



Cyberscope

Audit Report

COLLIE INU

August 2022

SHA256 0c3a670e55198b54264da7d922f9d1aa721709b33435bf717a1ce0288a4979c1

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Table of Contents

Table of Contents	1
Contract Review	3
Source Files	3
Audit Updates	3
Contract Analysis	4
ULTW - Unlimited Liquidity to Team Wallet	5
Description	5
Recommendation	5
Contract Diagnostics	6
STC - Succeeded Transfer Check	7
Description	7
Recommendation	7
CR - Code Repetition	8
Description	8
Recommendation	8
L01 - Public Function could be Declared External	9
Description	9
Recommendation	9
L02 - State Variables could be Declared Constant	10
Description	10
Recommendation	10
L04 - Conformance to Solidity Naming Conventions	11
Description	11
Recommendation	11
L05 - Unused State Variable	12
Description	12

Recommendation	12
L07 - Missing Events Arithmetic	13
Description	13
Recommendation	13
L08 - Tautology or Contradiction	14
Description	14
Recommendation	14
L09 - Dead Code Elimination	15
Description	15
Recommendation	15
L13 - Divide before Multiply Operation	16
Description	16
Recommendation	16
L15 - Local Scope Variable Shadowing	17
Description	17
Recommendation	17
Contract Functions	18
Contract Flow	23
Domain Info	24
Summary	25
Disclaimer	26
About Cyberscope	27

Contract Review

Contract Name	Collielnu
Compiler Version	v0.8.9+commit.e5eed63a
Testing Deploy	https://testnet.bscscan.com/token/0x1292093C82090307014cBab5abb3e2c4441b1969
Symbol	COLLIE
Decimals	18
Total Supply	1,000,000,000,000
Domain	collieinu.net

Source Files

Filename	SHA256
contract.sol	0c3a670e55198b54264da7d922f9d1aa721709b33435bf717a1ce0288a4979c1

Audit Updates

Initial Audit	14th August 2022
Corrected	17th August 2022

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

ULTW - Unlimited Liquidity to Team Wallet

Criticality	minor
Location	contract.sol#L1096,1101

Description

The contract owner has the authority to transfer funds without limit to the team wallet. These funds have been accumulated from fees collected from the contract. The owner may take advantage of it by calling the `rescueBNB` and `rescueAnyBEP20Tokens` methods.

```
function rescueBNB(uint256 weiAmount) external onlyOwner{
    require(address(this).balance >= weiAmount, "insufficient BNB balance");
    payable(msg.sender).transfer(weiAmount);
}

function rescueAnyBEP20Tokens(address _tokenAddr, address _to, uint _amount)
public onlyOwner {
    IERC20(_tokenAddr).transfer(_to, _amount);
}
```

Recommendation

The contract could embody a check for the maximum amount of funds that can be transferred.

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
●	STC	Succeeded Transfer Check
●	CR	Code Repetition
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L05	Unused State Variable
●	L07	Missing Events Arithmetic
●	L08	Tautology or Contradiction
●	L09	Dead Code Elimination
●	L13	Divide before Multiply Operation
●	L15	Local Scope Variable Shadowing

STC - Succeeded Transfer Check

Criticality	minor
Location	contract.sol#L1286,1294

Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

```
(success,) = address(devWallet).call{value: ethForDev}("");  
(success,) = address(marketingWallet).call{value: address(this).balance}("");
```

Recommendation

The contract should check if the result of the transfer methods is successful.

CR - Code Repetition

Criticality	minor
Location	contract.sol#L1194

Description

There are code segments that are repetitive in the contract. Those segments increase the code size of the contract unnecessarily.

The sell and buy calculations share the same functionality.

```
fees = amount.mul(sellTotalFees).div(100);
tokensForLiquidity += fees * sellLiquidityFee / sellTotalFees;
tokensForDev += fees * sellDevFee / sellTotalFees;
tokensForMarketing += fees * sellMarketingFee / sellTotalFees;
```

Recommendation

Create an internal function that contains the code segment and remove it from all the sections.

L01 - Public Function could be Declared External

Criticality

minor

Location

contract.sol#L1067,303,643,240,344,1091,223,266,325,652,215,285,1101,274

Description

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

```
allowance
rescueAnyBEP20Tokens
approve
name
transferOwnership
increaseAllowance
transfer
symbol
isExcludedFromFees
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L886,887

Description

Constant state variables should be declared constant to save gas.

