# Cyberscope

# Audit Report

# Hustle2.0

July 2022

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# Contract Review

| Contract Name | HUSTLE2.0 |
|---|---|
| Symbol | HST |
| Decimals | 9 |
| Total Supply | - |
| Domain | http://www.hustle2otoken.com |

# Source Files

| Filename | SHA256 |
|---|---|
| contract.sol | 9bdef314c56ddad5a3e177041b53cf9ab2c86cafb2be06bb8f2091485013d46a |

# Audit Updates

| Initial Audit | 25th 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 |

# 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#L55,374,250,355,773,363,228,269,246,224,255,59,351,359,274,237,290,294,285 |

## Description

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

```
transfer
reflectionFromToken
isExcludedFromReward
totalSupply
decreaseAllowance
isExcludedFromFee
excludeFromFee
transferOwnership
transferFrom

...
```

## Recommendation

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

# L02 - State Variables could be Declared Constant

| | |
|---|---|
| **Criticality** | minor |
| **Location** | contract.sol#L151,140 |

## Description

Constant state variables should be declared constant to save gas.

```
_tTotal
deadWallet
```

## Recommendation

Add the constant attribute to state variables that never change.

# L04 - Conformance to Solidity Naming Conventions

| Criticality | minor |
|---|---|
| Location | contract.sol#L367,137,773,364,148,378,748,375,376,78,365,316,156,366,155,178,309,377 |

## 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.

```
_liquidity
EnableTrading
valuesFromGetValues
_name
_symbol
_deadline
_marketing
WETH
_rfi
...
```

## 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#L316,752,737,743 |

## 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.

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

## Recommendation

Emit an event for critical parameter changes.

# L13 - Divide before Multiply Operation

| Criticality | minor |
|---|---|
| Location | contract.sol#L653 |

## 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 | - |
| | swapExactTokensForETHSupporting FeeOnTransferTokens | 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 | ✓ | |
| | _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 |
| | 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
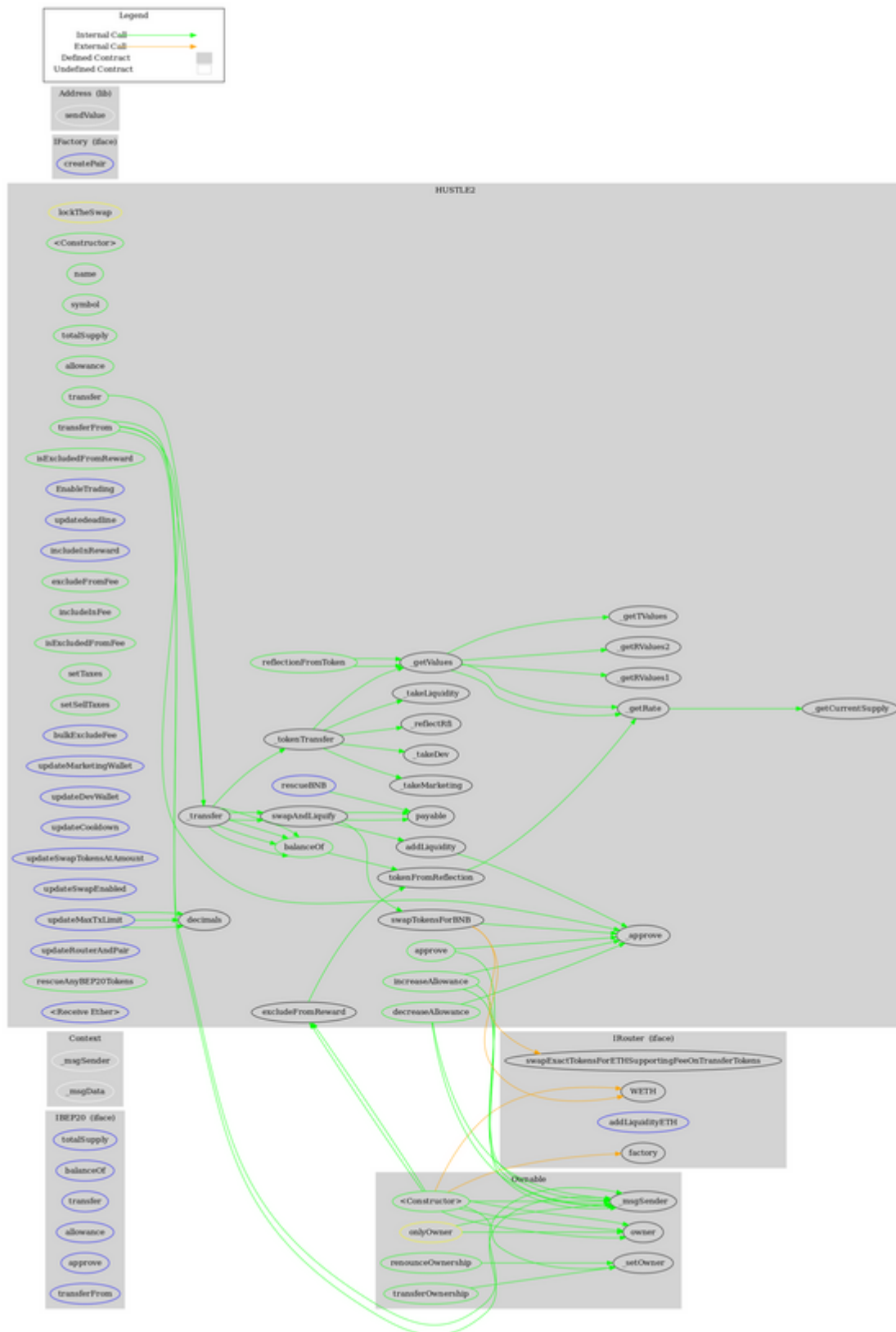
# Domain Info

| 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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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