



RugFreeCoins Audit



Doge 2.0 Token Smart Contract Security Audit

July 2nd ,2023

Overview

- ✓ No mint function found, the owner cannot mint tokens after initial deployment.
- ✓ The owner can't set a max transaction limit
- ✓ The owner can't enable or pause trading
- ✓ The owner can't change fees.
- ✓ The owner can't blacklist wallets.
- ✓ The owner can't set a max wallet limit
- ✓ The owner can't claim the contract's balance of its own token.

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Audit details



Audited project

Doge 2.0 Token



Contract Address

0x899109d50a0eb6c5ff3462120c9319461b6495c0



Client contact

Doge 2.0 Token Team



Blockchain

Binance smart chain



Project website

www.doge2token.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 the Doge 2.0 Token Team to perform an audit of the smart contract.

<https://bscscan.com/address/0x899109d50a0eb6c5ff3462120c9319461b6495c0#code>

This audit focuses on verifying 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, and long-term sustainability, and as a guide to improving the smart contract's security posture by remediating the identified issues.

Tokenomics

7% tax when buying & selling

- 1% of trade goes to the burn wallet
- 1% of trade goes to the holders in USDT
- 5% of trade goes to the marketing wallet in BNB

Target market and the concept

Target market

- Anyone who's interested in the 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 taking part in the Doge 2.0 token ecosystem.
- Anyone who's interested in taking part in the future plans of Doge 2.0 Token.
- Anyone who's interested in making financial transactions with any other party using Doge 2.0 Token as the currency.

Potential to grow with score points

1.	Project efficiency	8/10
2.	Project uniqueness	8/10
3	Information quality	8/10
4	Service quality	8/10
5	System quality	8/10
6	Impact on the community	8/10
7	Impact on the business	8/10
8	Preparing for the future	8/10
9	Smart contract security	10/10
10	Smart contract functionality assessment	10/10
Total Points		8.4/10

Contract details

Token contract details for 2nd of July 2023

Contract name	Doge 2.0
Contract address	0x899109D50a0eb6C5ff3462120c9319461B6495C0
Token supply	420,000,000,000,000,000
Token ticker	DOGE2.0
Decimals	9
Token holders	2
Transaction count	3
Contract deployer address	0x1A4c853e27c5dB2a9F0F9296C5fDB8043CCA8CAD
Contract's current owner address	0x1a4c853e27c5db2a9f0f9296c5fdb8043cca8cad
Marketing wallet	0x585374f8a97d35827a32e1c69a7cabb7e71ee592












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 & centralisation	Access control of owners	pass
		Business logics	pass
		Business implementation	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
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Contract description table











The 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 their visibility and mutability.










Contract	Type	Bases		
L	Function Name	Visibility	Mutability	Modifiers
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 		
SafeMath	Library			
L	add	Internal 		
L	sub	Internal 		
L	sub	Internal 		
L	mul	Internal 		

















L	div	Internal 🔒		
L	div	Internal 🔒		
L	mod	Internal 🔒		
L	mod	Internal 🔒		
Safe MathInt	Library			
L	mul	Internal 🔒		
L	div	Internal 🔒		
L	sub	Internal 🔒		
L	add	Internal 🔒		
L	abs	Internal 🔒		
L	toUInt256Safe	Internal 🔒		
SafeMath UInt	Library			
L	toInt256Safe	Internal 🔒		
Iterable Mapping	Library			
L	get	Public !		NO !
L	getIndexOfKey	Public !		NO !
L	getKeyAtIndex	Public !		NO !
L	size	Public !		NO !
L	set	Public !	🔴	NO !












L	remove	Public !		NO !
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 !
IuniswapV2Pair	Interface			
L	name	External !		NO !
L	symbol	External !		NO !
L	decimals	External !		NO !
L	totalSupply	External !		NO !
L	balanceOf	External !		NO !
L	allowance	External !		NO !
L	approve	External !		NO !
L	transfer	External !		NO !









