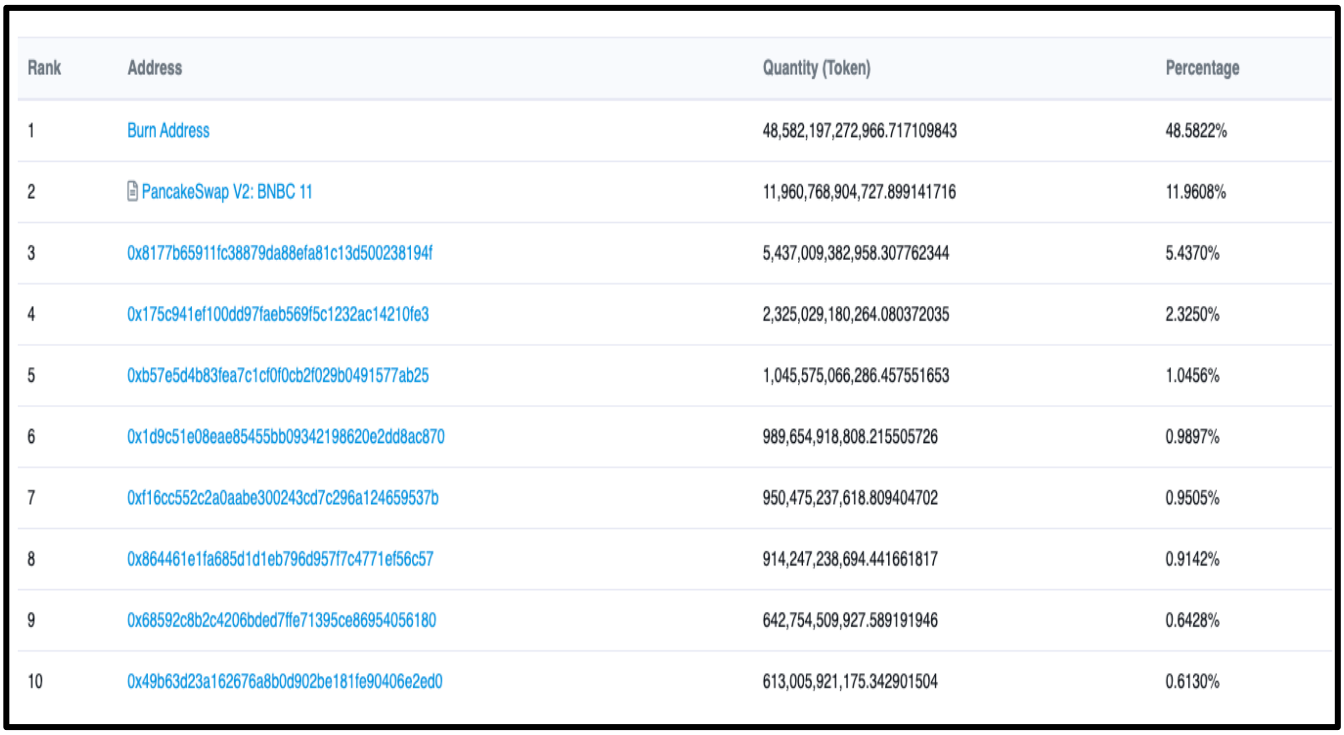
Token Total Supply: 100,000,000,000,000.00 Token | Total Token Holders: 1,152

BNB Connections Top 10 Token Holders

Source: BscScan.com

OTHER ACCOUNTS
0x49b63d23a162676a8b0d902be181fe90406e2ed0
0x68592c8b2c4206bded7ffe71395ce86954056180
0x864461e1fa685d1d1eb796d957f7c4771ef56c57
0xf16cc552c2a0aabe300243cd7c296a124659537b
0x1d9c51e08eae85455bb09342198620e2dd8ac870
0xb57e5d4b83fea7c1cf0f0cb2f029b0491577ab25
0x175c941ef100dd97faeb569f5c1232ac14210fe3
0x8177b65911fc38879da88efa81c13d500238194f
0x180236948f6f9a30eb7bc3b794919df151bc3103 (PancakeSwap V2: BNBC 11)
0x000000000000000000000000000000000000dead (Burn Address)

(A total of 73,460,717,633,427.80 tokens held by the top 10 accounts from the total supply of 100,000,000,000,000.00 token)

