



Cyberscope

Audit Report

Walk Sphere

May 2022

Type BEP20

Network BSC

Address 0xba8c50c82ee75e6ed19fded73046e44723ef2433

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Contract Review

| | |
|-------------------------|---|
| Contract Name | WALKXToken |
| Compiler Version | v0.8.9+commit.e5eed63a |
| Optimization | 200 runs |
| Licence | |
| Explorer | https://bscscan.com/token/0xba8c50c82ee75e6ed19fdded73046e44723ef2433 |
| Symbol | WALKX |
| Decimals | 18 |
| Total Supply | 1,000,000,000 |
| Domain | walksphere.com |

Source Files

| | |
|---------------------|--|
| Filename | SHA256 |
| contract.sol | 152a5906dd608fb9bc963ac951f7574e5d957556458764d3786c2762c2011b5a |

Audit Updates

| | |
|----------------------|---------------|
| Initial Audit | 24th May 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 | critical |
| Location | contract.sol#L602 |

Description

The contract owner has the authority to stop sale transactions for all users excluding the owner. The owner may take advantage of it by setting the `antiWhaleTxLimitDenominator` to zero. This will convert the contract into a **HONEYPOT**.

```
if (recipient == pair && sender != owner && !isTxLimitExempt[sender]) {  
    uint256 sellLimit = getAntiWhaleTx();  
    require(amount <= sellLimit, "Antiwhale limit exceeded");  
}
```

Recommendation

The contract could embody a check for not allowing setting the `antiWhaleTxLimitDenominator` to be zero. A suggested implementation could check that the maximum amount should be more than a fixed percentage of the total supply.

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 |

L01 - Public Function could be Declared External

| | |
|--------------------|-----------------------------------|
| Criticality | minor |
| Location | contract.sol#L168,172,184,273,342 |

Description

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

```
getPaidEarnings  
deposit  
transferOwnership  
unauthorize  
authorize
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L228,394,392

Description

Constant state variables should be declared constant to save gas.

```
sellFee  
feeDenominator  
dividendsPerShareAccuracyFactor
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality

minor

Location

contract.sol#L100,252,206,791,810,814,826,831,836,841,376,377,378,379

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.

```
_totalSupply  
_decimals  
_symbol  
_name  
_minDistribution  
_minPeriod  
_denominator  
_target  
_amount  
...
```

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#L252,257,814,831,836,850 |

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.

```
antiWhaleTxLimitDenominator = newDenominator
targetLiquidity = _target
swapThreshold = _amount
liquidityFee = _liquidityFee
totalShares = totalShares.sub(shares[shareholder].amount).add(amount)
minPeriod = _minPeriod
```

Recommendation

Emit an event for critical parameter changes.