L	transferFrom	External !		NO !
L	DOMAIN_SEPARATOR	External !		NO !
L	PERMIT_TYPEHASH	External !		NO !
L	nonces	External !		NO !
L	permit	External !		NO !
L	MINIMUM_LIQUIDITY	External !		NO !
L	factory	External !		NO !
L	token0	External !		NO !
L	token1	External !		NO !
L	getReserves	External !		NO !
L	price0CumulativeLast	External !		NO !
L	price1CumulativeLast	External !		NO !
L	kLast	External !		NO !
L	mint	External !		NO !
L	burn	External !		NO !
L	swap	External !		NO !
L	skim	External !		NO !
L	sync	External !		NO !
L	initialize	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 !
IERC20	Interface			
L	totalSupply	External !		NO !
L	balanceOf	External !		NO !
L	allowance	External !		NO !
L	transfer	External !		NO !
L	approve	External !		NO !
L	transferFrom	External !		NO !
IERC20 Metadata	Interface	IERC20		
L	name	External !		NO !
L	symbol	External !		NO !
L	decimals	External !		NO !
ERC20	Implementation	Context, IERC20, IERC20 Metadata		
L		Public !		NO !

L	name	Public !		NO !
L	symbol	Public !		NO !
L	decimals	Public !		NO !
L	totalSupply	Public !		NO !
L	balanceOf	Public !		NO !
L	transfer	Public !		NO !
L	allowance	Public !		NO !
L	approve	Public !		NO !
L	transferFrom	Public !		NO !
L	increaseAllowance	Public !		NO !
L	decreaseAllowance	Public !		NO !
L	_transfer	Internal 		
L	_mint	Internal 		
L	_burn	Internal 		
L	_approve	Internal 		
L	_beforeTokenTransfer	Internal 		
Dividend Paying Token Interface	Interface			
L	dividendOf	External !		NO !
L	withdrawDividend	External !		NO !

Dividend Paying Token Optional Interface	Interface			
L	withdrawableDividendOf	External !		NO !
L	withdrawnDividendOf	External !		NO !
L	accumulativeDividendOf	External !		NO !
Dividend Paying Token	Implementation	ERC20, Ownable, DividendP ayingToke nInterface, DividendP ayingToke nOptional Interface		
L		Public !		ERC20
L	distributeDividends	Public !		onlyOwner
L	withdrawDividend	Public !		NO !
L	_withdrawDividendOfUser	Internal 		
L	dividendOf	Public !		NO !
L	withdrawableDividendOf	Public !		NO !
L	withdrawnDividendOf	Public !		NO !
L	accumulativeDividendOf	Public !		NO !
L	_transfer	Internal 		
L	_mint	Internal 		
L	_burn	Internal 		

L	_setBalance	Internal 		
Dividend Tracker	Implementation	Ownable, Dividend Paying Token		
L		Public !		DividendPayingToken
L	_transfer	Internal 		
L	withdrawDividend	Public !		NO !
L	updateMinimumTokenBalanceForDividends	External !		onlyOwner
L	excludeFromDividends	External !		onlyOwner
L	updateClaimWait	External !		onlyOwner
L	setLastProcessedIndex	External !		onlyOwner
L	getLastProcessedIndex	External !		NO !
L	getNumberOfTokenHolders	External !		NO !
L	getAccount	Public !		NO !
L	getAccountAtIndex	Public !		NO !
L	canAutoClaim	Private 		
L	setBalance	External !		onlyOwner
L	process	Public !		NO !
L	processAccount	Public !		onlyOwner
DOGE2	Implementation	ERC20, Ownable		