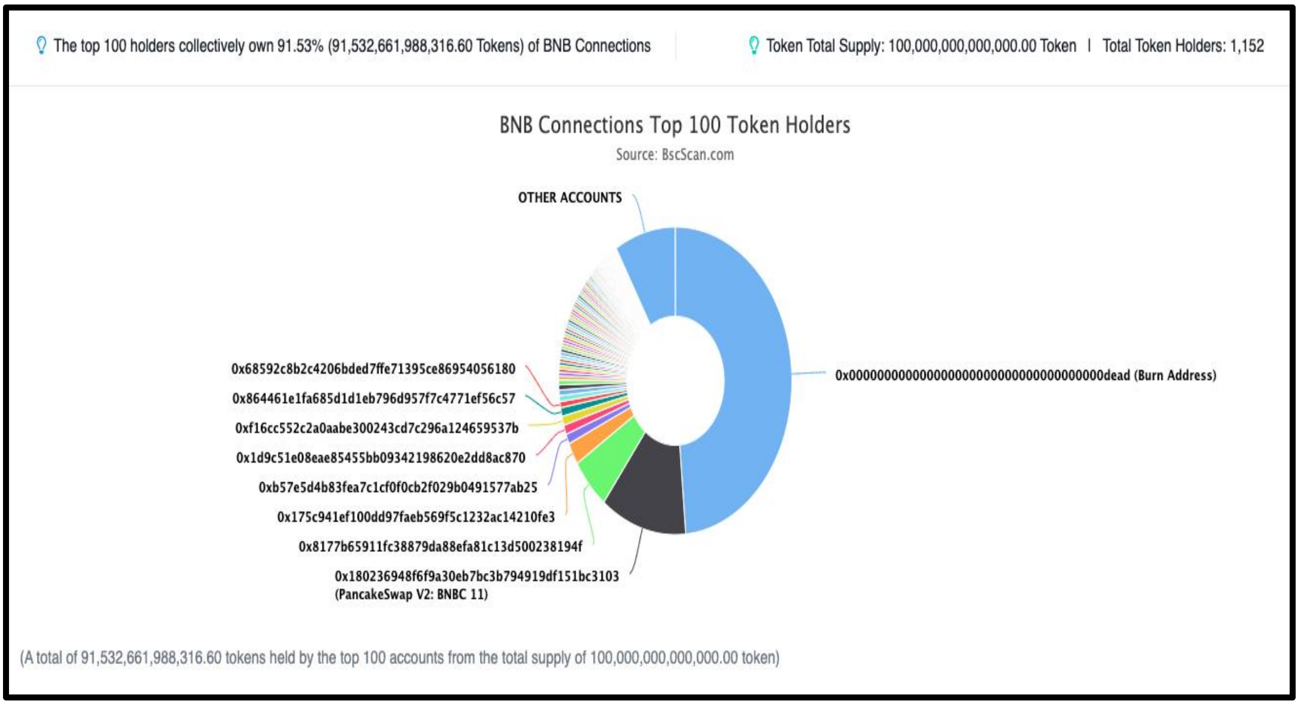


Rank	Address	Quantity (Token)	Percentage
1	Burn Address	48,582,197,272,966.717109843	48.5822%
2	PancakeSwap V2: BNBC 11	11,960,768,904,727.899141716	11.9608%
3	0x8177b65911fc38879da88efa81c13d500238194f	5,437,009,382,958.307762344	5.4370%
4	0x175c941ef100dd97faeb569f5c1232ac14210fe3	2,325,029,180,264.080372035	2.3250%
5	0xb57e5d4b83fea7c1cf0f0cb2f029b0491577ab25	1,045,575,066,286.457551653	1.0456%
6	0x1d9c51e08eae85455bb09342198620e2dd8ac870	989,654,918,808.215505726	0.9897%
7	0xf16cc552c2a0aabe300243cd7c296a124659537b	950,475,237,618.809404702	0.9505%
8	0x864461e1fa685d1d1eb796d957f7c4771ef56c57	914,247,238,694.441661817	0.9142%
9	0x68592c8b2c4206bded7ffe71395ce86954056180	642,754,509,927.589191946	0.6428%
10	0x49b63d23a162676a8b0d902be181fe90406e2ed0	613,005,921,175.342901504	0.6130%

Token distribution

Token will be distributed as follows:

Top 100 Token Holder



The top 100 holders collectively own 91.53% (91,532,661,988,316.60 Tokens) of BNB Connections

