Cyberscope

Audit Report

Mafia Cat

June 2022

Type	BEP20
Network	BSC
Address	0x52cd32E17D116763aD11dC45E656BEfB067e3bd2
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	MafiaCat
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x52cd32E17D116763aD11dC45E656BEfB067e3bd2
Symbol	MCat
Decimals	9
Total Supply	1,000,000,000,000
Domain	mafiacat.io

Source Files

Filename	**SHA256**
contract.sol	1753f6b662d2827c891705516f47309cf83d7cb015698c575f1d850c5cf4acf8

Audit Updates

Initial Audit	18th 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

Contract Diagnostics

Critical Medium Minor

Severity	Code	Description
	BLC	Business Logic Concern
	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

BLC - Business Logic Concern

Criticality	minor
Location	contract.sol#L318

Description

The business logic seems peculiar. The implementation may not follow the expected behavior. The function `_getTValues` is called with different order of arguments. As a result the tax fee is used as liquidity and vice versa.

```
(uint256 tTransferAmount, uint256 tFee, uint256 tTeam) = _getTValues(tAmount,
_taxFee, _liquidityFee);
//
function _getTValues(uint256 tAmount, uint256 liquidityFee, uint256 TeamFee)
private pure returns (uint256, uint256, uint256) {
```

Recommendation

The team is advised to carefully check if the implementation follows the expected business logic.

CO - Code Optimization

Criticality	minor
Location	contract.sol

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 `_taxFee` property is always zero, as a result the contract produced unnecessary calculations on every transfer.

```
_taxFee = 0;
//
uint256 tFee = tAmount.mul(liquidityFee).div(100);
//
uint256 tTransferAmount = tAmount.sub(tFee).sub(tTeam);
```

Recommendation

All the occustances of `_taxFee` could be eliminated from the codebase.

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L110,116,181,185,189,193,201,206,210,215,351,355

Description

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

```
excludeFromFees
toggleSwap
transferFrom
approve
allowance
transfer
totalSupply
decimals
symbol
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L146,145,143,144,93

Description

Constant state variables should be declared constant to save gas.

```
_previousOwner
_marketingAddress
_devAddress
_charityWallet
_appfunding
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L34,351,132,139,140,141

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.

```
_decimals
_symbol
_name
_tTotal
_feeSwap
WETH
```

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#L93,127

Description

There are segments that contain unused state variables.

```
_tOwned
_previousOwner
```

Recommendation

Remove unused state variables.

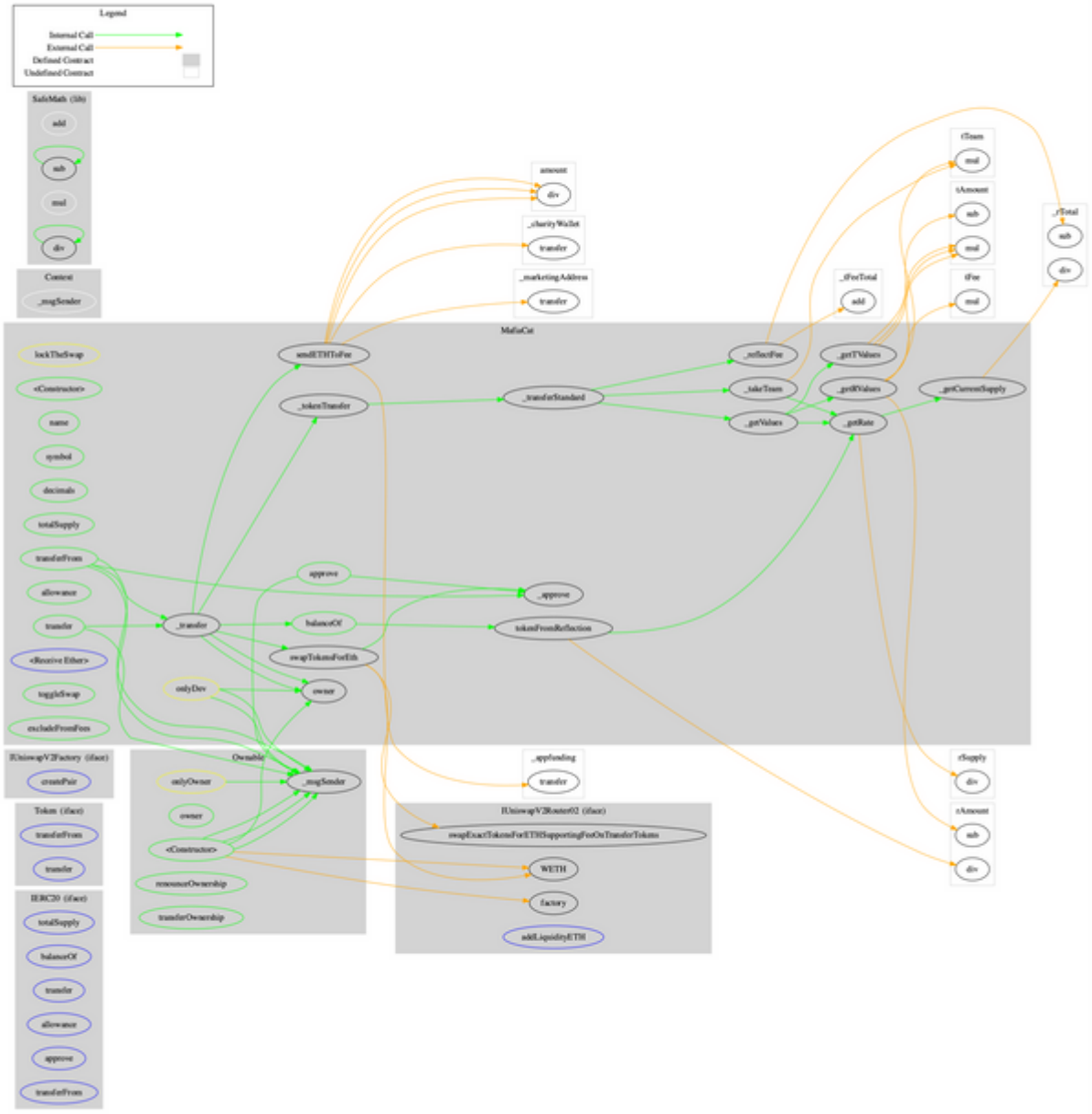
Contract Functions

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
MafiaCat	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	✓	
	_transferStandard	Private	✓	
	_takeTeam	Private	✓	
	_reflectFee	Private	✓	
	<Receive Ether>	External	Payable	-

	_getValues	Private		
	_getTValues	Private		
	_getRValues	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	toggleSwap	Public	✓	onlyDev
	excludeFromFees	Public	✓	onlyDev

Contract Flow



Domain Info

Domain Name	mafiacat.io
Registry Domain ID	47f80c3919e74a9eb48c207e7822f514-DONUTS
Creation Date	2022-06-12T14:03:47Z
Updated Date	2022-06-17T14:04:13Z
Registry Expiry Date	2023-06-12T14:03:47Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://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

Mafia Cat 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 25% fees.

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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