```
lastManualBurnTime  
manualBurnFrequency
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality

minor

Location

contract.sol#L1297,1101,927,1054,1046,870,42,59,41,915,732,929

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.

```
_liquidityFee  
devWalletUpdated  
WETH  
_marketingFee  
_isExcludedMaxTransactionAmount  
_frequencyInSeconds  
_percent  
DOMAIN_SEPARATOR  
MINIMUM_LIQUIDITY  
...
```

Recommendation

Follow the Solidity naming convention.

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

L05 - Unused State Variable

Criticality

minor

Location

contract.sol#L663

Description

There are segments that contain unused state variables.

```
MAX_INT256
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality

minor

Location

contract.sol#L1032,1297,1054,1046,1027,1020

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.

```
swapTokensAtAmount = newAmount
maxTransactionAmount = newNum * (10 ** 18)
buyMarketingFee = _marketingFee
sellMarketingFee = _marketingFee
lpBurnFrequency = _frequencyInSeconds
maxWallet = newNum * (10 ** 18)
```

Recommendation

Emit an event for critical parameter changes.

L08 - Tautology or Contradiction

Criticality

minor

Location

contract.sol#L1297

Description

Detects expressions that are tautologies or contradictions. For instance, an uint variable will always be greater than or equal to zero.

```
require(bool,string)(_percent <= 1000 && _percent >= 0, Must set auto LP burn percent between 0% and 10%)
```

Recommendation

Fix the incorrect comparison by changing the value type or the comparison.

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L709,722,408,715

Description

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

```
toUint256Safe  
_burn  
toInt256Safe  
abs
```

Recommendation

Remove unused functions.

L13 - Divide before Multiply Operation

Criticality

minor

Location

contract.sol#L1108

Description

Performing divisions before multiplications may cause lose of prediction.

```
tokensForDev += fees * sellDevFee / sellTotalFees
fees = amount.mul(buyTotalFees).div(100)
tokensForMarketing += fees * sellMarketingFee / sellTotalFees
tokensForLiquidity += fees * sellLiquidityFee / sellTotalFees
```

Recommendation

The multiplications should be prior to the divisions.

L15 - Local Scope Variable Shadowing

Criticality

minor

Location

contract.sol#L960

Description

There are variables that are defined in the local scope containing the same name from an upper scope.

```
totalSupply
```

Recommendation

The local variables should have different names from the upper scoped variables.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
IUniswapV2Pair	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	✓	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	✓	-
	burn	External	✓	-

	swap	External	✓	-
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	✓	-
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IERC20Metadata	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
ERC20	Implementation	Context, IERC20, IERC20Metadata		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-

	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		

	add	Internal		
	abs	Internal		
	toUint256Safe	Internal		
SafeMathUint	Library			
	toInt256Safe	Internal		
IUniswapV2Router01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Router02	Interface	IUniswapV2 Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-

	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
Collielnu	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	enableTrading	External	✓	onlyOwner
	removeLimits	External	✓	onlyOwner
	disableTransferDelay	External	✓	onlyOwner
	updateSwapTokensAtAmount	External	✓	onlyOwner
	updateMaxTxnAmount	External	✓	onlyOwner
	updateMaxWalletAmount	External	✓	onlyOwner
	excludeFromMaxTransaction	Public	✓	onlyOwner
	updateSwapEnabled	External	✓	onlyOwner
	updateBuyFees	External	✓	onlyOwner
	updateSellFees	External	✓	onlyOwner
	excludeFromFees	Public	✓	onlyOwner
	setAutomatedMarketMakerPair	Public	✓	onlyOwner
	_setAutomatedMarketMakerPair	Private	✓	
	updateMarketingWallet	External	✓	onlyOwner
	updateDevWallet	External	✓	onlyOwner
	isExcludedFromFees	Public		-
	rescueBNB	External	✓	onlyOwner
	rescueAnyBEP20Tokens	Public	✓	onlyOwner
	_transfer	Internal	✓	
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	swapBack	Private	✓	
	setAutoLPBurnSettings	External	✓	onlyOwner
	autoBurnLiquidityPairTokens	Internal	✓	

Contract Flow



Domain Info

Domain Name	collieinu.net
Registry Domain ID	2715570708_DOMAIN_NET-VRSN
Creation Date	2022-08-02T19:01:52Z
Updated Date	2022-08-02T21:03:35Z
Registry Expiry Date	2023-08-02T19:01:52Z
Registrar WHOIS Server	whois.launchpad.com
Registrar URL	LaunchPad.com
Registrar	Launchpad, Inc. (HostGator)
Registrar IANA ID	955

The domain has been created in 12 months 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 one minor severity issue. Other than that, the contract owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. The fees can be set up to 20% for buys and 25% for sales.

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About Cyberscope

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

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.

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



The Cyberscope team

<https://www.cyberscope.io>