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AUDIT COMPANY

Smart Contract Security Audit

TechRate

October, 2021

Audit Details

Audited project

Dalmatian Shelter

Deployer address

0xbc3c2c6e7baaeb7c7ea2ad4b2fa8681a91d47ccd

Client contacts:

Dalmatian Shelter team

Blockchain

Binance Smart Chain

Project website:

Not provided

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 Dalmatian Shelter to perform an audit of smart contracts:
https://bscscan.com/address/0xef0cc465434e01d5015f6d84bb1d8f2ec448dd4e#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 07.10.2021

Contract name	Dalmatian Shelter
Contract address	0xeF0Cc465434e01D5015f6d84bB1D8f2EC448dD4E
Total supply	1,000,000,000,000
Token ticker	DLMTN
Decimals	18
Token holders	1
Transactions count	1
Top 100 holders dominance	100.00%
Liquidity fee	300
Tax fee	300
Total fees	0
Uniswap V2 pair	0xe51a4f0502d67c74a68f29330cf1c3d7ef88bb80
Contract deployer address	0xbc3c2c6e7baaeb7c7ea2ad4b2fa8681a91d47ccd
Contract's current owner address	0xc7ec2050d7b2d4f136147e31a11bf1d0b8866811

Dalmatian Shelter Token Distribution

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

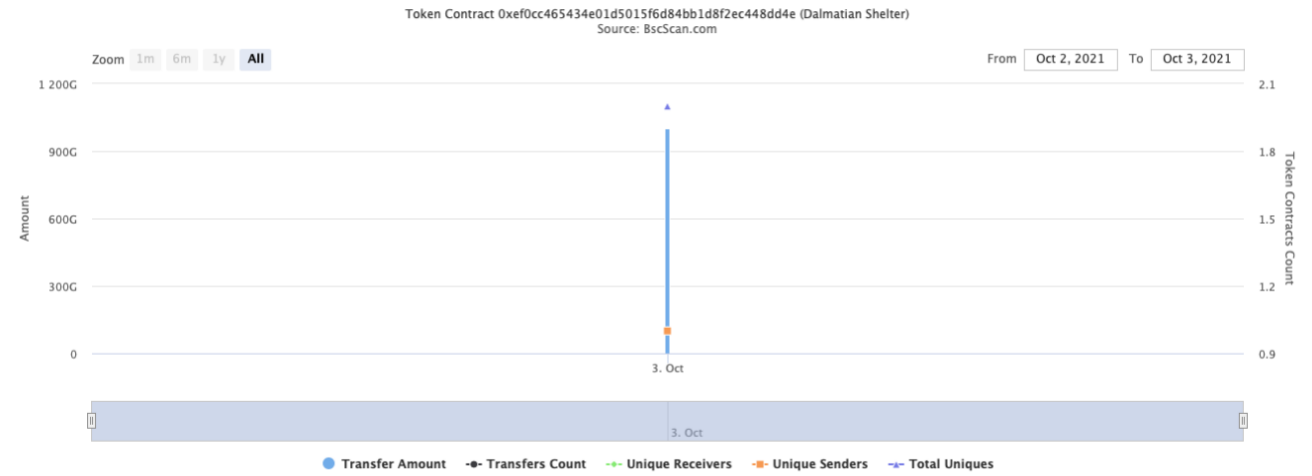
Token Total Supply: 1,000,000,000,000.00 Token | Total Token Holders: 1

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

Dalmatian Shelter Contract Interaction Details

Time Series: Token Contract Overview

Sun 3, Oct 2021 - Sun 3, Oct 2021



Dalmatian Shelter Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0xc7ec2050d7b2d4f136147e31a11bf1d0b8866811	1,000,000,000,000	100.0000%

Contract functions details

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ [Int] IBEP20
  - [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

+ Ownable (Context)
  - [Pub] <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 #

+ Dalmatian_Shelter (Context, IBEP20, Ownable)
  - [Pub] <Constructor> #
    - modifiers: Ownable
  - [Ext] <Fallback> ($)
  - [Pub] name
  - [Pub] symbol

- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Prv] _approve #
- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Pub] deliver #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Pub] excludeFromReward #
  - modifiers: onlyOwner
- [Ext] includeInReward #
  - modifiers: onlyOwner
- [Pub] totalFees
- [Pub] excludeFromFee #
  - modifiers: onlyOwner
- [Pub] includeInFee #
  - modifiers: onlyOwner
- [Ext] setTaxFeePercent #
  - modifiers: onlyOwner
- [Ext] setLiquidityFeePercent #
  - modifiers: onlyOwner
- [Ext] setCharityFeePercent #
  - modifiers: onlyOwner
- [Ext] setMaxTxPercent #
  - modifiers: onlyOwner
- [Ext] setMinLiquidityPercent #
  - modifiers: onlyOwner
- [Pub] setSwapAndLiquifyEnabled #
  - modifiers: onlyOwner
- [Pub] isExcludedFromFee
- [Pub] isExcludedFromReward
- [Ext] setExcludedFromAutoLiquidity #
  - modifiers: onlyOwner
- [Ext] setExcludedToAutoLiquidity #
  - modifiers: onlyOwner
- [Ext] setUniswapRouter #
  - modifiers: onlyOwner
- [Ext] setUniswapPair #
  - modifiers: onlyOwner
- [Prv] _transfer #
- [Prv] swapAndLiquify #
  - modifiers: lockTheSwap
- [Prv] swapTokensForBnb #
- [Prv] addLiquidity #
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _transferBothExcluded #
- [Prv] _transferToExcluded #
- [Prv] _transferFromExcluded #
- [Prv] reflectFee #

- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Prv] takeTransactionFee #

($) = 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 change the tax, charity and liquidity fee.

```
ftrace | funcSig
function setTaxFeePercent(uint256 taxFee⬆) external onlyOwner {
    _taxFee = taxFee⬆;
}
ftrace | funcSig
function setLiquidityFeePercent(uint256 liquidityFee⬆) external onlyOwner {
    _liquidityFee = liquidityFee⬆;
}
ftrace | funcSig
function setCharityFeePercent(uint256 charityFee⬆) external onlyOwner {
    _charityFee = charityFee⬆;
}
```

- Owner can change the maximum transaction amount.

```
function setMaxTxPercent(uint256 maxTxPercent) external onlyOwner {
    _maxTxAmount = _tTotal.mul(maxTxPercent).div(100);
}
```

- Owner can exclude from the fee.

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

- Owner can include & exclude from swapAndLiquify (swapAndLiquify won't be called).

```
ftrace | funcSig
function setExcludedFromAutoLiquidity(address a⬆, bool b⬆) external onlyOwner {
    _isExcludedFromAutoLiquidity[a⬆] = b⬆;
}
ftrace | funcSig
function setExcludedToAutoLiquidity(address a⬆, bool b⬆) external onlyOwner {
    _isExcludedToAutoLiquidity[a⬆] = b⬆;
}
```

- Owner can change uniswap router & pair.

```
function setUniswapRouter(address r⬆) external onlyOwner {
    IUniswapV2Router02 uniswapV2Router = IUniswapV2Router02(r⬆);
    _uniswapV2Router = uniswapV2Router;
}
ftrace | funcSig
function setUniswapPair(address p⬆) external onlyOwner {
    _uniswapV2Pair = p⬆;
}
```

- Owner can change number of tokens to add to liquidity.

```
function setMinLiquidityPercent(uint256 minLiquidityPercent⬆) external onlyOwner {
    _numTokensSellToAddToLiquidity = _tTotal.mul(minLiquidityPercent⬆).div(100);
}
```

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

```
function lock(uint256 time) public virtual onlyOwner {
    _previousOwner = _owner;
    _owner = address(0);
    _lockTime = block.timestamp + time;
    emit OwnershipTransferred(_owner, address(0));
}

function unlock() public virtual {
    require(_previousOwner == msg.sender, "You don't have permission to unlock");
    require(block.timestamp > _lockTime , "Contract is still locked");
    emit OwnershipTransferred(_owner, _previousOwner);
    _owner = _previousOwner;
}
```

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details are 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.