Cyberscope

Audit Report
Hustle2.0

July 2022

Table of Contents

Contract Review

Contract Name	HUSTLE2
Compiler Version	v0.8.7+commit.e28d00a7
Optimization	200 runs
Licence	Unlicense
Explorer	https://bscscan.com/token/0x4c3519C4cF6fAA7B05F540895B63e3179840843B
Symbol	HST
Decimals	9
Total Supply	500,000,000
Domain	http://www.hustle2otoken.com

Source Files

Filename	SHA256
contract.sol	6c5bd5e5d9f29c6c8524d3bf87cbbf934f87db8d086ff83f5f00753c8d63b7d0

Audit Updates

Initial Audit	15th August 2022
Corrected	25th July 2022

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

ST - Stop Transactions

Criticality	minor
Location	contract.sol#L565

Description

The contract owner has the authority to stop transactions for all users excluding the owner. The owner can use this functionality only before the trade opens.

```
if (!_isExcludedFromFee[from] && !_isExcludedFromFee[to]) {
        require(tradingEnabled, "Trading not active");
}
```

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#L767

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 rescueBNB method.

```solidity
function rescueBNB(uint256 weiAmount) external onlyOwner {
    require(address(this).balance >= weiAmount, "insufficient BNB balance");
    payable(msg.sender).transfer(weiAmount);
}
```

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
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L07	Missing Events Arithmetic
●	L13	Divide before Multiply Operation

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L55,59,230,234,243,252,256,261,275,280,291,296,300,357,361,365, 369,381,808

Description

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

```
rescueAnyBEP20Tokens
setSellTaxes
setTaxes
isExcludedFromFee
includeInFee
excludeFromFee
reflectionFromToken
isExcludedFromReward
transfer

...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L140,151

Description

Constant state variables should be declared constant to save gas.

```
deadWallet
_tTotal
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L78,181,315,322,370,371,372,373,374,382,383,384,385,386,783,808 ,137,148,156,157

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.

```
_symbol
_name
genesis_block
_decimals
_amount
_to
_tokenAddr
_enabled
_ops
...
```

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
Location	contract.sol#L322,772,778,787

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.

```
maxBuyLimit = maxBuy * 10 ** decimals()
swapTokensAtAmount = amount * 10 ** _decimals
coolDownTime = time * 1
deadline = _deadline
```

Recommendation

Emit an event for critical parameter changes.

L13 - Divide before Multiply Operation

Criticality	minor
Location	contract.sol#L676

Description

Performing divisions before multiplications may cause lose of prediction.

```
unitBalance = deltaBalance / (denominator - temp.liquidity)
```

Recommendation

The multiplications should be prior to the divisions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IBEP20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
IFactory	Interface			
	createPair	External	✓	-
IRouter	Interface			
	factory	External		-
	WETH	External		-
	addLiquidityETH	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-

Address	Library			
	sendValue	Internal	✓	
HUSTLE2	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	transfer	Public	✓	-
	isExcludedFromReward	Public		-
	reflectionFromToken	Public		-
	EnableTrading	External	✓	onlyOwner
	updatedeadline	External	✓	onlyOwner
	tokenFromReflection	Public		-
	excludeFromReward	Public	✓	onlyOwner
	includeInReward	External	✓	onlyOwner
	excludeFromFee	Public	✓	onlyOwner
	includeInFee	Public	✓	onlyOwner
	isExcludedFromFee	Public		-
	setTaxes	Public	✓	onlyOwner
	setSellTaxes	Public	✓	onlyOwner
	_reflectRfi	Private	✓	
	_takeLiquidity	Private	✓	
	_takeMarketing	Private	✓	
	_takeDev	Private	✓	
	_takeOps	Private	✓	
	_getValues	Private		

	_getTValues	Private		
	_getRValues1	Private		
	_getRValues2	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	_approve	Private	✓	
	_transfer	Private	✓	
	_tokenTransfer	Private	✓	
	swapAndLiquify	Private	✓	lockTheSwap
	addLiquidity	Private	✓	
	swapTokensForBNB	Private	✓	
	bulkExcludeFee	External	✓	onlyOwner
	updateMarketingWallet	External	✓	onlyOwner
	updateDevWallet	External	✓	onlyOwner
	updateOpsWallet	External	✓	onlyOwner
	updateCooldown	External	✓	onlyOwner
	updateSwapTokensAtAmount	External	✓	onlyOwner
	updateSwapEnabled	External	✓	onlyOwner
	updateMaxTxLimit	External	✓	onlyOwner
	updateRouterAndPair	External	✓	onlyOwner
	rescueBNB	External	✓	onlyOwner
	rescueAnyBEP20Tokens	Public	✓	onlyOwner
	<Receive Ether>	External	Payable	-