Token Total Supply: 100,000,000,000,000.00 Token | Total Token Holders: 1,152

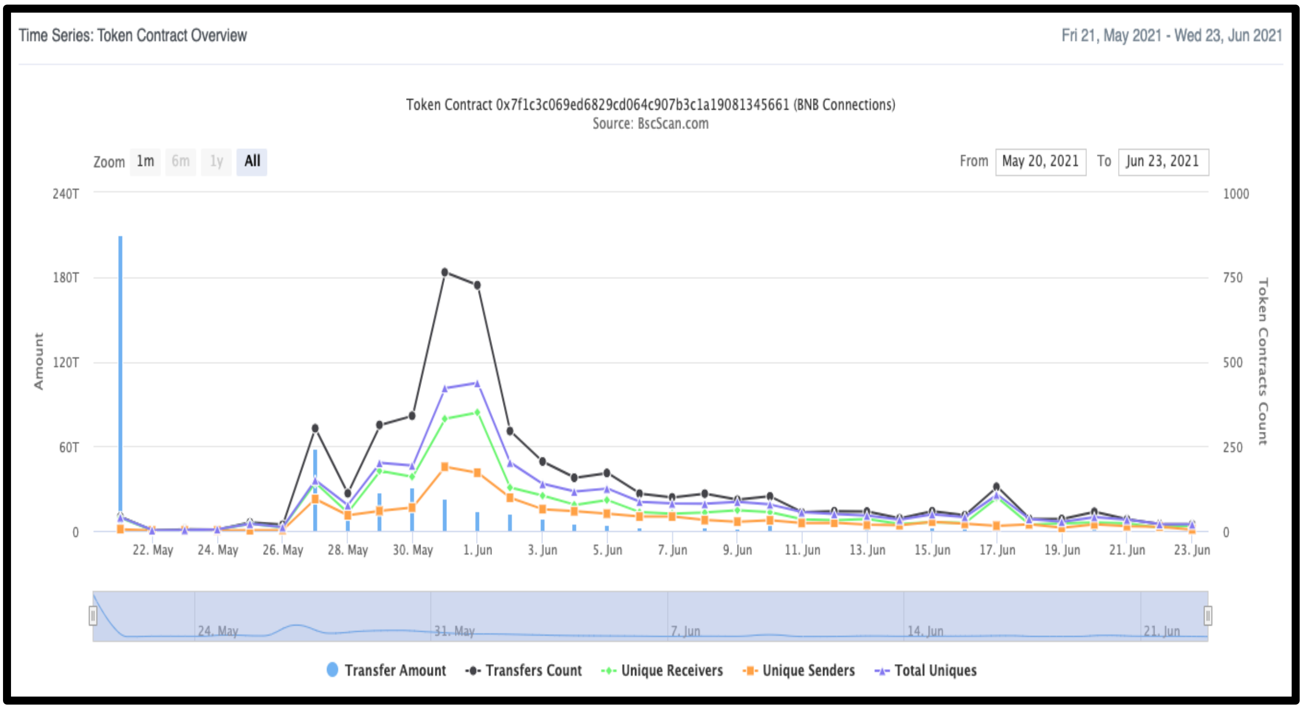
BNB Connections Top 100 Token Holders

Source: BscScan.com

OTHER ACCOUNTS
0x000000000000000000000000000000000000dead (Burn Address)
0x68592c8b2c4206bded7ffe71395ce86954056180
0x864461e1fa685d1d1eb796d957f7c4771ef56c57
0xf16cc552c2a0aabe300243cd7c296a124659537b
0x1d9c51e08eae85455bb09342198620e2dd8ac870
0xb57e5d4b83fea7c1cf0f0cb2f029b0491577ab25
0x175c941ef100dd97faeb569f5c1232ac14210fe3
0x8177b65911fc38879da88efa81c13d500238194f
0x180236948f6f9a30eb7bc3b794919df151bc3103
(PancakeSwap V2: BNBC 11)

(A total of 91,532,661,988,316.60 tokens held by the top 100 accounts from the total supply of 100,000,000,000,000.00 token)

Contract interaction details



Time Series: Token Contract Overview

Fri 21, May 2021 - Wed 23, Jun 2021

Token Contract 0x7f1c3c069ed6829cd064c907b3c1a19081345661 (BNB Connections)

Source: BscScan.com

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	low issue
		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	Medium issues
		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**		
└	Function Name	Visibility	Mutability	Modifiers
Context	**Implementation**			
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
IBEP20	**Interface**			
└	totalSupply	External ❗		NO❗
└	balanceOf	External ❗		NO❗
└	transfer	External ❗	🛑	NO❗
└	allowance	External ❗		NO❗
└	approve	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗
SafeMath	**Library**			
└	add	Internal 🔒		
└	sub	Internal 🔒		
└	sub	Internal 🔒		
└	mul	Internal 🔒		
└	div	Internal 🔒		
└	div	Internal 🔒		

└	mod	Internal 🔒		
└	mod	Internal 🔒		
Address	**Library**			
└	isContract	Internal 🔒		
└	sendValue	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCall	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	functionCallWithValue	Internal 🔒	🛑	
└	_functionCallWithValue	Private 🔐	🛑	
Ownable	**Implementation**	**Context**		
└		Internal 🔒	🛑	
└	owner	Public ❗		NO❗
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
BNBConnections	**Implementation**	**Context, IBEP20, Ownable**		
└		Public ❗	🛑	NO❗
└	name	Public ❗		NO❗
└	symbol	Public ❗		NO❗
└	decimals	Public ❗		NO❗
└	totalSupply	Public ❗		NO❗
└	balanceOf	Public ❗		NO❗