Contract Functions

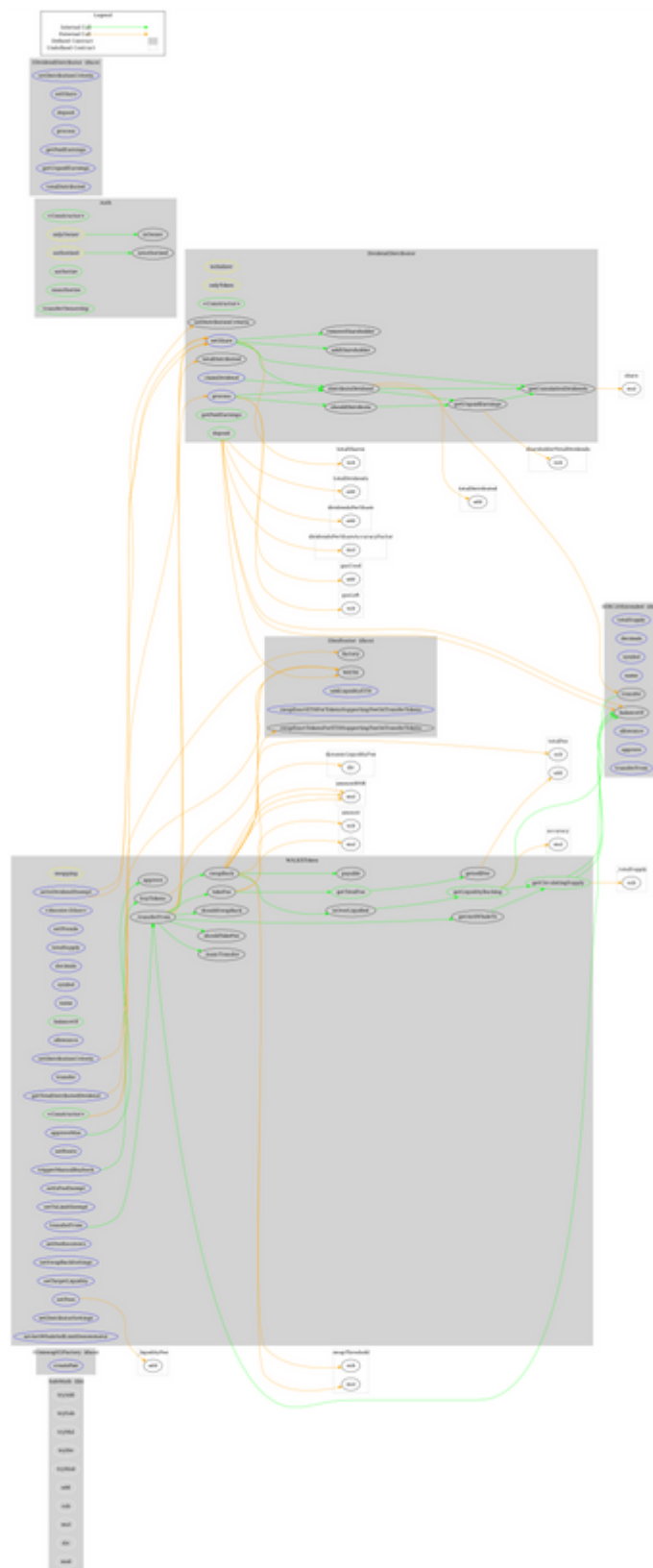
| Contract | Type | Bases | | |
|--------------------------|--|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| | | | | |
| SafeMath | Library | | | |
| | tryAdd | Internal | | |
| | trySub | Internal | | |
| | tryMul | Internal | | |
| | tryDiv | Internal | | |
| | tryMod | Internal | | |
| | add | Internal | | |
| | sub | Internal | | |
| | mul | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | sub | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | | | | |
| IUniswapV2Factory | Interface | | | |
| | createPair | External | ✓ | - |
| | | | | |
| IDexRouter | Interface | | | |
| | factory | External | | - |
| | WETH | External | | - |
| | addLiquidityETH | External | Payable | - |
| | swapExactETHForTokensSupportingFeeOnTransferTokens | External | Payable | - |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | | | | |
| IERC20Extended | Interface | | | |

| | | | | |
|-----------------------------|-------------------------|----------------------|---------|-----------|
| | totalSupply | External | | - |
| | decimals | External | | - |
| | symbol | External | | - |
| | name | External | | - |
| | balanceOf | External | | - |
| | transfer | External | ✓ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| Auth | Implementation | | | |
| | <Constructor> | Public | ✓ | - |
| | authorize | Public | ✓ | onlyOwner |
| | unauthorize | Public | ✓ | onlyOwner |
| | isOwner | Public | | - |
| | isAuthorized | Public | | - |
| | transferOwnership | Public | ✓ | onlyOwner |
| | | | | |
| IDividendDistributor | Interface | | | |
| | setDistributionCriteria | External | ✓ | - |
| | setShare | External | ✓ | - |
| | deposit | External | Payable | - |
| | process | External | ✓ | - |
| | getPaidEarnings | External | | - |
| | getUnpaidEarnings | External | | - |
| | totalDistributed | External | | - |
| | | | | |
| DividendDistributor | Implementation | IDividendDistributor | | |
| | <Constructor> | Public | ✓ | - |
| | setDistributionCriteria | External | ✓ | onlyToken |
| | setShare | External | ✓ | onlyToken |
| | deposit | Public | Payable | - |
| | process | External | ✓ | onlyToken |

