



Cyberscope

# Audit Report

## **X Capital**

June 2022

Type        BEP20

Network    BSC

Address    0x3fa9b0b2ce48666c5be52e0325eece35aa6221a1

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## Contract Review

<b>Contract Name</b>	XToken
<b>Compiler Version</b>	v0.6.8+commit.0bbfe453
<b>Optimization</b>	200 runs
<b>Licence</b>	Unlicense
<b>Explorer</b>	<a href="https://bscscan.com/token/0x3fa9b0b2ce48666c5be52e0325eece35aa6221a1">https://bscscan.com/token/0x3fa9b0b2ce48666c5be52e0325eece35aa6221a1</a>
<b>Symbol</b>	XCAP
<b>Decimals</b>	9
<b>Total Supply</b>	10,000,000,000
<b>Domain</b>	xcap.finance

## Source Files

<b>Filename</b>	<b>SHA256</b>
<b>contract.sol</b>	809d0220c3f41f6adf0405bb985931ae70d2bfb6912c4ae237bf1dfa2083fa4c

## Audit Updates

<b>Initial Audit</b>	31st May 2022
<b>Corrected phase 1</b>	10th June 2022
<b>Corrected phase 2</b>	12th June 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

# Contract Diagnostics

● Critical   ● Medium   ● Minor

Severity	Code	Description
●	STC	Succeeded Transfer Check
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination

## STC - Succeeded Transfer Check

<b>Criticality</b>	minor
<b>Location</b>	contract.sol

### Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

```
IBEP20(usdt).transfer(address(rewardPool), X);
```

### Recommendation

The contract should check if the result of the transfer methods is successful.

## L01 - Public Function could be Declared External

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L463,472,478,483,491,791,795,799,803,807,811,816,820,825,831,836,939,974,988,998,1008,1018,1027,1046,1105,1163,1171,1179,1187,1206,1212,1235

### Description

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

```
getUSDT  
removeWhiteList  
addWhiteList  
getSellNotXFee  
getBuyNotXFee  
getSellXFee  
getBuyXFee  
swapXForToken  
swapTokensForX  
...
```

### Recommendation

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



## L02 - State Variables could be Declared Constant

**Criticality**

minor

**Location**

contract.sol#L737,735,736,733

### Description

Constant state variables should be declared constant to save gas.

```
_tTotal  
_symbol  
_name  
_decimals
```

### Recommendation

Add the constant attribute to state variables that never change.

## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L131,133,530,531,548,568,918,929,940,941,942,943,944,975,976,977,998,1008,1018,1027,1036,1046,760,761,762,763,764,765,767,768,769,770,773,774

### 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.

```
XId1  
XId0  
Y3  
X3  
Y2  
X2  
Z1  
Y1  
X1  
...
```

### Recommendation

Follow the Solidity naming convention.

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

## L09 - Dead Code Elimination

<b>Criticality</b>	minor
<b>Location</b>	contract.sol#L401,361,371,386,396,308,335,704

### Description

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

```
random  
sendValue  
isContract  
functionCallWithValue  
functionCall  
_functionCallWithValue
```

### Recommendation

Remove unused functions.

# Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>IBEP20</b>	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>IERC165</b>	Interface			
	supportsInterface	External		-
<b>IERC721</b>	Interface	IERC165		
	balanceOf	External		-
	ownerOf	External		-
	safeTransferFrom	External	✓	-
	transferFrom	External	✓	-
	approve	External	✓	-
	getApproved	External		-
	setApprovalForAll	External	✓	-
	isApprovedForAll	External		-
	safeTransferFrom	External	✓	-
<b>IERC721Metadata</b>	Interface	IERC721		
	name	External		-
	symbol	External		-
	tokenURI	External		-
<b>IERC721Enum</b>	Interface	IERC721		

<b>erable</b>				
	totalSupply	External		-
	tokenOfOwnerByIndex	External		-
	tokenByIndex	External		-
<b>IERC721Receiver</b>	Interface			
	onERC721Received	External	✓	-
<b>OriginNFT</b>	Interface			
	XIds	External		-
	mint	External	✓	-
<b>SafeMath</b>	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
<b>Context</b>	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
<b>Address</b>	Library			
	isContract	Internal		
	sendValue	Internal	✓	
	functionCall	Internal	✓	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	✓	
	_functionCallWithValue	Private	✓	

Ownable	Implementation	Context		
	<Constructor>	Internal	✓	
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	geUnlockTime	Public		-
	lock	Public	✓	onlyOwner
	unlock	Public	✓	-
<b>IPancakeFactory</b>	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
<b>IPancakePair</b>	Interface			
	name	External		-
	symbol	External		-
	decimals	External		-
	totalSupply	External		-
	balanceOf	External		-
	allowance	External		-
	approve	External	✓	-
	transfer	External	✓	-
	transferFrom	External	✓	-
	DOMAIN_SEPARATOR	External		-
	PERMIT_TYPEHASH	External		-
	nonces	External		-
	permit	External	✓	-
	MINIMUM_LIQUIDITY	External		-
	factory	External		-

	token0	External		-
	token1	External		-
	getReserves	External		-
	price0CumulativeLast	External		-
	price1CumulativeLast	External		-
	kLast	External		-
	mint	External	✓	-
	burn	External	✓	-
	swap	External	✓	-
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	✓	-
<b>IPancakeRoute r01</b>	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-

<b>IPancakeRouter02</b>	Interface	IPancakeRouter01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
<b>XCommon</b>	Library			
	random	Internal		
	getPairAddress	Internal		
<b>XToken</b>	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	<Receive Ether>	External	Payable	-
	_approve	Private	✓	
	_transfer	Private	✓	
	initialAccount	Internal	✓	
	_transferStandard	Private	✓	
	payXSwapTxFee	Internal	✓	



	paySwapTxFee	Internal	✓	
	setInitialToken	Public	✓	-
	getTokenBack	External	✓	-
	setKeyAddress	Public	✓	-
	setAccountPair	Public	✓	-
	setBuyXFee	Public	✓	-
	setSellXFee	Public	✓	-
	setBuyNotXFee	Public	✓	-
	setSellNotXFee	Public	✓	-
	setMintNft	External	✓	-
	swapTokensForX	Public	Payable	-
	swapXForToken	Public	✓	-
	getBuyXFee	Public		-
	getSellXFee	Public		-
	getBuyNotXFee	Public		-
	getSellNotXFee	Public		-
	getMintNft	External		-
	addWhiteList	Public	✓	-
	removeWhiteList	Public	✓	-
<b>XInternal</b>	Implementation			
	<Constructor>	Public	✓	-
	getUSDT	Public	✓	-

# Contract Flow



## Domain Info

<b>Domain Name</b>	xcap.finance
<b>Registry Domain ID</b>	63f6bd3e84e64fe1b6d13524713136c0-DONUTS
<b>Creation Date</b>	2022-03-18T02:02:15Z
<b>Updated Date</b>	2022-04-15T22:58:35Z
<b>Registry Expiry Date</b>	2024-03-18T02:02:15Z
<b>Registrar WHOIS Server</b>	whois.godaddy.com/
<b>Registrar URL</b>	<a href="http://www.godaddy.com/domains/search.aspx?ci=8990">http://www.godaddy.com/domains/search.aspx?ci=8990</a>
<b>Registrar</b>	GoDaddy.com, LLC
<b>Registrar IANA ID</b>	146

The domain has been created 2 months before the creation of the audit. It will expire in almost 2 years.

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

## Summary

X Capital is an interesting project that has a friendly and growing community. The audit mentions some vulnerability concerns and potential improvement. The fees can be set up to 25%.

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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>