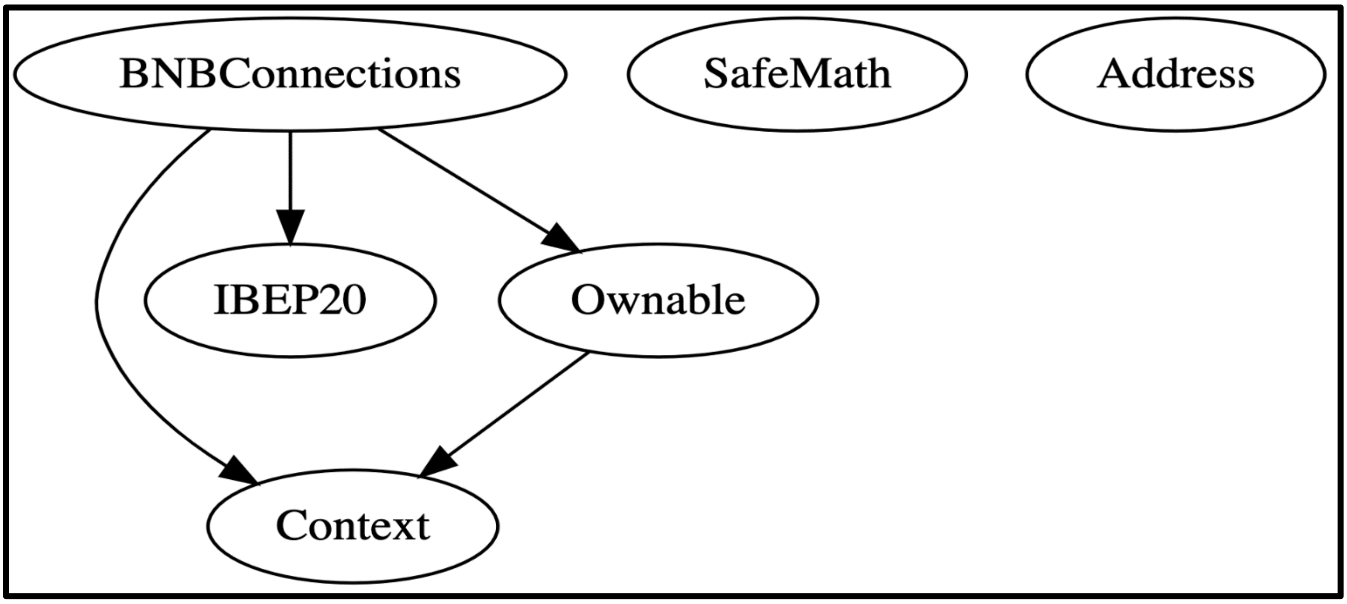
└	transfer	Public ❗	🛑	NO❗
└	allowance	Public ❗		NO❗
└	approve	Public ❗	🛑	NO❗
└	transferFrom	Public ❗	🛑	NO❗
└	increaseAllowance	Public ❗	🛑	NO❗
└	decreaseAllowance	Public ❗	🛑	NO❗
└	isExcluded	Public ❗		NO❗
└	totalFees	Public ❗		NO❗
└	totalBurn	Public ❗		NO❗
└	deliver	Public ❗	🛑	NO❗
└	reflectionFromToken	Public ❗		NO❗
└	tokenFromReflection	Public ❗		NO❗
└	excludeAccount	External ❗	🛑	onlyOwner
└	includeAccount	External ❗	🛑	onlyOwner
└	_approve	Private 🔐	🛑	
└	_transfer	Private 🔐	🛑	
└	multiTransfer	Public ❗	🛑	NO❗
└	_transferStandard	Private 🔐	🛑	
└	_transferToExcluded	Private 🔐	🛑	
└	_transferFromExcluded	Private 🔐	🛑	
└	_transferBothExcluded	Private 🔐	🛑	
└	_reflectFee	Private 🔐	🛑	
└	_getValues	Private 🔐		
└	_getTValues	Private 🔐		
└	_getRValues	Private 🔐		

└	_getRate	Private 🔐		
└	_getCurrentSupply	Private 🔐		
└	_getTaxFee	Private 🔐		
└	_getMaxTxAmount	Private 🔐		
└	_setTaxFee	External ❗	🛑	onlyOwner
└	_setMaxTxAmount	External ❗	🛑	onlyOwner

