Cyberscope

Audit Report

Minionsinu

June 2022

Type	BEP20
Network	BSC
Address	0x738fb8c90372abaac2371930a774c3bd8ac9a63f
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	MinionsInu
Compiler Version	v0.8.15+commit.e14f2714
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x738Fb8c90372aBaAc2371930A774C3BD8Ac9A63F
Symbol	STE
Decimals	18
Total Supply	99,999,999,999
Domain	https://v2.minionsinu.com/

Source Files

Filename	**SHA256**
contract.sol	f8c6e4b368d59fb2dd1201e3ff98e8ab2a2294671ac895be497b9457b8f60efd

Audit Updates

Initial Audit	24th June 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

OTUT - Owner Transfer User's Tokens

Criticality	minor
Location	contract.sol#L307

Description

The contract owner has the authority to transfer the balance of a user’s contract to the owner’s contract. The owner may take advantage of it by calling the `rescueForeignTokens` function.

```
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#L388

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 `manualsend` and `manualswap` methods.

```
function manualsend() external {
        require(_msgSender() == _developmentAddress || _msgSender() == _charitableAddress ||
_msgSender() == owner());
        uint256 contractETHBalance = address(this).balance;
        sendETHToFee(contractETHBalance);
}
function manualswap() external {
        require(_msgSender() == _developmentAddress || _msgSender() == _charitableAddress ||
_msgSender() == owner());
        uint256 contractBalance = balanceOf(address(this));
        swapTokensForEth(contractBalance);
}
```

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
	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

FSA - Fixed Swap Address

Criticality	minor
Location	contract.sol#L173

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.

```
IUniswapV2Router02 _uniswapV2Router =
IUniswapV2Router02(0x10ED43C718714eb63d5aA57B78B54704E256024E);
```

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#L1

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. The function `_tokenTransfer` can be removed.

```
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#L191,113,212,316,221,303,309,216,119,401,405,195,390,199,207,187

Description

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

```
name
transfer
totalSupply
setFee
decimals
excludeMultipleAccountsFromFees
toggleSwap
transferOwnership
approve
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L96

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#L308,316,303,401,302,37,148,315,150,149

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.

```
_to
_symbol
_decimals
charitableAddressUpdated
_amount
_name
WETH
tokensRescued
_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#L130,96

Description

There are segments that contain unused state variables.

```
_previousOwner
_tOwned
```

Recommendation

Remove unused state variables.

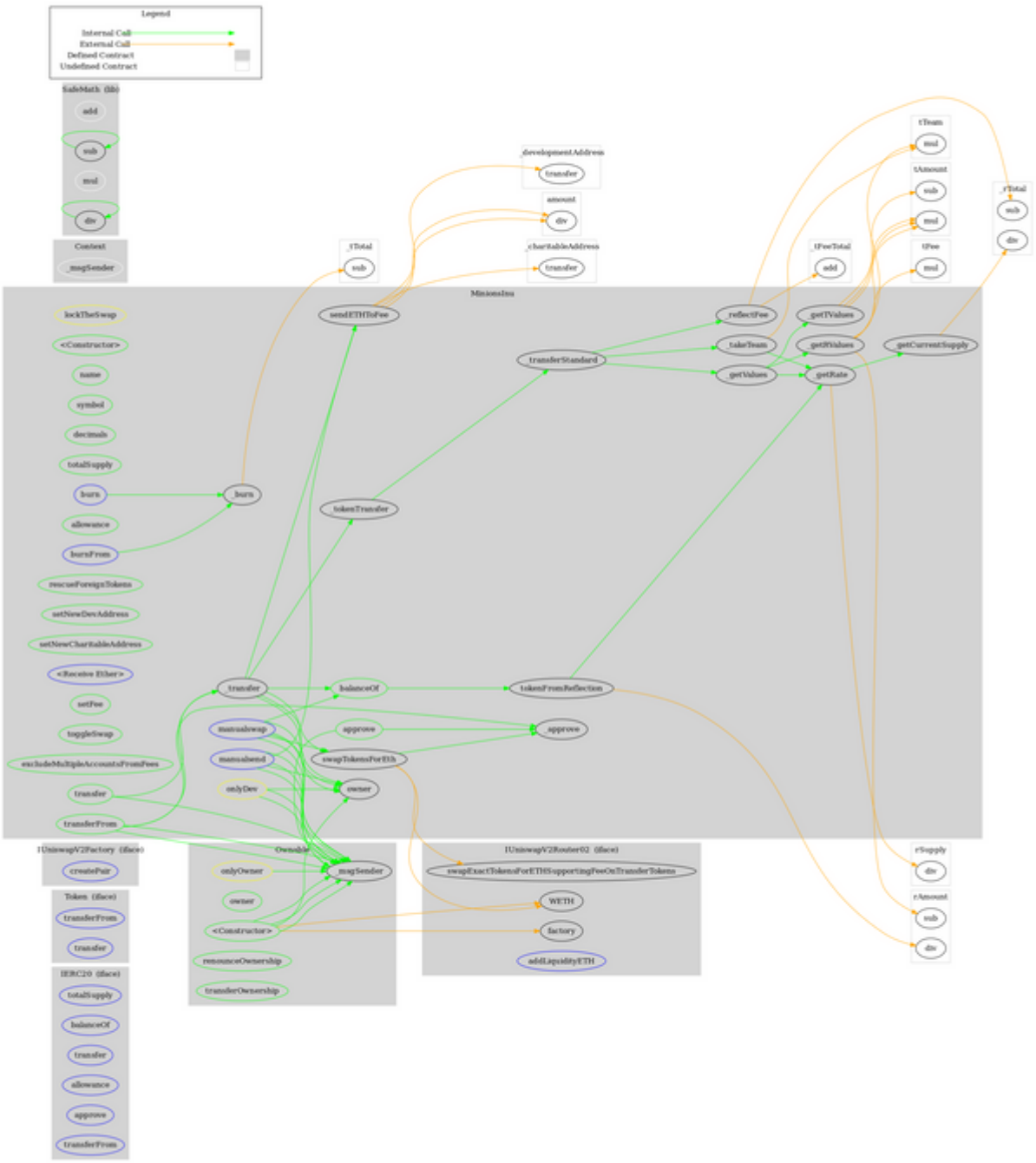
Contract Functions

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
MinionsInu	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
	setNewCharitableAddress	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
	burn	External	✓	-
	_burn	Internal	✓	
	burnFrom	External	✓	-

Contract Flow



Domain Info

Domain Name	minionsinu.com
Registry Domain ID	2690570264_DOMAIN_COM-VRSN
Creation Date	2022-04-20T04:25:11.00Z
Updated Date	0001-01-01T00:00:00.00Z
Registry Expiry Date	2023-04-20T04:25:11.00Z
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 10 months before the creation of the audit.

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

Summary

Token is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error and no critical issues. There are some functions that can be used in a malicious way to disturb the users’ transactions like transferring the user's tokens and transferring funds to the team’s wallet. There is also a limit of max 20% fees.

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.

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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