

# Audit Report

DogeStar

February 2022

Type BEP20

Network BSC

Address 0x1F5722fB076659C1d199fCC88051962f4542Db99

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### **Contract Review**

Contract Name	DogeStar
Compiler Version	v0.8.9+commit.e5eed63a
Optimization	200 runs
Licence	
Explorer	https://bscscan.com/token/0x1F5722fB076659C1d199 fCC88051962f4542Db99
Symbol	DST
Decimals	9
Total Supply	1,000,000,000
Source	/contracts/DogeStar.sol
Domain	

### **Audit Updates**

Initial Audit	24th February 2022
Corrected	



### **Contract Analysis**

CriticalMediumMinorPass

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
•	ВТ	Contract Owner is not able to burn tokens from specific wallet
•	ВС	Contract Owner is not able to blacklist wallets from selling



### **Contract Diagnostics**

CriticalMediumMinor

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



#### L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L94,101,122,708

#### Description

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

getUnpaidEarnings
transferOwnership
unauthorize
authorize

#### Recommendation

Use the external attribute for functions never called from the contract.



#### L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L202,215,365,364,366,372,412,413,410,409 and 11 more

#### Description

Constant state variables should be declared constant to save gas.

tradingOpen
totalFee
reflectionFee
marketingFee
liquidityFee
feeDenominator
devFee
buybackMultiplierNumerator
buybackMultiplierLength
....

#### Recommendation

Add the constant attribute to state variables that never change.



## L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L137,240,329,193,202,672,679,684,696,704 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.

```
_allowances
_balances
_maxTxAmount
_totalSupply
_decimals
_symbol
_name
ZERO
DEAD
...
```

#### Recommendation

Follow the Solidity naming convention.

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



### L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L240,649,679,684

#### 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.

```
targetLiquidity = _target
swapThreshold = _amount
_maxTxAmount = amount
minPeriod = _minPeriod
```

#### Recommendation

Emit an event for critical parameter changes.



### **Contract Functions**

Contract	Туре	Bases		
	Function Name	Visibility	Mutability	Modifiers
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
IBEP20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Auth	Implementation			
	<constructor></constructor>	Public	✓	-
	authorize	Public	✓	onlyOwner
	unauthorize	Public	✓	onlyOwner
	isOwner	Public		-



	isAuthorized	Public		-
	transferOwnership	Public	✓	onlyOwner
IDEXFactory	Interface			
	createPair	External	✓	-
IDEXRouter	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	swapExactTokensForTokensSupporti ngFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupporting FeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupporting FeeOnTransferTokens	External	✓	-
IDividendDistri butor	Interface			
	setDistributionCriteria	External	✓	-
	setShare	External	1	-
	deposit	External	Payable	-
	process	External	✓	-
DividendDistri butor	Implementation	IDividendDis tributor		
	<constructor></constructor>	Public	1	-
	setDistributionCriteria	External	1	onlyToken
	setShare	External	1	onlyToken
	deposit	External	Payable	onlyToken
	process	External	1	onlyToken
	shouldDistribute	Internal		
	distributeDividend	Internal	1	
	claimDividend	External	<b>√</b>	onlyToken
	setRewardsToken	External	1	onlyToken
	getUnpaidEarnings	Public		-



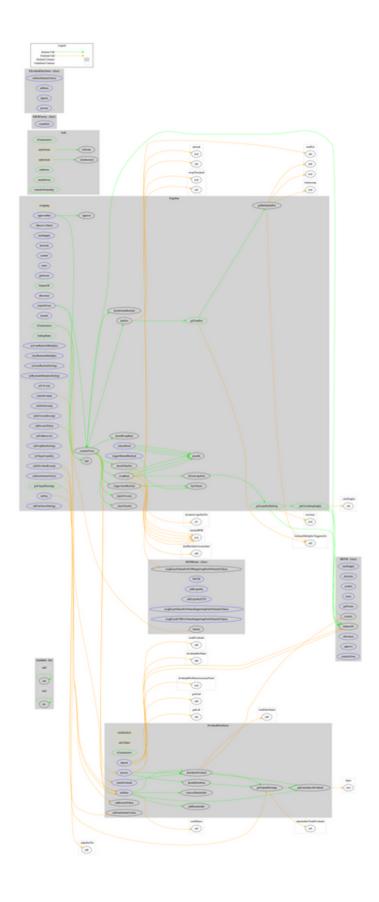
	getCumulativeDividends	Internal		
	addShareholder	Internal	1	
	removeShareholder	Internal	1	
DogeStar	Implementation	IBEP20, Auth		
	<constructor></constructor>	Public	1	Auth
	<receive ether=""></receive>	External	Payable	-
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	Public		-
	allowance	External		-
	approve	Public	1	-
	approveMax	External	1	-
	transfer	External	1	-
	transferFrom	External	1	-
	_transferFrom	Internal	1	
	_basicTransfer	Internal	1	
	checkTxLimit	Internal		
	shouldTakeFee	Internal		
	getTotalFee	Public		-
	getMultipliedFee	Public		-
	takeFee	Internal	1	
	shouldSwapBack	Internal		
	swapBack	Internal	1	swapping
	shouldAutoBuyback	Internal		
	triggerManualBuyback	External	1	authorized
	activateBuybackMultiplier	External	1	authorized
	clearBuybackMultiplier	External	1	authorized
	triggerAutoBuyback	Internal	1	
	buyTokens	Internal	1	swapping
	setTxLimit	External	1	authorized
	setIsDividendExempt	External	1	authorized