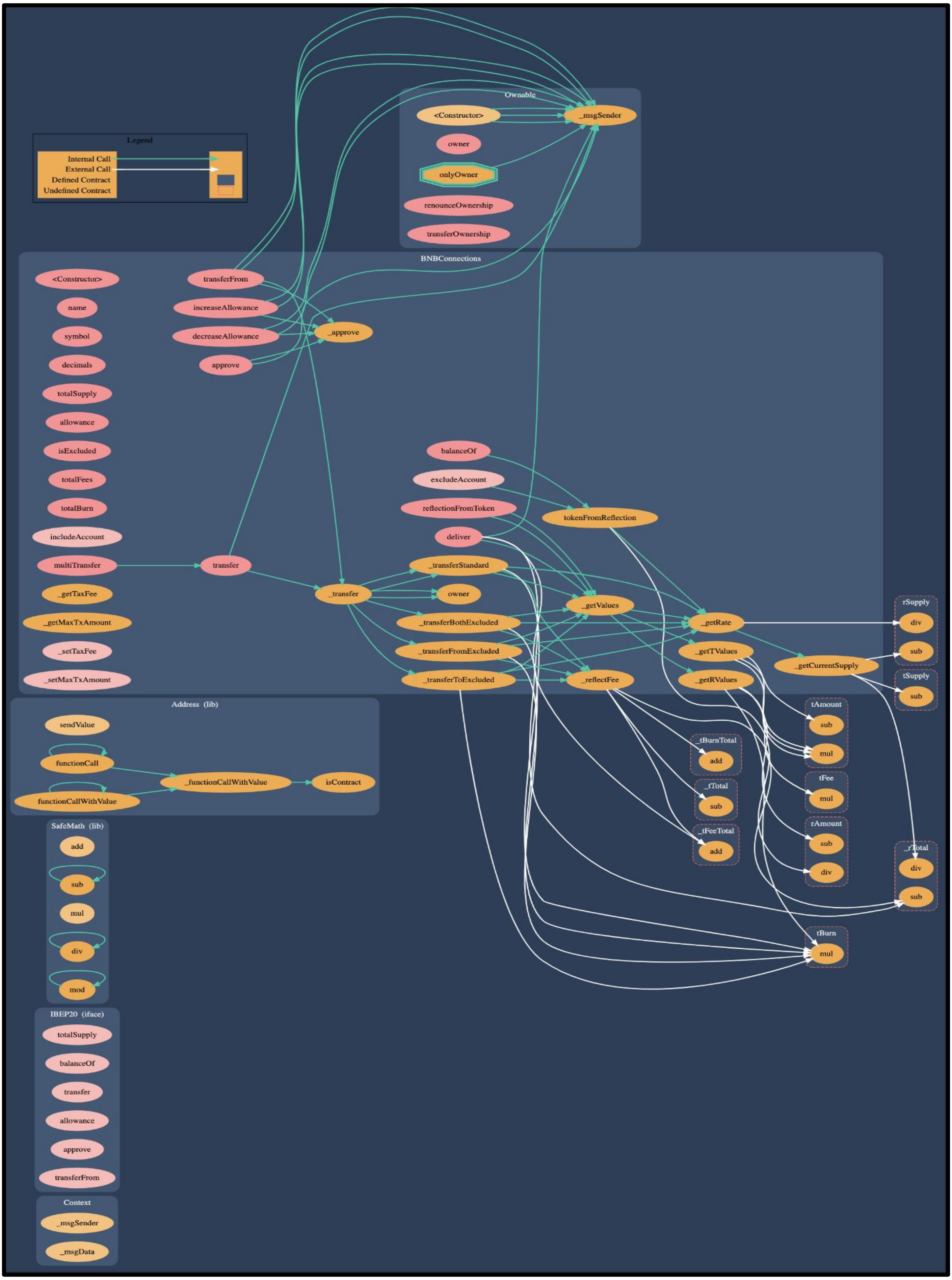
Legend

Symbol	Meaning
🛑	**Function can modify state**
💵	**Function is payable**

Inheritance Hierarchy



Functional connection graph



Security issue checking status

- ❖ **High severity issues**

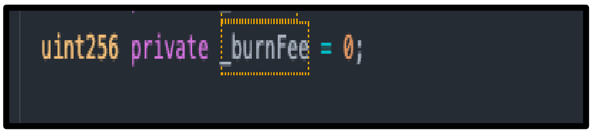
  No high severity issues found

- ❖ **Medium severity issues**

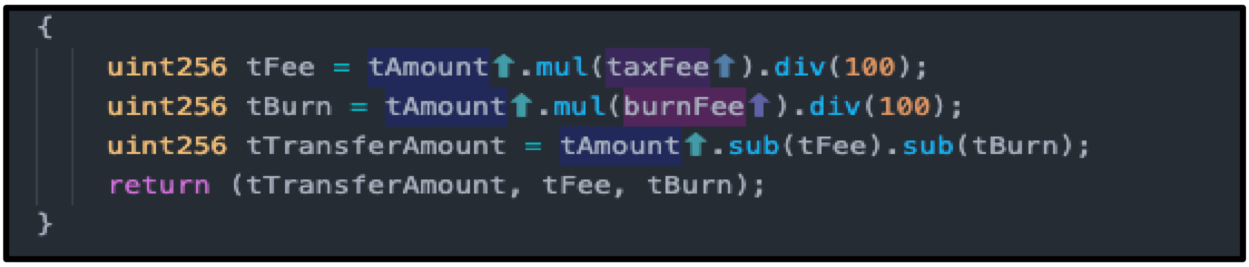
Wrong burning

Issue:

- ➢ By default, the burn fee is set to 0, and the owner can not change that value. Therefore, when the contract tries to calculate the burn amount, it will always get 0 as the value.



```
uint256 private _burnFee = 0;
```



