



Cyberscope

# Audit Report

## **Recruito**

February 2022

Type	BEP20
Network	BSC
Address	0x70D137DB682454B8F2af543Bf90acA0c6b6783C2
Audited by	© cyberscope

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## Contract Review

<b>Contract Name</b>	Recruito
<b>Compiler Version</b>	v0.8.7+commit.e28d00a7
<b>Optimization</b>	200 runs
<b>Licence</b>	MIT
<b>Explorer</b>	<a href="https://bscscan.com/token/0x70D137DB682454B8F2af543Bf90acA0c6b6783C2">https://bscscan.com/token/0x70D137DB682454B8F2af543Bf90acA0c6b6783C2</a>
<b>Symbol</b>	Recruito
<b>Decimals</b>	9
<b>Total Supply</b>	1,000,000,000
<b>Source</b>	contract.sol
<b>Domain</b>	recruitobsc.com

## Audit Updates

<b>Initial Audit</b>	28th February 2022
<b>Corrected</b>	

# 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

## ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	contract.sol#L730

### 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 `setFees` function with high percentage values.

```
function setFees(uint256 _liquidityFee, uint256 _buybackFee, uint256
_reflectionFee, uint256 _marketingFee, uint256 _feeDenominator) external
authorized {
    liquidityFee = _liquidityFee;
    buybackFee = _buybackFee;
    reflectionFee = _reflectionFee;
    marketingFee = _marketingFee;
    totalFee =
    _liquidityFee.add(_buybackFee).add(_reflectionFee).add(_marketingFee);
    feeDenominator = _feeDenominator;
    require(totalFee < feeDenominator/4);
}
```

### 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
●	L05	Unused State Variable
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination
●	L11	Unnecessary Boolean equality
●	L07	Missing Events Arithmetic

## L01 - Public Function could be Declared External

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L135,142,163,701

### Description

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

```
launch  
transferOwnership  
unauthorize  
authorize
```

### Recommendation

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



## L02 - State Variables could be Declared Constant

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L243,256,401,403,405,404,411

### Description

Constant state variables should be declared constant to save gas.

```
_totalSupply  
ZERO  
DEAD_NON_CHECKSUM  
DEAD  
BUSD  
dividendsPerShareAccuracyFactor  
WBNB
```

### Recommendation

Add the constant attribute to state variables that never change.

## L05 - Unused State Variable

**Criticality**

minor

**Location**

contract.sol#L401,405

### Description

There are segments that contain unused state variables.

```
DEAD_NON_CHECKSUM  
BUSD
```

### Recommendation

Remove unused state variables.

## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L178,281,234,242,243,681,730,740,745,750 and 25 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  
DEAD_NON_CHECKSUM  
ZERO  
...
```

### Recommendation

Follow the Solidity naming convention.

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

## L09 - Dead Code Elimination

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L697,79,68,86,11,38,45,26,19

### Description

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

```
trySub  
tryMul  
tryMod  
tryDiv  
tryAdd  
mod  
div  
launched
```

### Recommendation

Remove unused functions.

## L11 - Unnecessary Boolean equality

**Criticality**

minor

**Location**

contract.sol#L496

### Description

The comparison to boolean constants is redundant. Boolean constants can be used directly and do not need to be compared to true or false.

```
require(bool,string)(buyBacker[msg.sender] == true,)
```

### Recommendation

Remove the equality to the boolean constant.

## L07 - Missing Events Arithmetic

**Criticality**

minor

**Location**

contract.sol#L281,681,690,707,730,745,750

### 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
liquidityFee = _liquidityFee
_maxTxAmount = amount
buybackMultiplierNumerator = numerator
autoBuybackCap = _cap
minPeriod = _minPeriod
```

### Recommendation

Emit an event for critical parameter changes.

# Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>SafeMath</b>	Library			
	tryAdd	Internal		
	trySub	Internal		
	tryMul	Internal		
	tryDiv	Internal		
	tryMod	Internal		
	add	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	mod	Internal		
	sub	Internal		
	div	Internal		
	mod	Internal		
<b>IBEP20</b>	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>Auth</b>	Implementation			
	<Constructor>	Public	✓	-

