Cyberscope

Audit Report

Socalnu

July 2022

Type	BEP20
Network	BSC
Address	0x6843E5d8ee173887e740EcD481A56c083AC38439
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	Socalnu
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x6843E5d8ee173887e740EcD481A56c083AC38439
Symbol	Sinu
Decimals	9
Total Supply	100,000,000,000
Domain	https://www.socainu.club

Source Files

Filename	**SHA256**
contract.sol	56e5504c600003ab80f42460cfbd52168cd51575235d70efae6da4d8612ac652

Audit Updates

Initial Audit	26th July 2022
Corrected	

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

OCTD - Owner Contract Tokens Drain

Criticality	minor
Location	contract.sol#L310

Description

The contract owner has the authority to claim all the balance of the contract. The owner may take advantage of it by calling the tokensRescued function.

```
event tokensRescued(address indexed token, address indexed to, uint amount);
function rescueForeignTokens(address _tokenAddr, address _to, uint _amount) public onlyDev() {
    emit tokensRescued(_tokenAddr, _to, _amount);
    Token(_tokenAddr).transfer(_to, _amount);
}
```

Recommendation

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.

ULTW - Unlimited Liquidity to Team Wallet

Criticality	minor
Location	contract.sol#L385,L391

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 manualswap and manualsend methods.

```
function manualswap() external {
    require(_msgSender() == _developmentAddress || _msgSender() == _marketingAddress ||
_msgSender() == owner());
    uint256 contractBalance = balanceOf(address(this));
    swapTokensForEth(contractBalance);
}

function manualsend() external {
    require(_msgSender() == _developmentAddress || _msgSender() == _marketingAddress ||
_msgSender() == owner());
    uint256 contractETHBalance = address(this).balance;
    sendETHToFee(contractETHBalance);
}
```

Recommendation

The contract could embody a check for the maximum amount of funds that can be swapped. Since a huge amount may volatile the token's price.

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
●	FSA	Fixed Swap Address
●	CO	Code Optimization
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L05	Unused State Variable

STC - Succeeded Transfer Check

Criticality	minor
Location	contract.sol#L300

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.

```
function sendETHToFee(uint256 amount) private {
    _developmentAddress.transfer(amount.div(2));
    _marketingAddress.transfer(amount.div(2));
}
```

Recommendation

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

FSA - Fixed Swap Address

Criticality	minor
Location	contract.sol#L179

Description

The swap address is assigned once in the constructor and it can not be changed. The decentralized swaps sometimes create a new swap version or abandon the current. A contract that cannot change the swap address may not be able to catch-up the upgrade.

```
constructor () {
        _rOwned[_msgSender()] = _rTotal;

        IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x10ED43C718714eb63d5aA57B78B54704E256024E);
        uniswapV2Router = _uniswapV2Router;
        uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory())
            .createPair(address(this), _uniswapV2Router.WETH());
```

Recommendation

It could be better to allow the swap address mutation in case of future swap updates.

CO - Code Optimization

Criticality	minor
Location	contract.sol#L305

Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

This code segment can be optimized. The methods _tokenTransfer and _transferStandard can be merged.

```
function _tokenTransfer(address sender, address recipient, uint256 amount) private {
        _transferStandard(sender, recipient, amount);
 }
```

Recommendation

Rewrite some code segments so the runtime will be more performant.

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L210,312,215,116,198,408,224,202,194,190,404,122,319,219,393,306

Description

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

```
rescueForeignTokens
setFee
approve
setNewMarketingAddress
transferOwnership
toggleSwap
name
symbol
totalSupply
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L99

Description

Constant state variables should be declared constant to save gas.

```
_previousOwner
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L306,318,404,153,40,152,305,138,311,151

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.

```
_name
devAddressUpdated
_tTotal
tokensRescued
_tokenAddr
_symbol
WETH
_decimals
_swapEnabled
...
```

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#L133,99

Description

There are segments that contain unused state variables.

```
_previousOwner
_tOwned
```

Recommendation

Remove unused state variables.

