

Audit Report

Catscash

April 2022

Type BEP20

Network BSC

Address 0xCcb2448A0F24cF63bf7aa926E790F78dCbD07f59

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Contract Review

Contract Name	Cash
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0xccb2448a0f24cf63bf7aa 926e790f78dcbd07f59
Symbol	CCATS
Decimals	9
Total Supply	1,000,000,000
Domain	catscashtoken.com

Source Files

Filename	SHA256
contract.sol	a24eece5342bc40b3506f25c31a1cf8141c5b731eb86c 39299a19e98776ec1ed

Audit Updates

Initial Audit	28th April 2022
Corrected	

Contract Analysis

CriticalMediumMinorPass

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
•	ВТ	Contract Owner is not able to burn tokens from specific wallet
•	ВС	Contract Owner is not able to blacklist wallets from selling

Contract Diagnostics

CriticalMediumMinor

Severity	Code	Description
•	L01	Public Function could be Declared External
•	L02	State Variables could be Declared Constant
•	L04	Conformance to Solidity Naming Conventions
•	L05	Unused State Variable
•	L07	Missing Events Arithmetic
•	L09	Dead Code Elimination



L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L161,166,172,482,486,490,494,502,506,511,516,520,533,541,597,60 2,606,614,636,641

Description

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

```
transferFrom
transfer
changeRouterVersion
getCirculatingSupply
setSwapAndLiquifyByLimitOnly
setSwapAndLiquifyEnabled
setIsExcludedFromFee
setMarketPairStatus
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#L385,383,384,142,141

Description

Constant state variables should be declared constant to save gas.

```
asdasd
_lockTime
_symbol
_name
_decimals
```

Recommendation

Add the constant attribute to state variables that never change.



L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L209,210,226,245,597,391,399,400,401,403,404,405,407,408,409,41 1,412,413,416,417

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.

```
_walletMax
_maxTxAmount
_totalDistributionShares
_totalTaxIfSelling
_totalTaxIfBuying
_teamShare
_marketingShare
_liquidityShare
_sellTeamFee
...
```

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#L141,142

Description

There are segments that contain unused state variables.

_lockTime asdasd

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L545,553,561,569,581,585

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.

```
minimumTokensBeforeSwap = newLimit
   _walletMax = newLimit
   _maxTxAmount = maxTxAmount
   _liquidityShare = newLiquidityShare
   _totalTaxIfSelling = _sellLiquidityFee.add(_sellMarketingFee).add(_sellTeamFee)
   _totalTaxIfBuying = _buyLiquidityFee.add(_buyMarketingFee).add(_buyTeamFee)
```

Recommendation

Emit an event for critical parameter changes.



L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L119,102,106,110,114,83,94

Description

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

sendValue
isContract
functionCallWithValue
functionCall
_functionCallWithValue

Recommendation

Remove unused functions.



Contract Functions

Contract	Туре	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
Context	Implementation	Internal		
	_msgSender	Internal		
	_msgData	internal		
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	1	-
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
Address	Librani			
Address	Library			
	isContract	Internal		
	sendValue	Internal	✓	
	functionCall	Internal	✓	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	✓	



	_functionCallWithValue	Private	1	
Ownable	Implementation	Context		
	<constructor></constructor>	Public	1	-
	owner	Public		-
	waiveOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	getTime	Public		-
IUniswapV2Fa ctory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	1	-
	setFeeTo	External	1	-
	setFeeToSetter	External	1	-
IUniswapV2Pai r	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	1	-
	transfer	External	1	-
	transferFrom	External	1	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	1	-
	MINIMUM_LIQUIDITY	External		-



	factory	External		-
	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	burn	External	1	-
	swap	External	✓	-
	skim	External	1	-
	sync	External	✓	-
	initialize	External	✓	-
IUniswapV2Ro uter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	1	-
	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		-



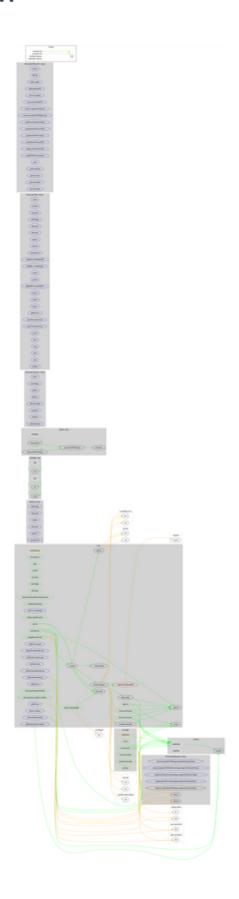
IUniswapV2Ro uter02	Interface	IUniswapV2 Router01		
	removeLiquidityETHSupportingFeeOn TransferTokens	External	√	-
	removeLiquidityETHWithPermitSuppor tingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportin gFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingF eeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingF eeOnTransferTokens	External	✓	-
Cash	Implementation	Context, IERC20, Ownable		
	<constructor></constructor>	Public	1	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	allowance	Public		-
	increaseAllowance	Public	1	-
	decreaseAllowance	Public	1	-
	minimumTokensBeforeSwapAmount	Public		-
	approve	Public	1	-
	_approve	Private	1	
	setMarketPairStatus	Public	1	onlyOwner
	setIsTxLimitExempt	External	1	onlyOwner
	setIsExcludedFromFee	Public	✓	onlyOwner
	setBuyTaxes	External	1	onlyOwner
	setSelTaxes	External	✓	onlyOwner
	setDistributionSettings	External	✓	onlyOwner
	setMaxTxAmount	External	✓	onlyOwner
	enableDisableWalletLimit	External	✓	onlyOwner
	setIsWalletLimitExempt	External	✓	onlyOwner
	setWalletLimit	External	1	onlyOwner



setNumTokensBeforeSwap	External	✓	onlyOwner
setMarketingWalletAddress	External	✓	onlyOwner
setTeamWalletAddress	External	✓	onlyOwner
setSwapAndLiquifyEnabled	Public	✓	onlyOwner
setSwapAndLiquifyByLimitOnly	Public	✓	onlyOwner
getCirculatingSupply	Public		-
transferToAddressETH	Private	✓	
changeRouterVersion	Public	✓	onlyOwner
<receive ether=""></receive>	External	Payable	-
transfer	Public	✓	-
transferFrom	Public	✓	-
_transfer	Private	✓	
_basicTransfer	Internal	✓	
swapAndLiquify	Private	✓	lockTheSwap
swapTokensForEth	Private	✓	
addLiquidity	Private	✓	
takeFee	Internal	✓	



Contract Flow



Domain Info

Domain Name	catscashtoken.com
Registry Domain ID	2691316527_DOMAIN_COM-VRSN
Creation Date	2022-04-23T16:20:59Z
Updated Date	2022-04-23T16:21:00Z
Registry Expiry Date	2023-04-23T16:20:59Z
Registrar WHOIS Server	whois.publicdomainregistry.com
Registrar URL	www.publicdomainregistry.com
Registrar	PDR Ltd. d/b/a PublicDomainRegistry.com
Registrar IANA ID	303

The domain has been created 5 days before the creation of the audit. It will expire in 12 months.

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



Summary

Catscash is an interesting project that has a friendly and growing community. The contract ownership is renounced. Hence, it cannot be manipulated by the owner.



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