



Audit Report

Legends Doge

January 2022

Type	BEP20
Network	BSC
Address	0xCd092F1f9858204d7986b3a2e36730fF1229a2e5
Audited by	© coinscope

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Contract Review

Contract Name	LegendsDoge
Compiler Version	v0.8.5+commit.a4f2e591
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0xCd092F1f9858204d7986b3a2e36730fF1229a2e5
Symbol	LSD
Decimals	9
Total Supply	1,000,000,000
Source	contract.sol
Domain	legendsdogecoin.com

Audit Updates

Initial Audit	18th January 2022
Corrected	

Contract Analysis

● Critical
 ● Medium
 ● Minor
 ● Pass

Severity	Code	Description
●	ST	Contract Owner is not able to stop or pause transactions
●	OCTD	Contract Owner is not able to transfer tokens from specific address
●	OTUT	Owner Transfer User's Tokens
●	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
●	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
●	MT	Contract Owner is not able to mint new tokens
●	BT	Contract Owner is not able to burn tokens from specific wallet
●	BC	Contract Owner is not able to blacklist wallets from selling

ST - Stop Transactions

Criticality	medium
Location	contract.sol#L675

Description

The contract owner has the authority to stop transactions for all users excluding the owner. The owner may take advantage of it by setting the `_maxTxAmount` to zero.

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

Recommendation

The contract could embody a check for not allowing setting the `_maxTxAmount` less than a reasonable amount. A suggested implementation could check that the maximum amount should be more than a fixed percentage of the total supply.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	contract.sol#L646

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the `updateFee` function with a high percentage value.

```
function updateFee(uint256 _txFee,uint256 _burnFee,uint256 _charityFee)
onlyOwner() public{
    _TAX_FEE = _txFee* 100;
    _BURN_FEE = _burnFee * 100;
    _CHARITY_FEE = _charityFee* 100;
    ORIG_TAX_FEE = _TAX_FEE;
    ORIG_BURN_FEE = _BURN_FEE;
    ORIG_CHARITY_FEE = _CHARITY_FEE;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Contract Diagnostics

● Critical ● Medium ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination
●	L07	Missing Events Arithmetic

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L646,L642,L597 and 18 more

Description

Public functions that are never called by the contract should be declared external to save gas.

```
updateFee  
burn  
reflectionFromToken  
...
```

Recommendation

Use the external attribute for functions never called from the contract

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L461,L463

Description

Constant state variables should be declared constant to save gas.

```
_MAX  
_GRANULARITY
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality

minor

Location

contract.sol#L503,L502,L479 and 17 more

Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
_maxWalletToken  
_maxTxAmount  
ORIG_CHARITY_FEE  
...
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L244,L228,L868 and 8 more

Description

Functions that are not used in the contract, and make the code's size bigger.

```
mod
_getTaxFee
_msgData
...
```

Recommendation

Remove unused functions.

