Cyberscope

Audit Report

Vacuum

December 2022

Type	BEP20
Network	BSC
Address	0xD322061C9dF01778874df6a2D1d1A8fB728806f7
Audited by	© cyberscope

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Contract Review

Contract Name	VacuumCoin
Compiler Version	v0.8.17+commit.8df45f5f
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0xD322061C9dF01778874df6a2D1d1A8fB728806f7#code
Symbol	VC
Decimals	9
Total Supply	299,792,458
Domain	vacuum.ltd

Source Files

Filename	**SHA256**
contract.sol	de3193370e53deff67b1b99e88416c28cf4d402127a8dcd2375e62708495e830

Audit Updates

Initial Audit	7th November 2022 https://github.com/cyberscope-io/audits/blob/main/1-vc/v1/audit.pdf
Corrected Phase 1	23rd November 2022 https://github.com/cyberscope-io/audits/blob/main/1-vc/v2/audit.pdf
Corrected Phase 2	25th November 2022 https://github.com/cyberscope-io/audits/blob/main/1-vc/v3/audit.pdf
Corrected Phase 3	29th November 2022 https://github.com/cyberscope-io/audits/blob/main/1-vc/v4/audit.pdf
Corrected Phase 4	2nd December 2022

Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OCTD	Transfers Contract's Tokens	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	ULTW	Transfers Liquidity to Team Wallet	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Contract Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
●	PVC	Price Volatility Concern	Unresolved
●	RSML	Redundant SafeMath Library	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L07	Missing Events Arithmetic	Unresolved

PVC - Price Volatility Concern

Criticality	minor / informative
Location	contract.sol#L684
Status	Unresolved

Description

The _minTokenBalance could produce a dramatically price volatility. If the variable set to a high number, then the contract will sell a huge amount of tokens in a single transaction.

```
function setMinimumTokenBalance (uint256 minimumToken) external onlyOwner {
    _minTokenBalance = minimumToken;
}
```

Recommendation

The contract could ensure that it will not sell more than a reasonable amount of tokens once. A suggested implementation could check that the maximum amount should be less than a fixed percentage of the total supply.

RSML - Redundant SafeMath Library

Criticality	minor / informative
Location	contract.sol#L15
Status	Unresolved

Description

The Solidity versions that are greater than or equal to 0.8.0 do not need the use of SafeMath Library. The usage of the SafeMath library produces unnecessary additional gas.

```
library SafeMath {
...
}
```

Recommendation

The team is advised to remove the SafeMath library as it is safe to do math operations without it.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor / informative
Location	contract.sol#L511,507,501,527,322,339,321,508,526,504,525,359,506
Status	Unresolved

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.

```
_tTotal
_symbol
_isExcludedFromAutoLiquidity
_uniswapV2Pair
PERMIT_TYPEHASH
MINIMUM_LIQUIDITY
DOMAIN_SEPARATOR
_decimals
_uniswapV2Router
...
```

Recommendation

Follow the Solidity naming convention.
https://docs.soliditylang.org/en/v0.8.17/style-guide.html#naming-conventions.

L07 - Missing Events Arithmetic

Criticality	minor / informative
Location	contract.sol#L691,701,706,684,696,711
Status	Unresolved

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.

```
taxFee = amount
percentageOfLiquidityForMarketing = marketingFee
maxWalletToken = amount
_minTokenBalance = minimumToken
liquidityFee = amount
maxTxAmount = amount
```

Recommendation

Emit an event for critical parameter changes.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IBEP20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
SafeMath	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		
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-