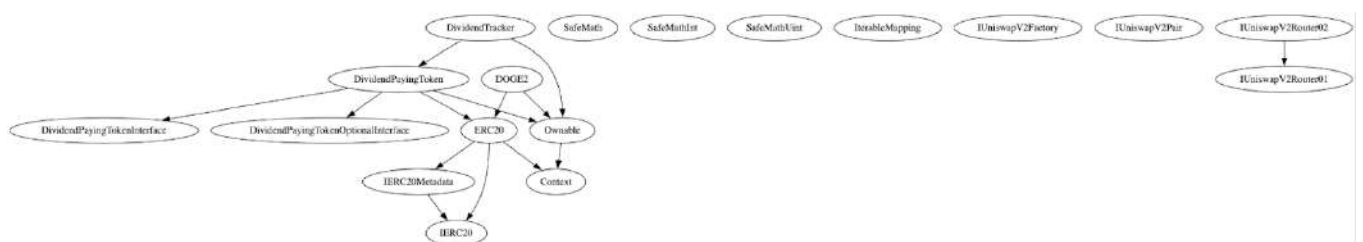
L		Public !		ERC20
L		External !		NO !
L	claimStuckTokens	External !		onlyOwner
L	isContract	Internal 		
L	sendBNB	Internal 		
L	_setAutomatedMarketMakerPair	Private 		
L	updateMarketingWallet	External !		onlyOwner
L	excludeFromFees	External !		onlyOwner
L	isExcludedFromFees	Public !		NO !
L	_transfer	Internal 		
L	swapAndSendDividends	Private 		
L	setSwapTokensAtAmount	External !		onlyOwner
L	updateClaimWait	External !		onlyOwner
L	getClaimWait	External !		NO !
L	getTotalDividendsDistributed	External !		NO !
L	withdrawableDividendOf	Public !		NO !
L	dividendTokenBalanceOf	Public !		NO !
L	totalRewardsEarned	Public !		NO !
L	excludeFromDividends	External !		onlyOwner
L	getAccountDividendsInfo	External !		NO !
L	getAccountDividendsInfoAtIndex	External !		NO !

L	processDividendTracker	External !	●	NO !
L	claim	External !	●	NO !
L	claimAddress	External !	●	onlyOwner
L	getLastProcessedIndex	External !		NO !
L	setLastProcessedIndex	External !	●	onlyOwner
L	getNumberOfDividendTokenHolders	External !		NO !

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

❖ **Centralization Risk**

No centralization issues found

Owner privileges

- ❖ Owner can get any bep20 tokens from the contract (can not get native tokens)

```
function claimStuckTokens(address token) external onlyOwner {
    require(token != address(this), "Owner cannot claim native tokens");
    if (token == address(0x0)) {
        payable(msg.sender).transfer(address(this).balance);
        return;
    }
    IERC20 ERC20token = IERC20(token);
    uint256 balance = ERC20token.balanceOf(address(this));
    ERC20token.transfer(msg.sender, balance);
}
```

- ❖ Owner can change marketing wallet

```
function updateMarketingWallet(address newWallet) external onlyOwner {
    require(newWallet != address(0), "Fee Address cannot be zero address");
    marketingWallet = newWallet;
}
```

- ❖ Owner can change swap point minimum up to 0.001%

```
function setSwapTokensAtAmount(uint256 newAmount) external onlyOwner {
    require(
        newAmount > totalSupply() / 100_000,
        "SwapTokensAtAmount must be greater than 0.001% of total supply"
    );
    swapTokensAtAmount = newAmount;
}
```

- ❖ Owner can change claim wait

```
function updateClaimWait(uint256 newClaimWait) external onlyOwner {  
    require(  
        newClaimWait >= 3_600 && newClaimWait <= 86_400,  
        "claimWait must be updated to between 1 and 24 hours"  
    );  
    dividendTracker.updateClaimWait(newClaimWait);  
}
```


Audit conclusion

RugFreeCoins team has performed in-depth testings, line-by-line manual code review, and automated audit of the smart contract. The smart contract was analyzed mainly for common smart contract vulnerabilities, exploits, manipulations, and hacks. According to the smart contract audit.

Smart contract functional Status: **PASS**

Number of risk issues: **0**

Solidity code functional issue level: **PASS**

Number of owner privileges: **4**

Centralization risk correlated to the active owner: **LOW**

Smart contract active ownership: **ACTIVE**