L07 - Missing Events Arithmetic

Criticality

minor

Location

contract.sol#L646,L505

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
_TAX_FEE = _txFee * 100  
_maxTxAmount = _tTotal.mul(maxTxPercent).div(10 ** 4)
```

Recommendation

Emit an event for critical parameter changes.

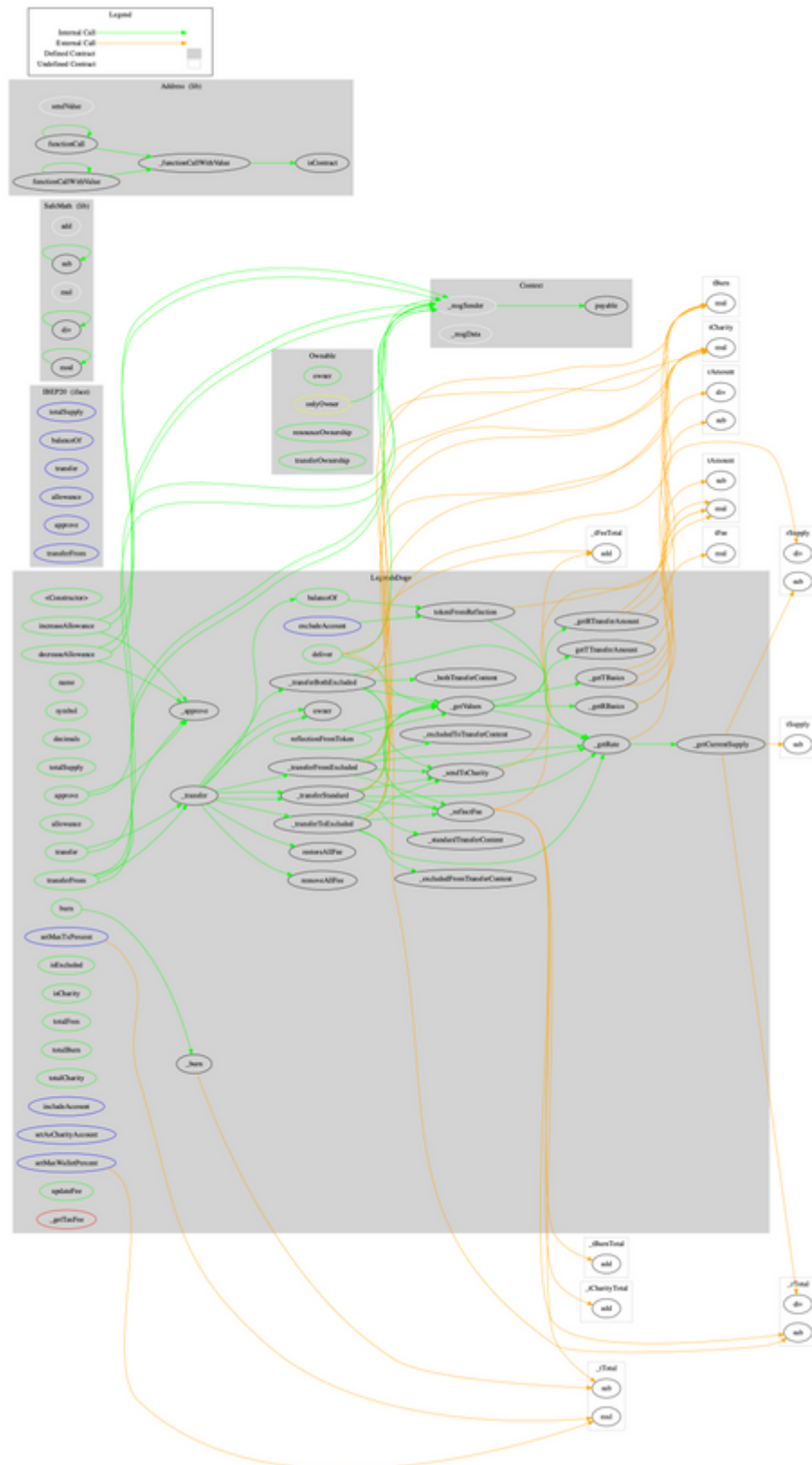
Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
IBEP20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
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		
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
LegendsDoge	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	setMaxTxPercent	External	✓	onlyOwner
	setMaxWalletPercent	External	✓	onlyOwner
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	isExcluded	Public		-
	isCharity	Public		-
	totalFees	Public		-
	totalBurn	Public		-
	totalCharity	Public		-
	deliver	Public	✓	-
	reflectionFromToken	Public		-
	tokenFromReflection	Public		-
	excludeAccount	External	✓	onlyOwner
	includeAccount	External	✓	onlyOwner
	setAsCharityAccount	External	✓	onlyOwner
	burn	Public	✓	-

	updateFee	Public	✓	onlyOwner
	_burn	Internal	✓	
	_approve	Private	✓	
	_transfer	Private	✓	
	_transferStandard	Private	✓	
	_standardTransferContent	Private	✓	
	_transferToExcluded	Private	✓	
	_excludedFromTransferContent	Private	✓	
	_transferFromExcluded	Private	✓	
	_excludedToTransferContent	Private	✓	
	_transferBothExcluded	Private	✓	
	_bothTransferContent	Private	✓	
	_reflectFee	Private	✓	
	_getValues	Private		
	_getTBasics	Private		
	getTTransferAmount	Private		
	_getRBasics	Private		
	_getRTransferAmount	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	_sendToCharity	Private	✓	
	removeAllFee	Private	✓	
	restoreAllFee	Private	✓	
	_getTaxFee	Private		

Contract Flow



Domain Info

Domain Name	legendsdogecoin.com
Registry Domain ID	2668712200_DOMAIN_COM-VRSN
Creation Date	2022-01-16T19:06:51Z
Updated Date	2022-01-16T19:08:32Z
Registry Expiry Date	
Registrar WHOIS Server	whois.launchpad.com
Registrar URL	LaunchPad.com
Registrar	Launchpad, Inc. (HostGator)
Registrar IANA ID	955

The domain has been created 2 days before the creation of the audit.

There is no public billing information, the creator is protected by the privacy settings.

Summary

The smart contract analysis reported 2 issues. There are some functions that can be abused by the owner, like manipulating fees and indirectly stopping the transactions. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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About Coinscope

CoinScope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

CoinScope is aiming to make crypto discoverable and efficient globally. It provides all the essential tools to assist users draw their own conclusions.



The Coinscope.co team

<https://www.coinscope.co>