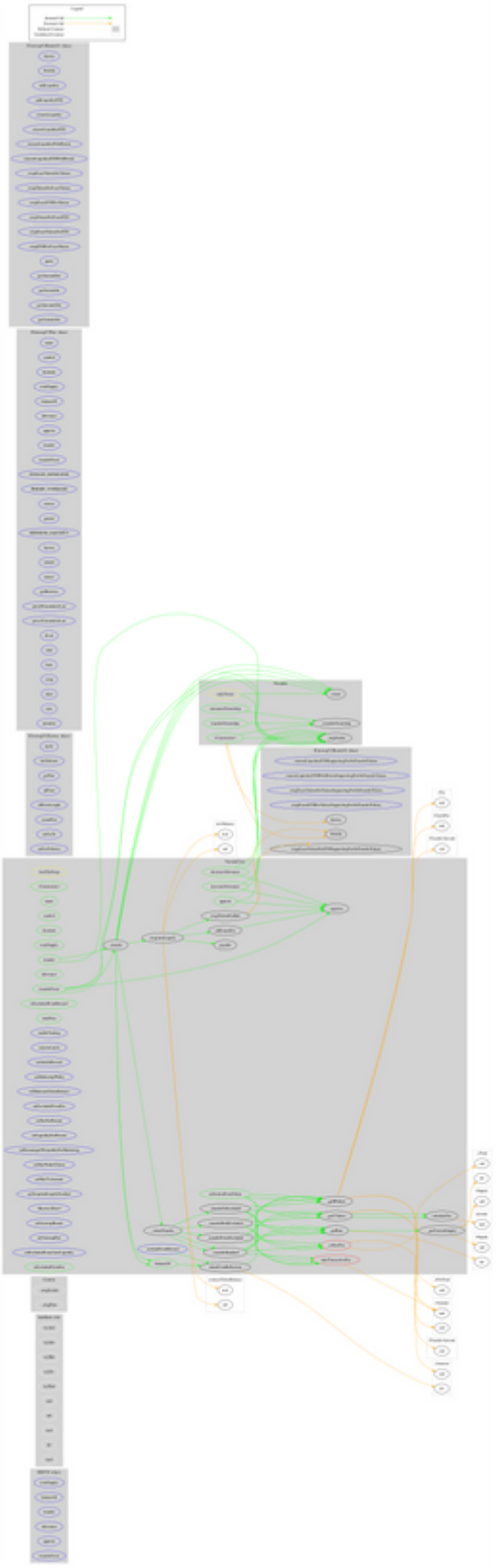
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
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	✓	-
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	✓	-
VacuumCoin	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	isExcludedFromReward	Public		-
	totalFees	Public		-
	reflectionFromToken	Public		-
	tokenFromReflection	Public		-
	enableTrading	External	✓	onlyOwner
	removeLimits	External	✓	onlyOwner
	excludeFromReward	External	✓	onlyOwner
	includeInReward	External	✓	onlyOwner
	setMarketingWallet	External	✓	onlyOwner
	setMinimumTokenBalance	External	✓	onlyOwner
	setExcludedFromFee	External	✓	onlyOwner
	setTaxFeePercent	External	✓	onlyOwner
	setLiquidityFeePercent	External	✓	onlyOwner

	setPercentageOfLiquidityForMarketing	External	✓	onlyOwner
	setMaxWalletTokens	External	✓	onlyOwner
	setMaxTxAmount	External	✓	onlyOwner
	setSwapAndLiquifyEnabled	External	✓	onlyOwner
	<Receive Ether>	External	Payable	-
	setUniswapRouter	External	✓	onlyOwner
	setUniswapPair	External	✓	onlyOwner
	setExcludedFromAutoLiquidity	External	✓	onlyOwner
	_reflectFee	Private	✓	
	_getTValues	Private		
	_getRValues	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	takeTransactionFee	Private	✓	
	calculateFee	Private		
	isExcludedFromFee	Public		-
	_approve	Private	✓	
	_transfer	Private	✓	
	swapAndLiquify	Private	✓	lockTheSwap
	swapTokensForBnb	Private	✓	
	addLiquidity	Private	✓	
	_tokenTransfer	Private	✓	
	_transferStandard	Private	✓	
	_transferBothExcluded	Private	✓	
	_transferToExcluded	Private	✓	
	_transferFromExcluded	Private	✓	

Contract Flow



Domain Info

Domain Name	vacuum.ltd
Registry Domain ID	953ba04742b4447ca62fb390dcaa9482-DONUTS
Creation Date	2022-08-12T09:22:39Z
Updated Date	2022-08-17T09:22:40Z
Registry Expiry Date	2023-08-12T09:22:39Z
Registrar WHOIS Server	whois.godaddy.com/
Registrar URL	http://www.godaddy.com/domains/search.aspx?ci=8990
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

The domain was created 4 months before the creation of the audit. It will expire in 8 months.

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

Summary

Vacuum is an interesting project that has 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. There is also a limit of max 6% fees.

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.

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