Contract Flow
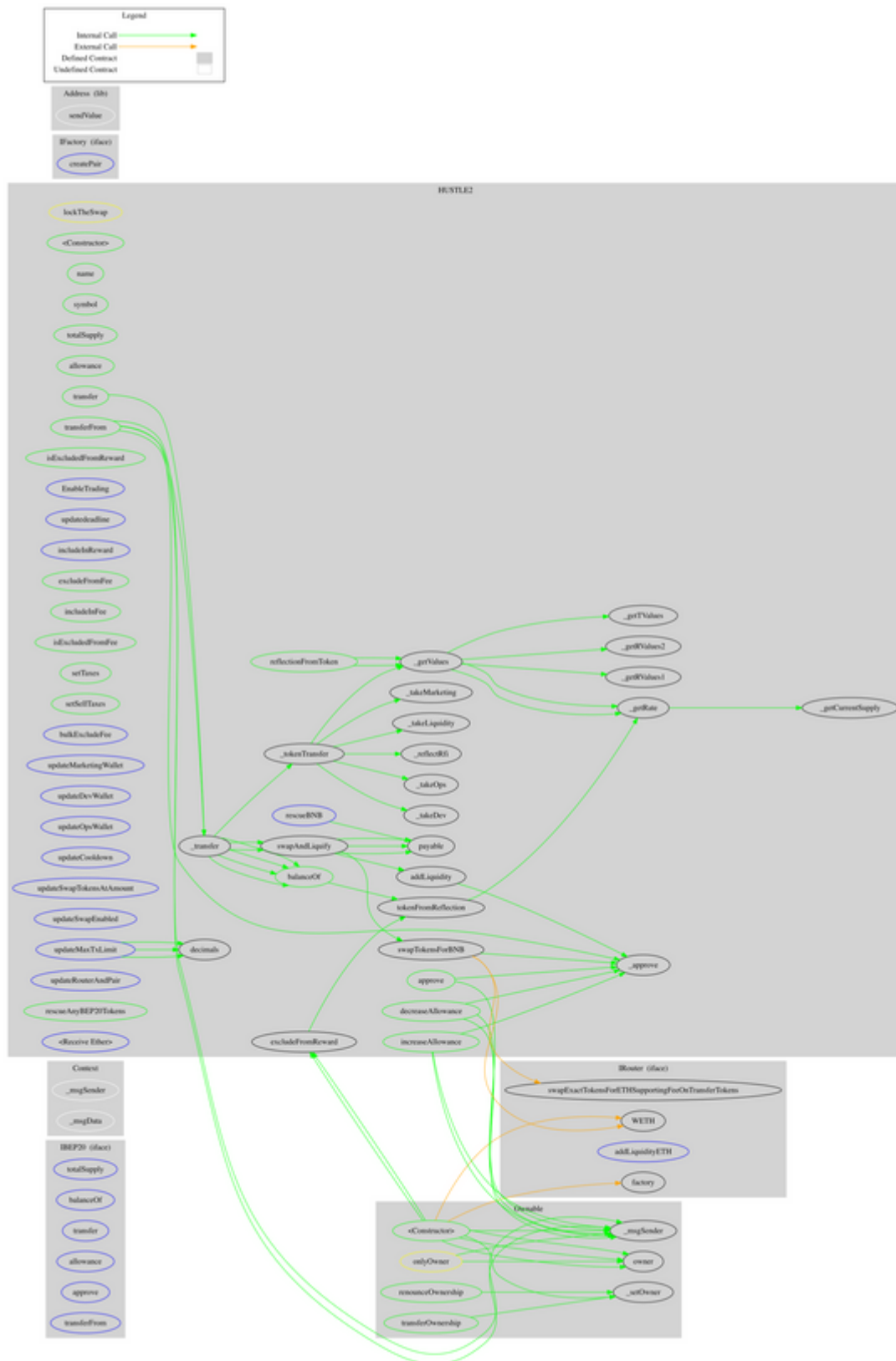
Domain Info

Domain Name	hustle2otoken.com
Registry Domain ID	2709045831_DOMAIN_COM-VRSN
Creation Date	2022-07-06T11:10:25.00Z
Updated Date	0001-01-01T00:00:00.00Z
Registry Expiry Date	2023-07-06T11:10:25.00Z
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 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 two minor severity issues. The contract owner has the authority to stop transactions and transfer funds to the team's wallet.

The contract owner has the ability to tax the trades with 99% in the first five blocks after the trade opening.

The contract owner can limit the sales up to once every minute.

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 20% 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