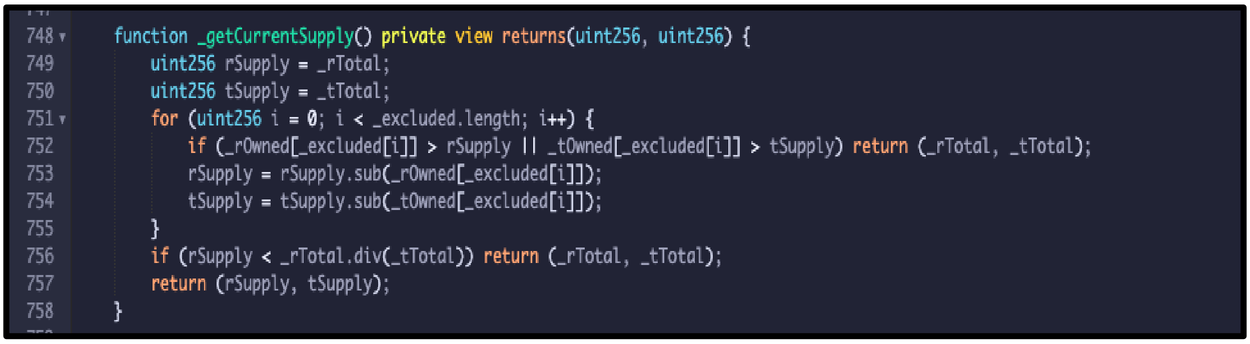
```
{
    uint256 tFee = tAmount.mul(taxFee).div(100);
    uint256 tBurn = tAmount.mul(burnFee).div(100);
    uint256 tTransferAmount = tAmount.sub(tFee).sub(tBurn);
    return (tTransferAmount, tFee, tBurn);
}
```

- ❖ **Low severity issues**

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.



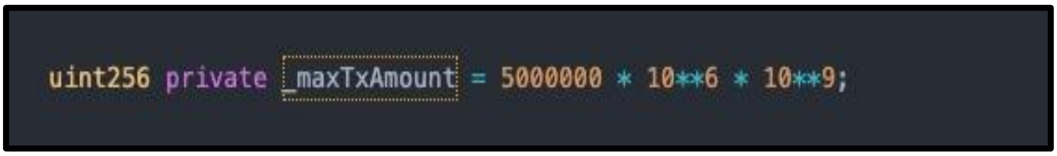
```
    function _getCurrentSupply() private view returns(uint256, uint256) {
        uint256 rSupply = _rTotal;
        uint256 tSupply = _tTotal;
        for (uint256 i = 0; i < _excluded.length; i++) {
            if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return (_rTotal, _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.

Informational

It states in the whitepaper that “The maximum amount is calculated dynamically per transaction based on the current liquidity portfolio,” but the maximum amount is a fixed value and it doesn’t happen dynamically.



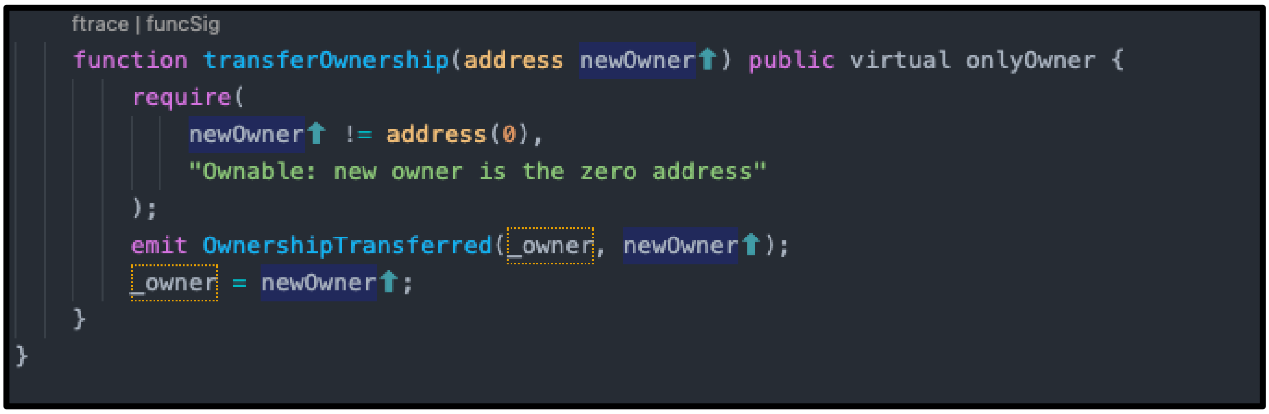
```
uint256 private _maxTxAmount = 5000000 * 10**6 * 10**9;
```

Owner privileges

Ownership has been renounced and the owner doesn’t have any privileges and has no authority to make any changes now.

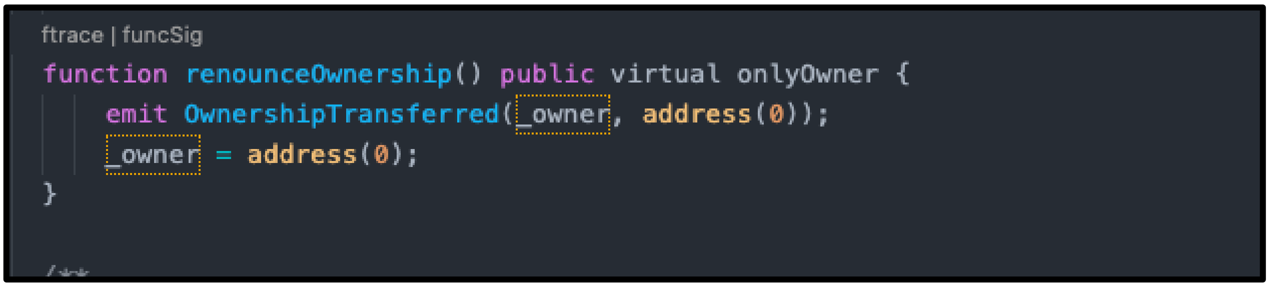
Ownership privileges owner had;

- Owner can transfer the ownership.



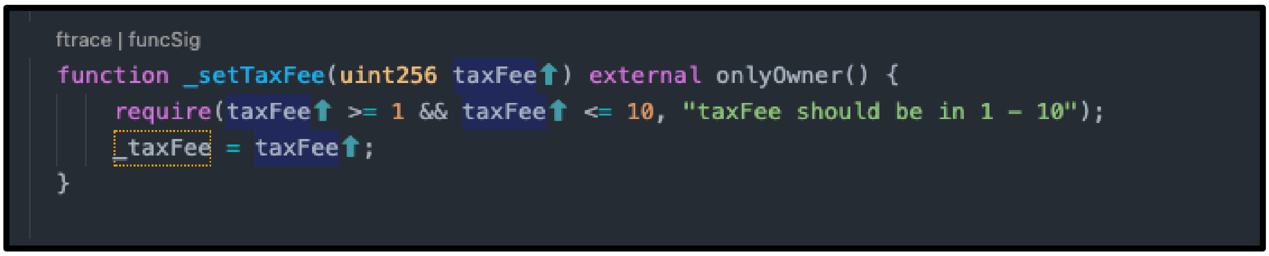
```
    ftrace | funcSig
    function transferOwnership(address newOwner) public virtual onlyOwner {
        require(
            newOwner != address(0),
            "Ownable: new owner is the zero address"
        );
        emit OwnershipTransferred(_owner, newOwner);
        _owner = newOwner;
    }
}
```

- Owner can renounce the ownership.



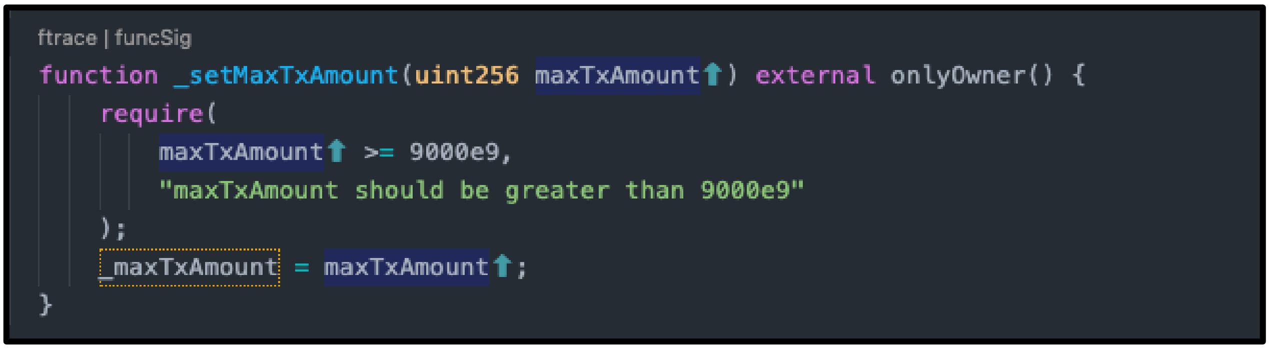
```
ftrace | funcSig
function renounceOwnership() public virtual onlyOwner {
    emit OwnershipTransferred(_owner, address(0));
    _owner = address(0);
}

