



Cyberscope

Audit Report

HODLX

March 2022

Github <https://github.com/super0326/hodlx-farm-contracts>

commit [0c561b0fb4fd40985208285400803536f5670931](https://github.com/super0326/hodlx-farm-contracts/commit/0c561b0fb4fd40985208285400803536f5670931)

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Contract Review

Commit	0c561b0fb4fd40985208285400803536f5670931
Github	https://github.com/super0326/hodlx-farm-contracts
Domain	hodlx.exchange

Source Files

Filename	SHA256
contract.sol	ba21d9f9192ae7232b24fa12684bce5967a0d5f68322a07e143b6fc04789af34

Audit Updates

Initial Audit	31st March 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

MT - Mint Tokens

Criticality	critical
Location	contract.sol#L648

Description

The contract owner has the authority to mint tokens. The owner may take advantage of it by calling the `mint` function. As a result the contract tokens will be highly inflated.

```
function mint(address _to, uint256 _amount) public onlyOwner {  
    _mint(_to, _amount);  
    _moveDelegates(address(0), _delegates[_to], _amount);  
}
```

Recommendation

The owner should carefully manage the credentials of the owner's account. We advised considering an extra-strong security mechanism that the actions may be quarantined by many users instead of one. The owner could also renounce the contract ownership for a period of time or pass the access to the zero address.

Contract Diagnostics

● Critical ● Medium ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination
●	L15	Local Scope Variable Shadowing

L01 - Public Function could be Declared External

Criticality

minor

Location

contract.sol#L238,247,422,429,436,455,463,474,491,513 and 3 more

Description

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

```
mint
decreaseAllowance
increaseAllowance
transferFrom
approve
allowance
transfer
totalSupply
decimals
...
```

Recommendation

Use the external attribute for functions never called from the contract

L04 - Conformance to Solidity Naming Conventions

Criticality

minor

Location

contract.sol#L648,659

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.

```
_delegates  
_amount  
_to
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

L09 - Dead Code Elimination

Criticality

minor

Location

contract.sol#L601,636

Description

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

```
_burnFrom  
_burn
```

Recommendation

Remove unused functions.

L15 - Local Scope Variable Shadowing

Criticality

minor

Location

contract.sol#L398

Description

There are variables that are defined in the local scope containing the same name from an upper scope.

```
symbol  
name
```

Recommendation

The local variables should have different names from the upper scoped variables.

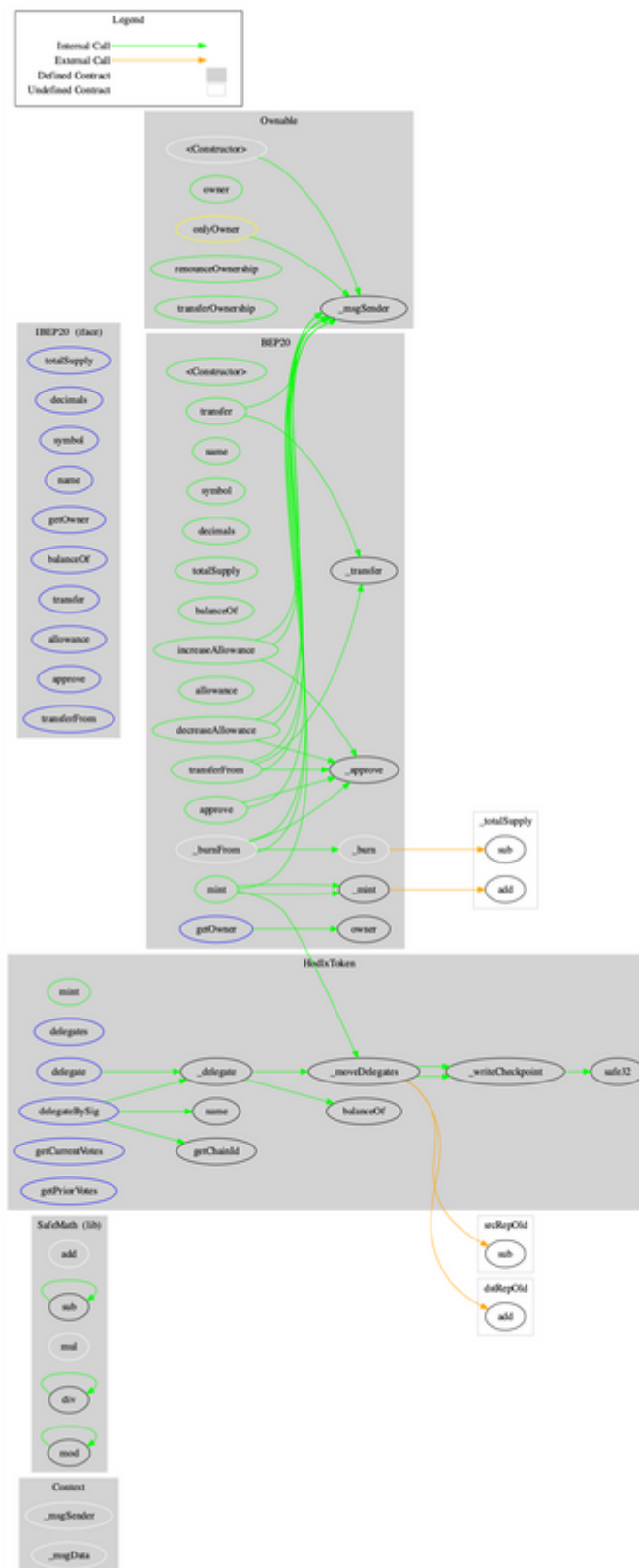
Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
Ownable	Implementation	Context		
	<Constructor>	Internal	✓	
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
IBEP20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-

	approve	External	✓	-
	transferFrom	External	✓	-
BEP20	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	getOwner	External		-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	mint	Public	✓	onlyOwner
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_burnFrom	Internal	✓	
HodlxToken	Implementation	BEP20		
	mint	Public	✓	onlyOwner
	delegates	External		-
	delegate	External	✓	-
	delegateBySig	External	✓	-
	getCurrentVotes	External		-
	getPriorVotes	External		-
	_delegate	Internal	✓	
	_moveDelegates	Internal	✓	
	_writeCheckpoint	Internal	✓	

	safe32	Internal		
	getChainId	Internal		

Contract Flow



Domain Info

Domain Name	hodlx.exchange
Registry Domain ID	5734a00b646e46a8b0b4eeb624d3fcb4-DONUTS
Creation Date	2022-03-18T16:41:54Z
Updated Date	2022-03-23T16:42:44Z
Registry Expiry Date	2023-03-18T16:41:54Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://www.namecheap.com/
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

The domain has been created 13 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

HODLX is an interesting project that has a friendly and growing community. The Smart Contract analysis reported one critical issue. The contract Owner has the authority to mint tokens. If this functionality is abused by the contract owner, then the contract will be highly inflated. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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.

The Cyberscope team has audited this project for general information and only expresses their opinion based on similar projects and checks from popular diagnostic tools. Under no circumstances did Cyberscope receive a payment to manipulate those results or change the awarding badge that we will be adding in our website.

Always Do your own research and protect yourselves from scams. This document should not be presented as a reason to buy or not buy any particular token.

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 provides all the essential tools to assist users draw their own conclusions.



The Cyberscope team

<https://www.cyberscope.io>