Cyberscope

Audit Report

Opin

October 2022

SHA256 cc273481edf60c2d7c40f730c9a930e75e71449034a87b47bd34f05c73c50d88

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Table of Contents

Contract Review

Contract Name	OPIN
Compiler Version	v0.8.9+commit.e5eed63a
Testing Deploy	https://testnet.bscscan.com/token/0x7419e60A33C6b0FC1A4422B9D332A04C4729Ec22
Symbol	OPIN
Decimals	18
Total Supply	500,000,000
Domain	-

Source Files

Filename	**SHA256**
contract.sol	cc273481edf60c2d7c40f730c9a930e75e71449034a87b47bd34f05c73c50d88

Audit Updates

Initial Audit	7th October 2022 https://github.com/cyberscope-io/audits/blob/main/v1/opin/audit.pdf
Corrected	20th October 2022

Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OCTD	Transfers Contract's Tokens	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	ULTW	Transfers Liquidity to Team Wallet	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Contract Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
	L01	Public Function could be Declared External	Unresolved
	L04	Conformance to Solidity Naming Conventions	Unresolved
	L07	Missing Events Arithmetic	Unresolved
	L12	Using Variables before Declaration	Unresolved
	L13	Divide before Multiply Operation	Unresolved
	L14	Uninitialized Variables in Local Scope	Unresolved

L01 - Public Function could be Declared External

Criticality	minor / informative
Location	contract.sol#L293,382,623,650
Status	Unresolved

Description

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

```
transfer
getCirculatingSupply
enableTrading
isExcludedFromReward
```

Recommendation

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

L04 - Conformance to Solidity Naming Conventions

Criticality	minor / informative
Location	contract.sol#L33,390,114,115,116,117,118,135,141,148,149,150,151,152,172
Status	Unresolved

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.

```
WETH
_antiSnipe
_antiBlock
startingSupply
_name
_symbol
_decimals
_tTotal
_taxRates
...
```

Recommendation

Follow the Solidity naming convention.
https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions.

L07 - Missing Events Arithmetic

Criticality	minor / informative
Location	contract.sol#L425,432,449,458
Status	Unresolved

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.

```
_maxTxBuyAmount = (_tTotal * percentBuy) / divisorBuy
_maxWalletSize = (_tTotal * percent) / divisor
swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor
piSwapPercent = priceImpactSwapPercent
```

Recommendation

Emit an event for critical parameter changes.

L12 - Using Variables before Declaration

Criticality	minor / informative
Location	contract.sol#L753
Status	Unresolved

Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

```
check
```

Recommendation

The variables should be declared before any usage of them.

L13 - Divide before Multiply Operation

Criticality	minor / informative
Location	contract.sol#L559,740
Status	Unresolved

Description

Performing divisions before multiplications may cause lose of prediction.

```
toLiquify = ((contractTokenBalance * ratios.liquidity) / ratios.totalSwap) / 2
feeAmount = (tAmount * currentFee) / masterTaxDivisor
```

Recommendation

The multiplications should be prior to the divisions.

L14 - Uninitialized Variables in Local Scope

Criticality	minor / informative
Location	contract.sol#L741,752,753
Status	Unresolved

Description

The are variables that are defined in the local scope and are not initialized.

```
values
checked
check
```

Recommendation

All the local scoped variables should be initialized.