/**
```

- Owner can change the tax percentage.



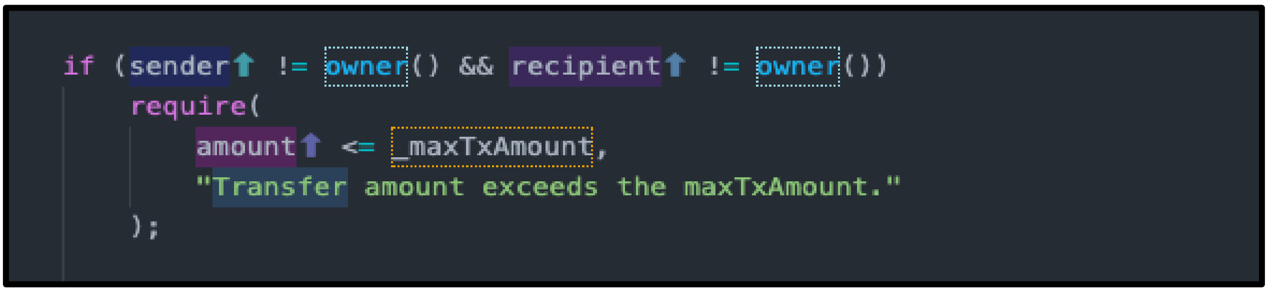
```
ftrace | funcSig
function _setTaxFee(uint256 taxFee) external onlyOwner() {
    require(taxFee >= 1 && taxFee <= 10, "taxFee should be in 1 - 10");
    _taxFee = taxFee;
}
```

❖ Owner can change the max transaction amount.



