

Audit Report

CitysHome

January 2022

Type	BEP20
Network	BSC
Address	0x2989997e4f761d9f8Bb9fe668e4cC07a28C5F543
Audited by	© coinscope

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Contract Review

Contract Name	CitysHome
Compiler Version	v0.8.11+commit.d7f03943
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x2989997e4f761d9f8Bb9fe668e4cC07a28C5F543
Symbol	CHC
Decimals	18
Total Supply	50,000,000
Source	contract.sol
Domain	cityshome.io

Audit Updates

Initial Audit	20th January 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

ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	contract.sol#L624,L628

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the `setBurnFee` function with a high percentage value.

```
function setBurnFee(uint256 fee) public onlyOwner {
    burnFee = fee;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

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
	L09	Dead Code Elimination
	L07	Missing Events Arithmetic

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L632,L628,L624 and 12 more

Description

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

```
setSwapFee
setBurnFee
setSwapAddress
...
```

Recommendation

Use the external attribute for functions never called from the contract

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L587,L581,L589 and 5 more

Description

Constant state variables should be declared constant to save gas.

```
teamAddress
presaleAddress
marketingAddress
...
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L599

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.

PVP

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#L488,L22

Description

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

```
_burn
_msgData
```

Recommendation

Remove unused functions.

L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L632,L628

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.

```
liquidityFee = fee
burnFee = fee
```

Recommendation

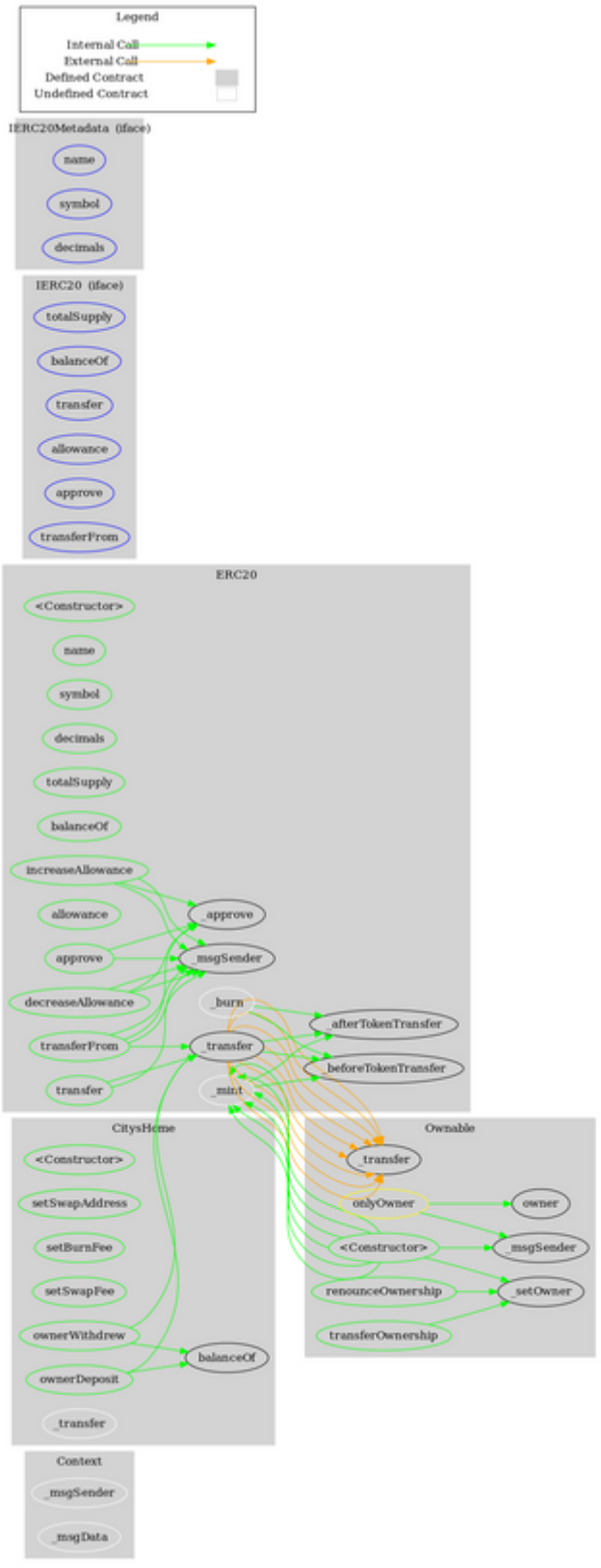
Emit an event for critical parameter changes.

Contract Functions

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IERC20Metadata	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
ERC20	Implementation	Context, IERC20, IERC20Metadata		
	<Constructor>	Public	✓	-

	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
CitysHome	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	setSwapAddress	Public	✓	onlyOwner
	setBurnFee	Public	✓	onlyOwner
	setSwapFee	Public	✓	onlyOwner
	ownerWithdrew	Public	✓	onlyOwner
	ownerDeposit	Public	✓	onlyOwner
	_transfer	Internal	✓	

Contract Flow



Domain Info

Domain Name	cityshome.io
Registry Domain ID	30c56385a49646c192d525d1a3ad5dd9-DONUTS
Creation Date	2022-01-15T08:16:05Z
Updated Date	2022-01-20T08:16:46Z
Registry Expiry Date	2023-01-15T08:16:05Z
Registrar WHOIS Server	whois.namesilo.com
Registrar URL	http://www.namesilo.com
Registrar	NameSilo, LLC
Registrar IANA ID	1479

The domain has been created 5 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

CitysHome is aiming to build an NFT play-to-earn game. The token has a friendly and growing community. The Smart Contract analysis reported one issue. The contract owner can manipulate the fees. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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The Coinscope.co team

https://www.coinscope.co