Contract Functions

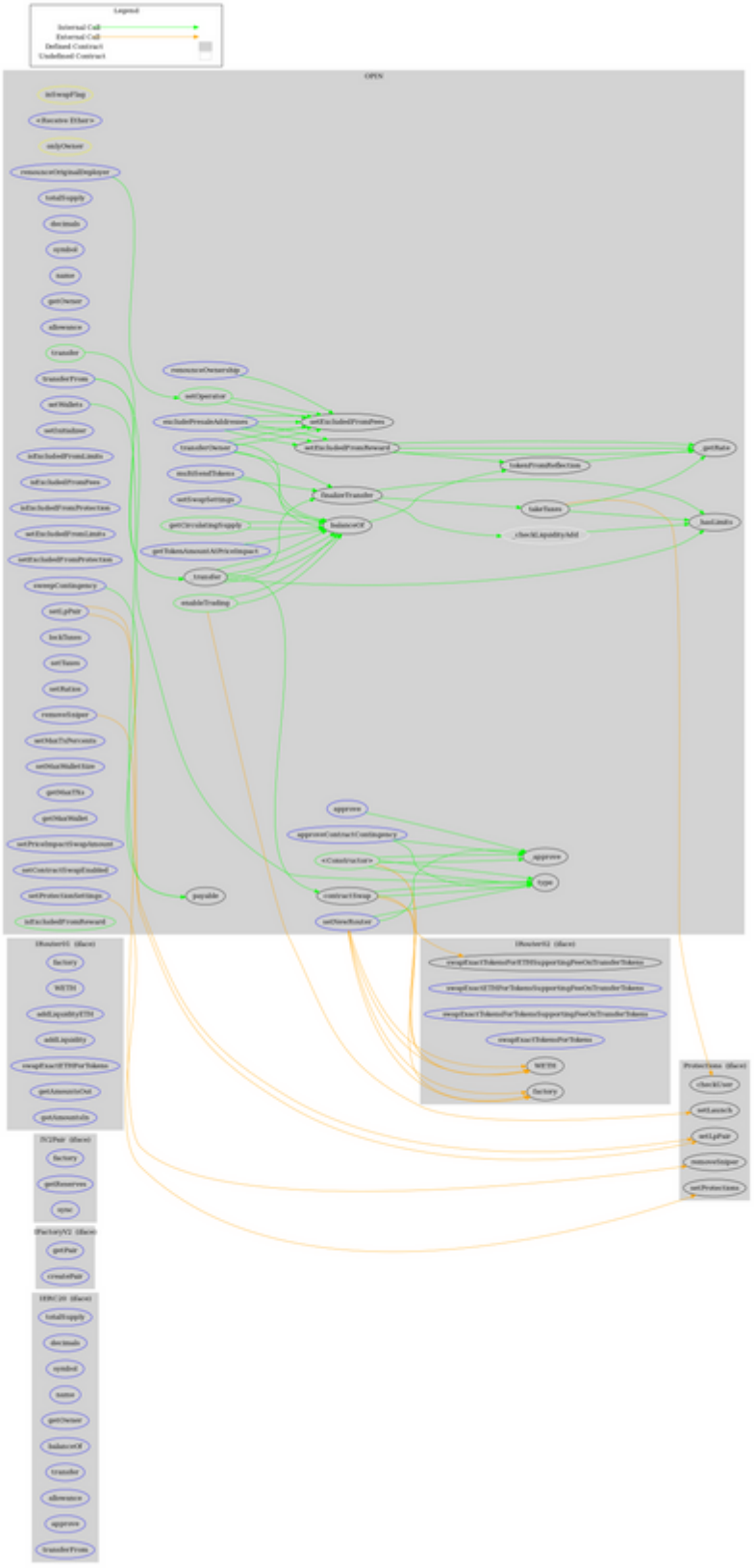
Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IFactoryV2	Interface			
	getPair	External		-
	createPair	External	✓	-
IV2Pair	Interface			
	factory	External		-
	getReserves	External		-
	sync	External	✓	-
IRouter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidityETH	External	Payable	-
	addLiquidity	External	✓	-
	swapExactETHForTokens	External	Payable	-
	getAmountsOut	External		-

	getAmountsIn	External		-
IRouter02	Interface	IRouter01		
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokens	External	✓	-
Protections	Interface			
	checkUser	External	✓	-
	setLaunch	External	✓	-
	setLpPair	External	✓	-
	setProtections	External	✓	-
	removeSniper	External	✓	-
OPIN	Implementation	IERC20		
	<Constructor>	Public	Payable	-
	<Receive Ether>	External	Payable	-
	transferOwner	External	✓	onlyOwner
	renounceOwnership	External	✓	onlyOwner
	setOperator	Public	✓	-
	renounceOriginalDeployer	External	✓	-
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	allowance	External		-
	balanceOf	Public		-
	transfer	Public	✓	-
	approve	External	✓	-
	_approve	Internal	✓	
	approveContractContingency	External	✓	onlyOwner

	transferFrom	External	✓	-
	setNewRouter	External	✓	onlyOwner
	setLpPair	External	✓	onlyOwner
	setInitializer	External	✓	onlyOwner
	isExcludedFromLimits	External		-
	isExcludedFromFees	External		-
	isExcludedFromProtection	External		-
	setExcludedFromLimits	External	✓	onlyOwner
	setExcludedFromFees	Public	✓	onlyOwner
	setExcludedFromProtection	External	✓	onlyOwner
	getCirculatingSupply	Public		-
	removeSniper	External	✓	onlyOwner
	setProtectionSettings	External	✓	onlyOwner
	lockTaxes	External	✓	onlyOwner
	setTaxes	External	✓	onlyOwner
	setRatios	External	✓	onlyOwner
	setWallets	External	✓	onlyOwner
	setMaxTxPercents	External	✓	onlyOwner
	setMaxWalletSize	External	✓	onlyOwner
	getMaxTXs	External		-
	getMaxWallet	External		-
	getTokenAmountAtPriceImpact	External		-
	setSwapSettings	External	✓	onlyOwner
	setPriceImpactSwapAmount	External	✓	onlyOwner
	setContractSwapEnabled	External	✓	onlyOwner
	excludePresaleAddresses	External	✓	onlyOwner
	_hasLimits	Internal		
	_transfer	Internal	✓	
	contractSwap	Internal	✓	inSwapFlag
	_checkLiquidityAdd	Internal	✓	
	enableTrading	Public	✓	onlyOwner
	sweepContingency	External	✓	onlyOwner
	multiSendTokens	External	✓	onlyOwner
	isExcludedFromReward	Public		-

	setExcludedFromReward	Public	✓	onlyOwner
	tokenFromReflection	Public		-
	finalizeTransfer	Internal	✓	
	takeTaxes	Internal	✓	
	_getRate	Internal		

Contract Flow



Summary

Opin Token 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 15% 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