```
ftrace | funcSig
function _setMaxTxAmount(uint256 maxTxAmount) external onlyOwner() {
    require(
        maxTxAmount >= 9000e9,
        "maxTxAmount should be greater than 9000e9"
    );
    _maxTxAmount = maxTxAmount;
}
```

❖ Max transaction amount will not apply for the owner.



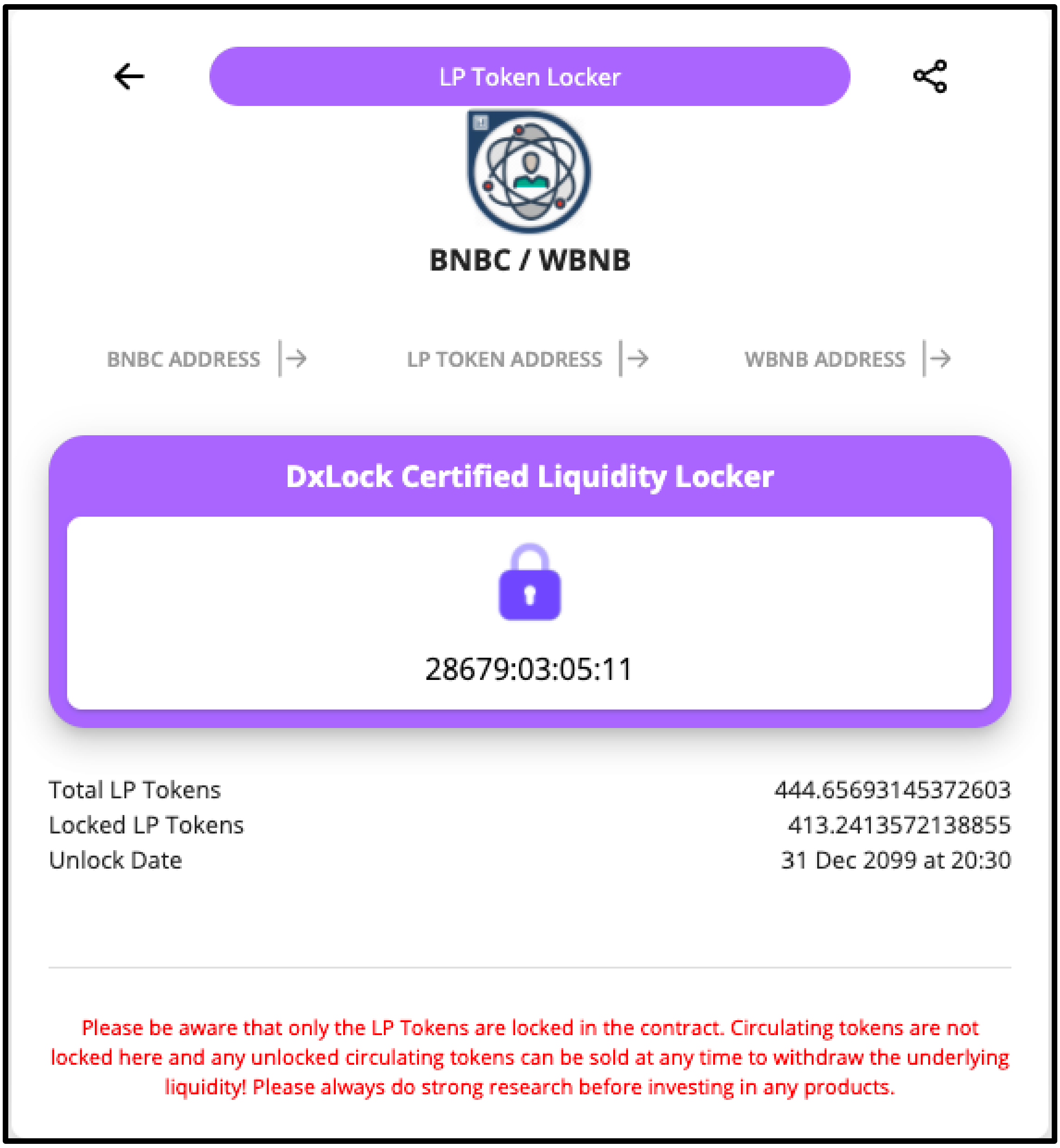
```
if (sender != owner() && recipient != owner())
    require(
        amount <= _maxTxAmount,
        "Transfer amount exceeds the maxTxAmount."
    );
```

Audit conclusion

While conducting the audit of the BNBConnections smart contract, it was observed that there is nothing alarming with the code and the contract only contains low and medium severity issues.

Liquidity locking details can be found through the below link.

https://dxsale.app/app/pages/dxlockview?id=0&add=0x0d71A65f9420%20492Be2cE6DEB0b082d82c94Fa2e5&type=lplock&chain=BSC



BNBC / WBNB

DxLock Certified Liquidity Locker

28679:03:05:11

Total LP Tokens	444.65693145372603
Locked LP Tokens	413.2413572138855
Unlock Date	31 Dec 2099 at 20:30

Please be aware that only the LP Tokens are locked in the contract. Circulating tokens are not locked here and any unlocked circulating tokens can be sold at any time to withdraw the underlying liquidity! Please always do strong research before investing in any products.