



# **Smart Contract Security Audit**

<u>TechRate</u> November, 2021

### **Audit Details**



**Audited project** 

**DogePlay** 



Deployer address

0x3f5734d20434d0ee1fadeae004293ef9d84eef9d



**Client contacts:** 

**DogePlay team** 



Blockchain

**Binance Smart Chain** 



### **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 DogePlay to perform an audit of smart contracts:

https://bscscan.com/address/0x68387ea6852cba3629c7952397b115c8a1dab52a#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.

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### **Contracts Details**

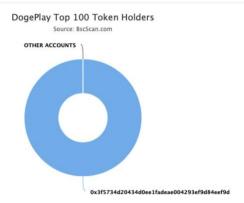
#### Token contract details for 29.11.2021

Contract name	DogePlay	
Contract address	0x68387ea6852cba3629C7952397b115C8A1dAb52a	
Total supply	1,000,000,000	
Token ticker	DP	
Decimals	9	
Token holders	1	
Transactions count	1	
Top 100 holders dominance	100.00%	
Liquidity fee	200	
Tax fee	100	
Total fees	0	
Uniswap V2 pair	0x971f6c3b907d2513d9a05af5cf4f51d4c657162e	
Contract deployer address	0x3f5734d20434d0ee1fadeae004293ef9d84eef9d	
Contract's current owner address	0x3f5734d20434d0ee1fadeae004293ef9d84eef9d	

# **DogePlay Token Distribution**

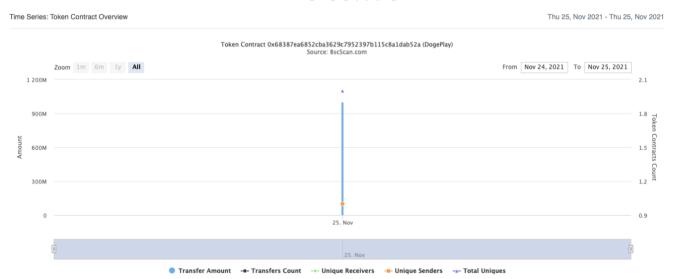
The top 100 holders collectively own 100.00% (1,000,000,000.00 Tokens) of DogePlay

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



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

# DogePlay Contract Interaction Details



# **DogePlay Top 10 Token Holders**

Rank Address Quantity (Token) Percentage

0x3f5734d20434d0ee1fadeae004293ef9d84eef9d 1,000,000,000 100.0000%



### **Contract functions details**

#### + [Int] IERC20 - [Ext] totalSupply - [Ext] balanceOf - [Ext] transfer # - [Ext] allowance - [Ext] approve # - [Ext] transferFrom # + Context - [Int] \_msgSender - [Int] msgData + Ownable (Context) - [Pub] <Constructor> # - [Pub] owner - [Pub] renounceOwnership # - modifiers: onlyOwner - [Pub] transferOwnership # - modifiers: onlyOwner - [Prv] setOwner# + [Lib] SafeMath - [Int] tryAdd - [Int] trySub - [Int] tryMul - [Int] tryDiv - [Int] tryMod - [Int] add - [Int] sub - [Int] mul - [Int] div - [Int] mod - [Int] sub - [Int] div - [Int] mod + [Lib] Address - [Int] isContract - [Int] sendValue # - [Int] functionCall # - [Int] functionCall # - [Int] functionCallWithValue # - [Int] functionCallWithValue # - [Int] functionStaticCall - [Int] functionStaticCall - [Int] functionDelegateCall # - [Int] functionDelegateCall # - [Int] verifyCallResult + [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 ($)
 - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
+ [Int] IUniswapV2Factory
 - [Ext] feeTo
 - [Ext] feeToSetter
 - [Ext] getPair
 - [Ext] allPairs
 - [Ext] allPairsLength
 - [Ext] createPair #
 - [Ext] setFeeTo #
 - [Ext] setFeeToSetter #
+ [Int] IPinkAntiBot
 - [Ext] setTokenOwner #
 - [Ext] onPreTransferCheck #
+ BaseToken
+ AntiBotLiquidityGeneratorToken (IERC20, Ownable, BaseToken)
 - [Pub] <Constructor> ($)
 - [Ext] setEnableAntiBot#
   - modifiers: onlvOwner
 - [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] deliver #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Pub] excludeFromReward #
 - modifiers: onlyOwner
- [Ext] includeInReward #
 - modifiers: onlyOwner
- [Prv] _transferBothExcluded #
- [Pub] excludeFromFee #
 - modifiers: onlyOwner
- [Pub] includeInFee #
 - modifiers: onlyOwner
- [Ext] setTaxFeePercent #
 - modifiers: onlyOwner
- [Ext] setLiquidityFeePercent #
 - modifiers: onlyOwner
- [Pub] setSwapAndLiquifyEnabled #
 - modifiers: onlyOwner
- [Ext] <Fallback> ($)
- [Prv] _reflectFee #
- [Prv] getValues
- [Prv] _getTValues
- [Prv] getRValues
- [Prv] _getRate
- [Prv] getCurrentSupply
- [Prv] takeLiquidity#
- [Prv] takeCharityFee #
- [Prv] calculateTaxFee
- [Prv] calculateLiquidityFee
- [Prv] calculateCharitvFee
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Pub] isExcludedFromFee
- [Prv] approve #
- [Prv] _transfer #
- [Prv] swapAndLiquify #
 - modifiers: lockTheSwap
- [Prv] swapTokensForEth#
- [Prv] addLiquidity #
- [Prv] tokenTransfer #
- [Prv] _transferStandard #
```

(\$) = payable function # = non-constant function

- [Prv] \_transferToExcluded #- [Prv] transferFromExcluded #

# **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.

No medium severity issues found.

- Low Severity Issues
  - 1. 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.

 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.

#### 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 the tax and liquidity fee.

```
function setTaxFeePercent(uint256 taxFeeBps 1) external onlyOwner {
    require(taxFeeBps 1 >= 0 && taxFeeBps 1 <= 10**4, "Invalid bps");
    _taxFee = taxFeeBps 1;
}

ftrace|funcSig
function setLiquidityFeePercent(uint256 liquidityFeeBps 1)
    external
    onlyOwner
{
    require(
        liquidityFeeBps 1 >= 0 && liquidityFeeBps 1 <= 10**4,
        "Invalid bps"
    );
    _liquidityFee
    = liquidityFeeBps 1;
}</pre>
```

Owner can enable antibot.

```
function setEnableAntiBot(bool _enable 1) external onlyOwner {
    enableAntiBot = _enable 1;
}
```

Owner can exclude from the fee.

```
function excludeFromFee(address account 1) public onlyOwner {
    isExcludedFromFee[account 1] = true;
}
```

#### Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope. Smart contract contains interfaces that is not audited, some functions may work different ways.

Liquidity locking details NOT provided by the team.

#### 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.