setIsFeeExempt       External       /       authorized         setIsTxLimitExempt       External       /       authorized         setFeeReceivers       External       /       authorized         setSwapBackSettings       External       /       authorized         setTargetLiquidity       External       /       authorized         manualSend       External       /       authorized         setDistributionCriteria       External       /       authorized         claimDividend       External       /       authorized         getRewardsToken       External       /       authorized         getUnpaidEarnings       Public       -         setDistributorSettings       External       /       authorized         getCirculatingSupply       Public       -         getLiquidityBacking       Public       -         isOverLiquified       Public       -				
setFeeReceivers       External       ✓       authorized         setSwapBackSettings       External       ✓       authorized         setTargetLiquidity       External       ✓       authorized         manualSend       External       ✓       authorized         setDistributionCriteria       External       ✓       authorized         claimDividend       External       ✓       -         setRewardsToken       External       ✓       authorized         getUnpaidEarnings       Public       -         setDistributorSettings       External       ✓       authorized         getCirculatingSupply       Public       -         getLiquidityBacking       Public       -	setIsFeeExempt	External	✓	authorized
setSwapBackSettings External	setIsTxLimitExempt	External	✓	authorized
setTargetLiquidity External  manualSend External  setDistributionCriteria External  claimDividend External  function  setRewardsToken External  getUnpaidEarnings Public  setDistributorSettings External  function  function  function  setDistributorSettings External  function  function	setFeeReceivers	External	✓	authorized
manualSend External ✓ authorized setDistributionCriteria External ✓ authorized  claimDividend External ✓ - setRewardsToken External ✓ authorized  getUnpaidEarnings Public - setDistributorSettings External ✓ authorized  getCirculatingSupply Public - getLiquidityBacking Public -	setSwapBackSettings	External	✓	authorized
setDistributionCriteria       External       ✓       authorized         claimDividend       External       ✓       -         setRewardsToken       External       ✓       authorized         getUnpaidEarnings       Public       -         setDistributorSettings       External       ✓       authorized         getCirculatingSupply       Public       -         getLiquidityBacking       Public       -	setTargetLiquidity	External	✓	authorized
claimDividend External ✓ - setRewardsToken External ✓ authorized getUnpaidEarnings Public - setDistributorSettings External ✓ authorized getCirculatingSupply Public - getLiquidityBacking Public -	manualSend	External	✓	authorized
setRewardsToken       External       ✓       authorized         getUnpaidEarnings       Public       -         setDistributorSettings       External       ✓       authorized         getCirculatingSupply       Public       -         getLiquidityBacking       Public       -	setDistributionCriteria	External	✓	authorized
getUnpaidEarnings Public - setDistributorSettings External ✓ authorized getCirculatingSupply Public - getLiquidityBacking Public -	claimDividend	External	✓	-
setDistributorSettings External ✓ authorized  getCirculatingSupply Public -  getLiquidityBacking Public -	setRewardsToken	External	✓	authorized
getCirculatingSupply Public - getLiquidityBacking Public -	getUnpaidEarnings	Public		-
getLiquidityBacking Public -	setDistributorSettings	External	✓	authorized
	getCirculatingSupply	Public		-
isOverLiquified Public -	getLiquidityBacking	Public		-
	isOverLiquified	Public		-



### **Contract Flow**





### Domain

Domain Name	dogestar.net			
Registry Domain ID				
Creation Date	2022-01-29T13:41:28Z			
Updated Date	2022-01-29T13:45:25Z			
Registry Expiry Date	2023-01-29T13:41:28Z			
Registrar WHOIS Server				
Registrar URL				
Registrar	LWS dba Ligne Web Services			
Registrar IANA ID	1630			
The domain has been created 20 days before the creation of the audit. It will expire				

The domain has been created 20 days before the creation of the audit. It will expire in 12 months.

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



### Summary

DogeStar Token is an interesting project with a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions.



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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

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