Cyberscope

Audit Report

Sito Cash

November 2022

Type	BEP20
Network	BSC
Address	0x0bceb787efb7ec5a2573dab1363059118737d68f
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	SitoCash
Compiler Version	v0.8.10+commit.fc410830
Optimization	200 runs
Licence	Unlicense
Explorer	https://bscscan.com/token/0x0bceb787efb7ec5a2573dab1363059118737d68f
Symbol	SICASH
Decimals	18
Total Supply	10,000,000
Domain	sitocash.com

Source Files

Filename	**SHA256**
contract.sol	0666970c6761d172777ba8110a07db7aa60b8c660e29e2aa43d8d1ea73c21b7a

Audit Updates

Initial Audit	21st November 2022
Corrected	

Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Unresolved
●	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

ST - Stops Transactions

Criticality	critical
Location	contract.sol#L759,880
Status	Unresolved

Description

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

```
function setMaxWalletTokens(uint256 _maxToken) external onlyOwner {
  maxWalletToken = _maxToken ;
}

.....

uint256 contractBalanceRecepient = balanceOf(to);
require(
  contractBalanceRecepient + amount <= maxWalletToken,
  "Exceeds maximum wallet token amount."
);
```

Recommendation

The contract could embody a check for not allowing setting the maxWalletToken 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.

Contract Diagnostics

● Critical ● Medium ● Minor / Informative

Severity	Code	Description	Status
●	RVO	Ratio Value Overflow	Unresolved
●	RSML	Redundant SafeMath Library	Unresolved
●	L02	State Variables could be Declared Constant	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L05	Unused State Variable	Unresolved
●	L07	Missing Events Arithmetic	Unresolved
●	L09	Dead Code Elimination	Unresolved

RVO - Ratio Value Overflow

Criticality	Critical
Location	contract.sol#L930
Status	Unresolved

Description

The contract could revert the transaction if the `_percentageOfLiquidityForMarketing` is more than 100.

```
uint256 marketingFee          =
newBalance.mul(_percentageOfLiquidityForMarketing).div(100);
uint256 bnbForLiquidity = newBalance.sub(marketingFee);
```

Recommendation

The `_percentageOfLiquidityForMarketing` should not be able to set more than 100.

RSML - Redundant SafeMath Library

Criticality	minor / informative
Location	contract.sol#L21
Status	Unresolved

Description

Solidity versions greater than or equal to 0.8.0 no longer need the use of SafeMath Library. As a result, the contract produces more gas from the additional calls.

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

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor / informative
Location	contract.sol#L307,563,561,557,308,562
Status	Unresolved

Description

Constant state variables should be declared constant to save gas.

```
_previousOwner
_decimals
_name
_tTotal
_lockTime
_symbol
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor / informative
Location	contract.sol#L573,567,579,551,554,372,389,565,577,371,578,580,409,759,566
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.

```
_maxTxAmount
_percentageOfLiquidityForMarketing
_uniswapV2Router
_isExcludedFromAutoLiquidity
_marketingWallet
PERMIT_TYPEHASH
MINIMUM_LIQUIDITY
_taxFee
_swapAndLiquifyEnabled
...
```

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 / informative
Location	contract.sol#L224,307,308
Status	Unresolved

Description

There are segments that contain unused state variables.

```
MAX_INT256
_previousOwner
_lockTime
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality	minor / informative
Location	contract.sol#L751,739,759,756,746
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.

```
_liquidityFee = liquidityFee
_minTokenBalance = minimumToken
maxWalletToken = _maxToken
_percentageOfLiquidityForMarketing = marketingFee
_taxFee = taxFee
```

Recommendation

Emit an event for critical parameter changes.

L09 - Dead Code Elimination

Criticality	minor / informative
Location	contract.sol#L270,283,276
Status	Unresolved

Description

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

```
abs
toInt256Safe
toUint256Safe
```

Recommendation

Remove unused functions.