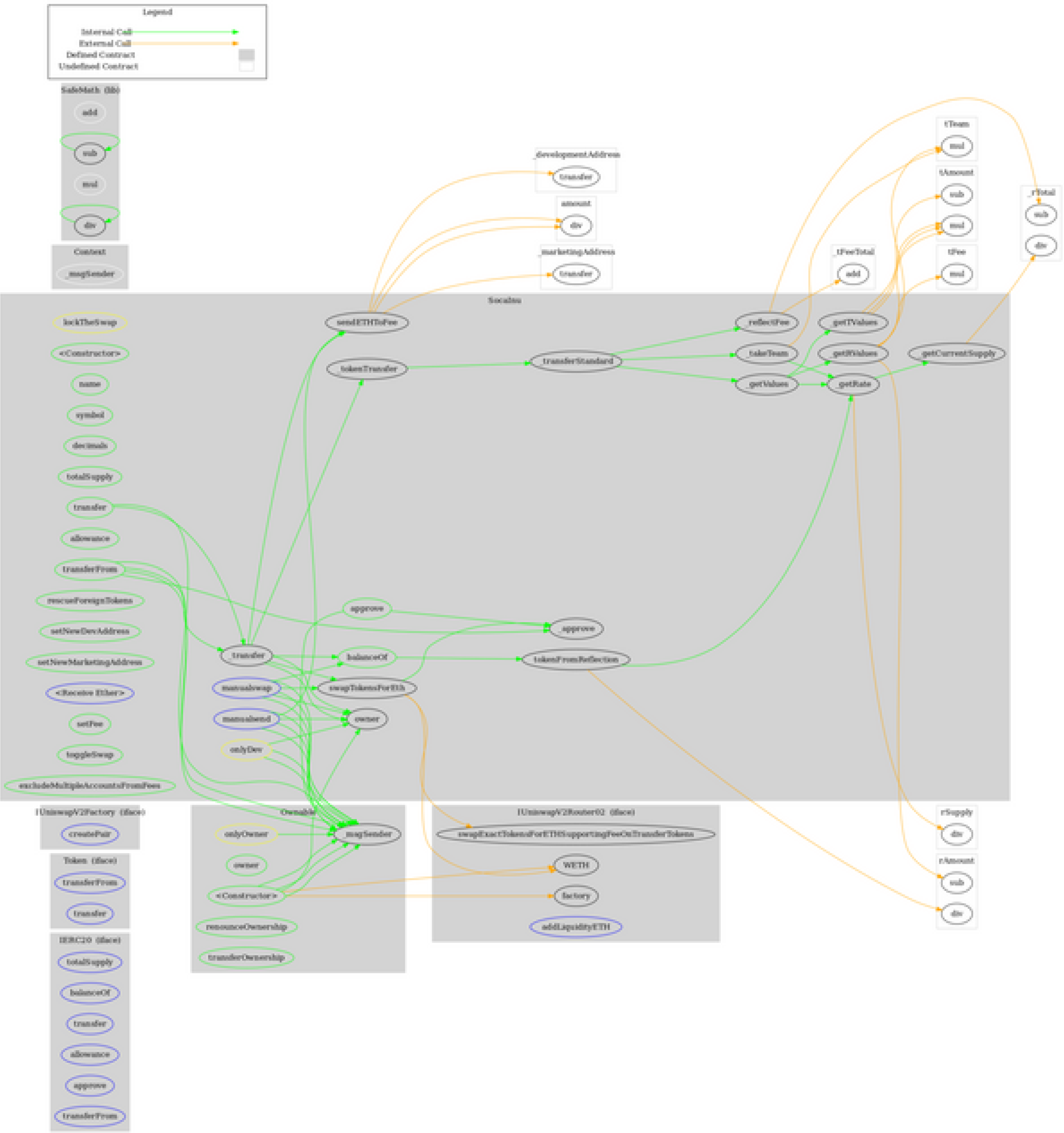
Contract Functions

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Token	Interface			
	transferFrom	External	✓	-
	transfer	External	✓	-
IUniswapV2Factory	Interface			
	createPair	External	✓	-
IUniswapV2Router02	Interface			
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
	factory	External		-
	WETH	External		-
	addLiquidityETH	External	Payable	-
Context	Implementation			
	_msgSender	Internal		
SafeMath	Library			
	add	Internal		
	sub	Internal		

	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
SocaInu	Implementation	Context, IERC20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	tokenFromReflection	Private		
	_approve	Private	✓	
	_transfer	Private	✓	
	swapTokensForEth	Private	✓	lockTheSwap
	sendETHToFee	Private	✓	
	_tokenTransfer	Private	✓	
	rescueForeignTokens	Public	✓	onlyDev
	setNewDevAddress	Public	✓	onlyDev
	setNewMarketingAddress	Public	✓	onlyDev
	_transferStandard	Private	✓	
	_takeTeam	Private	✓	

	_reflectFee	Private	✓	
	<Receive Ether>	External	Payable	-
	_getValues	Private		
	_getTValues	Private		
	_getRValues	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	manualswap	External	✓	-
	manualsend	External	✓	-
	setFee	Public	✓	onlyDev
	toggleSwap	Public	✓	onlyDev
	excludeMultipleAccountsFromFees	Public	✓	onlyOwner

Contract Flow



Domain Info

Domain Name	socainu.club
Registry Domain ID	D2A18D5D1E7E748CBAB989E527134C585-GDREG
Creation Date	2022-07-18T15:02:01Z
Updated Date	2022-07-23T15:02:02Z
Registry Expiry Date	2023-07-18T15:02:01Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	http://www.namecheap.com
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

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

There are some functions that can be abused by the owner like transferring tokens to the team’s wallet and transferring funds to the team’s wallet. 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 max fee limit of 16%.

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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