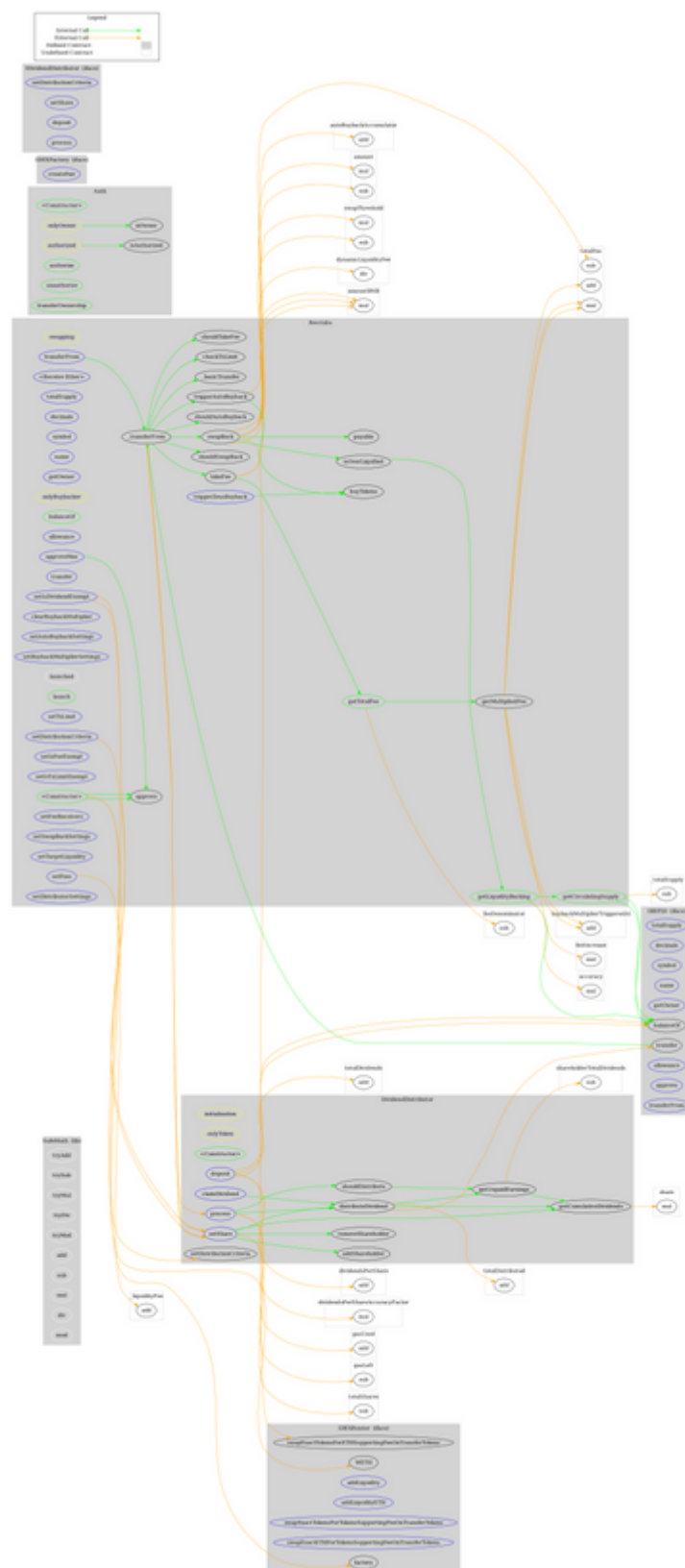
	authorize	Public	✓	onlyOwner
	unauthorize	Public	✓	onlyOwner
	isOwner	Public		-
	isAuthorized	Public		-
	transferOwnership	Public	✓	onlyOwner
<b>IDEXFactory</b>	Interface			
	createPair	External	✓	-
<b>IDEXRouter</b>	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
<b>IDividendDistributor</b>	Interface			
	setDistributionCriteria	External	✓	-
	setShare	External	✓	-
	deposit	External	Payable	-
	process	External	✓	-
<b>DividendDistributor</b>	Implementation	IDividendDistributor		
	<Constructor>	Public	✓	-
	setDistributionCriteria	External	✓	onlyToken
	setShare	External	✓	onlyToken
	deposit	External	Payable	onlyToken
	process	External	✓	onlyToken
	shouldDistribute	Internal		
	distributeDividend	Internal	✓	



	claimDividend	External	✓	-
	getUnpaidEarnings	Public		-
	getCumulativeDividends	Internal		
	addShareholder	Internal	✓	
	removeShareholder	Internal	✓	
<b>Recruito</b>	Implementation	IBEP20, Auth		
	<Constructor>	Public	✓	Auth
	<Receive Ether>	External	Payable	-
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	Public		-
	allowance	External		-
	approve	Public	✓	-
	approveMax	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	_transferFrom	Internal	✓	
	_basicTransfer	Internal	✓	
	checkTxLimit	Internal		
	shouldTakeFee	Internal		
	getTotalFee	Public		-
	getMultipliedFee	Public		-
	takeFee	Internal	✓	
	shouldSwapBack	Internal		
	swapBack	Internal	✓	swapping
	shouldAutoBuyback	Internal		
	triggerZeusBuyback	External	✓	authorized
	clearBuybackMultiplier	External	✓	authorized
	triggerAutoBuyback	Internal	✓	
	buyTokens	Internal	✓	swapping
	setAutoBuybackSettings	External	✓	authorized

	setBuybackMultiplierSettings	External	✓	authorized
	launched	Internal		
	launch	Public	✓	authorized
	setTxLimit	External	✓	authorized
	setIsDividendExempt	External	✓	authorized
	setIsFeeExempt	External	✓	authorized
	setIsTxLimitExempt	External	✓	authorized
	setFees	External	✓	authorized
	setFeeReceivers	External	✓	authorized
	setSwapBackSettings	External	✓	authorized
	setTargetLiquidity	External	✓	authorized
	setDistributionCriteria	External	✓	authorized
	setDistributorSettings	External	✓	authorized
	getCirculatingSupply	Public		-
	getLiquidityBacking	Public		-
	isOverLiquified	Public		-

# Contract Flow



## Domain Info

<b>Domain Name</b>	recruitobsc.com
<b>Registry Domain ID</b>	2674177212_DOMAIN_COM-VRSN
<b>Creation Date</b>	2022-02-10T11:23:39Z
<b>Updated Date</b>	2022-02-10T11:23:39Z
<b>Registry Expiry Date</b>	2023-02-10T11:23:39Z
<b>Registrar WHOIS Server</b>	whois.godaddy.com
<b>Registrar URL</b>	<a href="http://www.godaddy.com">http://www.godaddy.com</a>
<b>Registrar</b>	GoDaddy.com, LLC
<b>Registrar IANA ID</b>	146

The domain has been created 18 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

Recruito aims to be a platform for job seekers and recruiters in crypto space. The Project has a friendly and growing community. The Smart Contract analysis reported no compiler errors and only 1 critical issue. The contract owner can set fees up to 100%. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

## Disclaimer

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment.

Cyberscope team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed.

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The Cyberscope team disclaims any liability for the resulting losses.

## About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Cyberscope 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.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>