Cyberscope

Audit Report

C7DAO

July 2022

Type	BEP20
Network	BSC
Address	0x5e3f8124d7b7e82aeacb5c1f5097b6fa6b9c126d
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	C7DAO
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	Unlicense
Explorer	https://bscscan.com/token/0x5e3f8124d7b7e82aeacb5c1f5097b6fa6b9c126d
Symbol	C7DAO
Decimals	9
Total Supply	100,000,000,000,000,000
Domain	https://c7dao.com

Source Files

Filename	**SHA256**
contract.sol	3aace8815751e3b4ca97812955e578b991d403b7c8cf1775a37ebeaef5485e57

Audit Updates

Initial Audit	19th 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

ULTW - Unlimited Liquidity to Team Wallet

Criticality	minor
Location	contract.sol#L422,L428

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
●	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#L337

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#L192

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.

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L135,221,234,229,349,238,441,343,141,209,430,243,356,213,217,445

Description

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

```
excludeMultipleAccountsFromFees
decimals
symbol
setNewMarketingAddress
transferFrom
setFee
name
transferOwnership
rescueForeignTokens
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L118

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#L157,170,172,342,59,441,343,355,348,171

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
_amount
_symbol
devAddressUpdated
marketingAddressUpdated
_tokenAddr
_swapEnabled
WETH
tokensRescued
...
```

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#L118,152

Description

There are segments that contain unused state variables.

```
_tOwned
_previousOwner
```

Recommendation

Remove unused state variables.

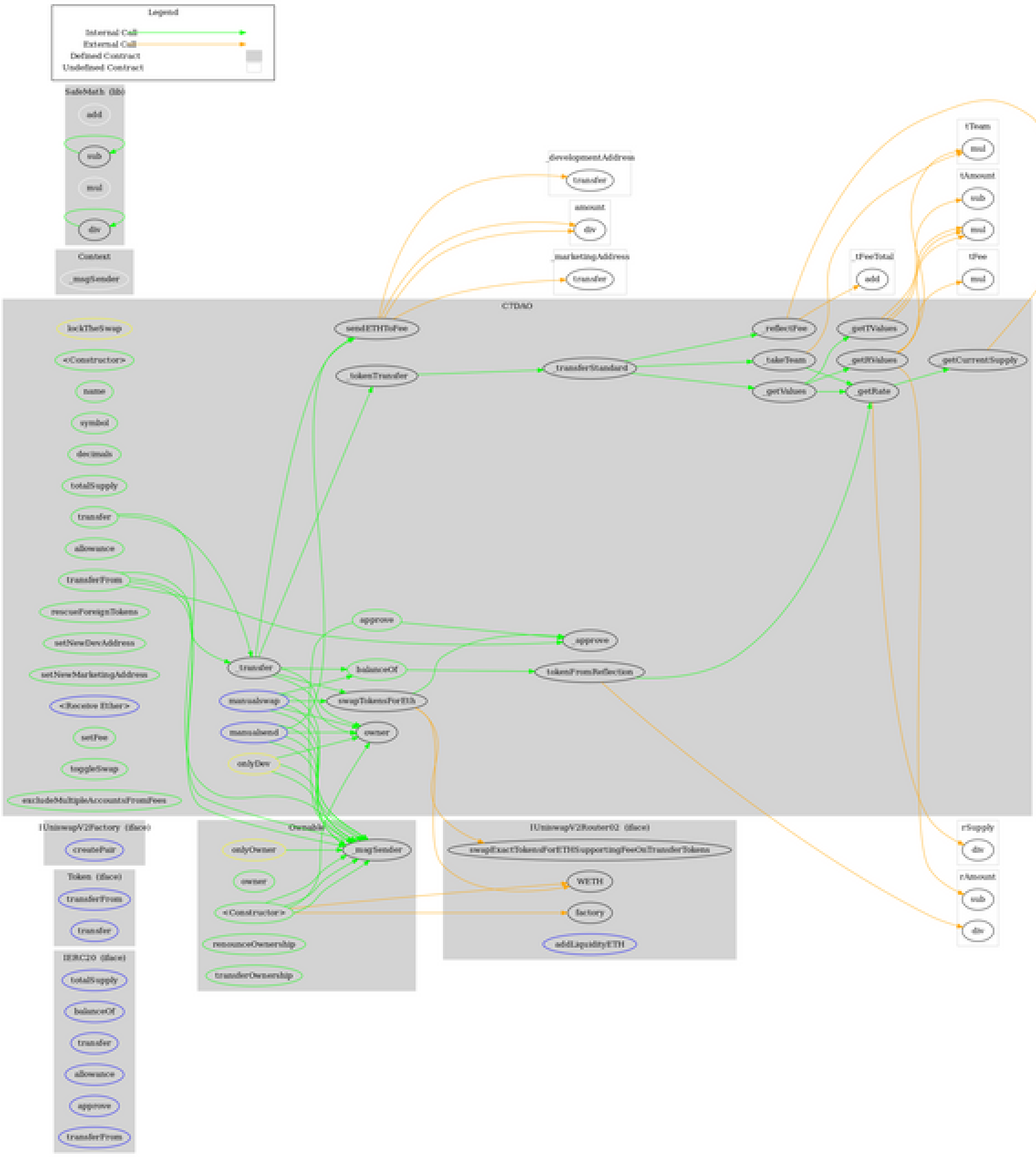
Contract Functions

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
C7DAO	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	c7dao.com
Registry Domain ID	2711447878_DOMAIN_COM-VRSN
Creation Date	2022-07-16T03:25:24Z
Updated Date	2022-07-16T03:25:24Z
Registry Expiry Date	2023-07-16T03:25:24Z
Registrar WHOIS Server	whois.godaddy.com
Registrar URL	https://www.godaddy.com
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

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. The contract owner has the authority to transfer 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 limit of max 24% fees

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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