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		
SafeMathInt	Library			
	mul	Internal		
	div	Internal		
	sub	Internal		
	add	Internal		
	abs	Internal		

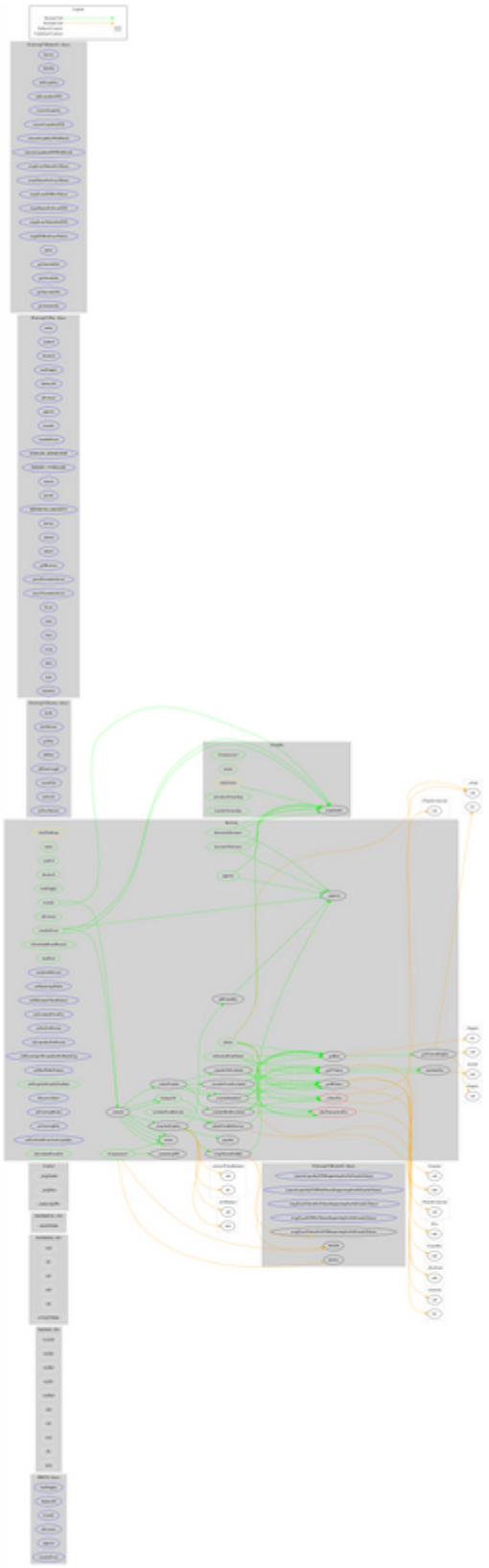
	toUint256Safe	Internal		
SafeMathUint	Library			
	toInt256Safe	Internal		
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
	_marketingWlt	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
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	IUniswapV2Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
SitoCash	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	Ownable
	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		-
	deliver	Public	✓	-

	reflectionFromToken	Public		-
	tokenFromReflection	Public		-
	excludeFromReward	Public	✓	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
	setSwapAndLiquifyEnabled	Public	✓	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	
Registry Domain ID	2725196292_DOMAIN_COM-VRSN
Creation Date	2022-09-14T04:49:50.00Z
Updated Date	0001-01-01T00:00:00.00Z
Registry Expiry Date	2025-09-14T04:49:50.00Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	http://www.namecheap.com
Registrar	NAMECHEAP INC
Registrar IANA ID	1068

The domain was created 2 months before the creation of the audit. It will expire in almost 3 years.

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

Summary

The Smart Contract analysis reported one critical severity issue. The contract owner has the authority to stop transactions. The contract can be converted into a honeypot and prevent users from selling if the owner abuses the admin functions. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats. There is also a limit of max 4% fees.

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Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.

The Cyberscope team

https://www.cyberscope.io