| | | | | |
|-------------------|-----------------------------|----------------------|---------|------------|
| | shouldDistribute | Internal | | |
| | distributeDividend | Internal | ✓ | |
| | claimDividend | External | ✓ | - |
| | getPaidEarnings | Public | | - |
| | getUnpaidEarnings | Public | | - |
| | getCumulativeDividends | Internal | | |
| | addShareholder | Internal | ✓ | |
| | removeShareholder | Internal | ✓ | |
| | | | | |
| WALKXToken | Implementation | IERC20Extended, Auth | | |
| | <Constructor> | Public | Payable | Auth |
| | <Receive Ether> | External | Payable | - |
| | setPresale | External | ✓ | authorized |
| | totalSupply | External | | - |
| | decimals | External | | - |
| | symbol | External | | - |
| | name | External | | - |
| | balanceOf | Public | | - |
| | allowance | External | | - |
| | approve | Public | ✓ | - |
| | approveMax | External | ✓ | - |
| | transfer | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | _transferFrom | Internal | ✓ | |
| | _basicTransfer | Internal | ✓ | |
| | shouldTakeFee | Internal | | |
| | getTotalFee | Public | | - |
| | getsellFee | Public | | - |
| | takeFee | Internal | ✓ | |
| | shouldSwapBack | Internal | | |
| | swapBack | Internal | ✓ | swapping |
| | triggerManualBuyback | External | ✓ | authorized |
| | buyTokens | Internal | ✓ | swapping |
| | getTotalDistributedDividend | External | | - |

| | | | | |
|--|----------------------------------|----------|---|------------|
| | setRoute | External | ✓ | authorized |
| | setIsDividendExempt | External | ✓ | authorized |
| | setIsFeeExempt | External | ✓ | authorized |
| | setTxLimitExempt | External | ✓ | authorized |
| | setFees | External | ✓ | authorized |
| | setFeeReceivers | External | ✓ | authorized |
| | setSwapBackSettings | External | ✓ | authorized |
| | setTargetLiquidity | External | ✓ | authorized |
| | setDistributionCriteria | External | ✓ | authorized |
| | setDistributorSettings | External | ✓ | authorized |
| | setAntiWhaleSellLimitDenominator | External | ✓ | authorized |
| | getCirculatingSupply | Public | | - |
| | getAntiWhaleTx | Public | | - |
| | getLiquidityBacking | Public | | - |
| | isOverLiquified | Public | | - |

Contract Flow



Domain Info

| | |
|-------------------------------|----------------------------|
| Domain Name | |
| Registry Domain ID | 2691311244_DOMAIN_COM-VRSN |
| Creation Date | 2022-04-23T14:57:23.00Z |
| Updated Date | 0001-01-01T00:00:00.00Z |
| Registry Expiry Date | 2023-04-23T14:57:23.00Z |
| Registrar WHOIS Server | whois.namecheap.com |
| Registrar URL | http://www.namecheap.com |
| Registrar | NAMECHEAP INC |
| Registrar IANA ID | 1068 |

The domain has been created about 1 month before the creation of the audit. It will expire in 11 months.

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

Summary

Walk Sphere Token is an interesting project that has a friendly and growing community. The Smart Contract analysis reported one critical severity issue. The contract can be converted into a honeypot and prevent users from selling if the owner abuses the admin functions. 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 22% fees for selling and 20% for buying.

Disclaimer

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment.

Cyberscope team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed.

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The Cyberscope team disclaims any liability for the resulting losses.

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>