



# Audit Report

# **AnimeHatchery**

January 2022

Type           BEP20

Network       BSC

Address       0x51c64E6D749fd42bE28600CB771E4dCC91A488b4

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## Contract Review

<b>Contract Name</b>	AnimeHatchery
<b>Compiler Version</b>	v0.8.0+commit.c7dfd78e
<b>Optimization</b>	200 runs
<b>Licence</b>	None
<b>Explorer</b>	<a href="https://bscscan.com/token/0x51c64E6D749fd42bE28600CB771E4dCC91A488b4">https://bscscan.com/token/0x51c64E6D749fd42bE28600CB771E4dCC91A488b4</a>
<b>Symbol</b>	AHY
<b>Decimals</b>	18
<b>Total Supply</b>	5,000,000
<b>Source</b>	contract.sol
<b>Domain</b>	animehatchery.io

## Audit Updates

<b>Initial Audit</b>	8th January 2022
<b>Corrected</b>	

# Contract Analysis

● Critical
 ● Medium
 ● Minor
 ● Pass

Severity	Code	Description
<span style="color: blue;">●</span>	ST	Contract Owner is not able to stop or pause transactions
<span style="color: blue;">●</span>	OCTD	Contract Owner is not able to transfer tokens from specific address
<span style="color: blue;">●</span>	OTUT	Owner Transfer User's Tokens
<span style="color: red;">●</span>	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
<span style="color: blue;">●</span>	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
<span style="color: blue;">●</span>	MT	Contract Owner is not able to mint new tokens
<span style="color: blue;">●</span>	BT	Contract Owner is not able to burn tokens from specific wallet
<span style="color: gold;">●</span>	BC	Contract Owner is not able to blacklist wallets from selling

## ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	AnimeHatchery.sol#L154

### 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 `setFees` function with a high percentage value.

```
function setFees(uint256 bnbFee, uint256 marketingFee) external onlyOwner() {  
    require(_BNBFee != bnbFee || _marketingFee != marketingFee);  
    _BNBFee = bnbFee;  
    _marketingFee = marketingFee;  
    emit UpdateFees(bnbFee, marketingFee);  
}
```

### 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.

## BC - Blacklisted Contracts

<b>Criticality</b>	medium
<b>Location</b>	AnimeHatchery.sol#L217

### Description

The contract owner has the authority to stop contracts from transactions. The owner may take advantage of it by calling the `blacklistAddress` function.

```
require(!_isBlacklisted[from] && !_isBlacklisted[to], 'Blacklisted address');
```

### 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.

# Contract Diagnostics

● Critical    ● Medium    ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L05	Unused State Variable
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination



## L01 - Public Function could be Declared External

**Criticality**

minor

**Location**

AnimeHatchery.sol#L49,L42,L38 and 8 more

### Description

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

```
unlock  
lock  
geUnlockTime  
...
```

### Recommendation

Use the external attribute for functions never called from the contract

## L02 - State Variables could be Declared Constant

**Criticality**

minor

**Location**

AnimeHatchery.sol#L44,L23,L26 and 2 more

### Description

Constant state variables should be declared constant to save gas.

```
snipeBlockAmount  
_tTotal  
_symbol  
...
```

### Recommendation

Add the constant attribute to state variables that never change.

## L05 - Unused State Variable

**Criticality**

minor

**Location**

AnimeHatchery.sol#L45,L24

### Description

There are segments that contains unused state variable.

```
lastTxTimes  
MAX
```

### Recommendation

Remove unused state variables.

## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	minor
<b>Location</b>	AnimeHatchery.sol#L7,L32,L29 and 2 more

### 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.

```
WETH
 _marketingFee
 _BNBFee
 ...
```

### 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**

Context.sol#L33,L45,L74 and 6 more

### Description

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

```
trySub  
tryMul  
tryMod  
...
```

### Recommendation

Remove unused functions.

# Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>AnimeHatchery</b>	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	symbol	External		-
	name	External		-
	decimals	External		-
	totalSupply	External		-
	getOwner	External		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	setBNBPoolAddress	External	✓	onlyOwner
	setMarketingAddress	External	✓	onlyOwner
	setCoolDownTime	External	✓	onlyOwner
	excludeFromFee	External	✓	onlyOwner
	includeInFee	External	✓	onlyOwner
	setFees	External	✓	onlyOwner
	setNumTokensToSwap	External	✓	onlyOwner
	setSwapEnabled	External	✓	onlyOwner
	<Receive Ether>	External	Payable	-
	_getFeeValues	Private		
	removeAllFee	Private	✓	
	restoreAllFee	Private	✓	
	isExcludedFromFee	External		-

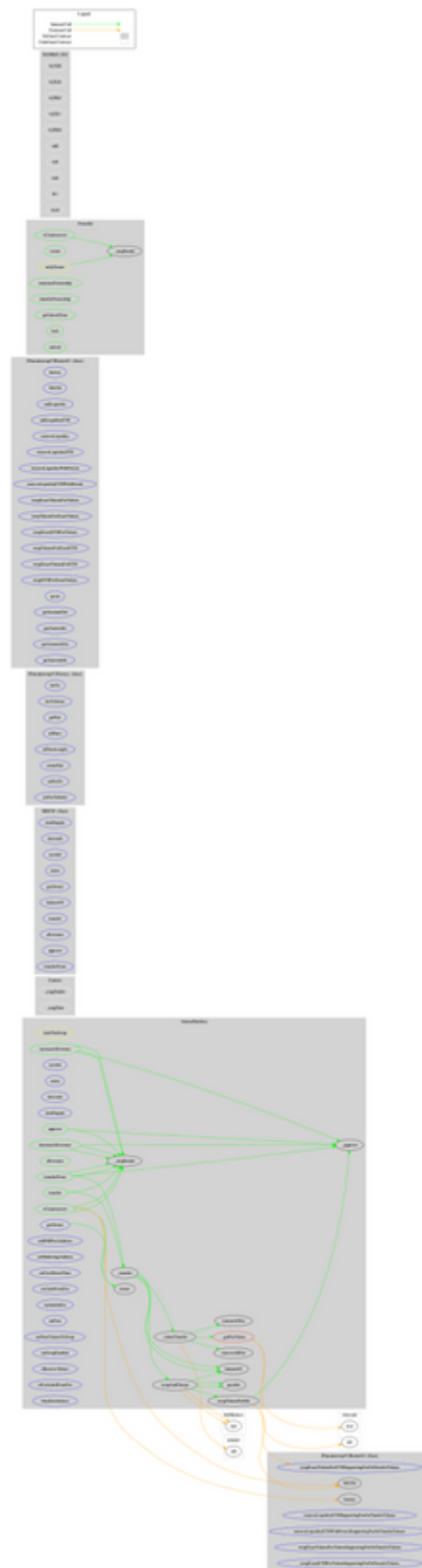
	_approve	Private	✓	
	_transfer	Private	✓	
	swapAndCharge	Private	✓	lockTheSwap
	blacklistAddress	External	✓	onlyOwner
	swapTokensForEth	Private	✓	
	_tokenTransfer	Private	✓	
<b>Context</b>	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
<b>IBEP20</b>	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>IPancakeswap V2Factory</b>	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
<b>IPancakeswap V2Router01</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>IPancakeswap V2Router02</b>	Interface	IPancakesw apV2Router 01		
	removeLiquidityETHSupportingFeeOn TransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupport ingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportin gFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingF eeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingF eeOnTransferTokens	External	✓	-
<b>Ownable</b>	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner



	transferOwnership	Public	✓	onlyOwner
	geUnlockTime	Public		-
	lock	Public	✓	onlyOwner
	unlock	Public	✓	-
<b>SafeMath</b>	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		

# Contract Flow



## Domain Info

<b>Domain Name</b>	animehatchery.io
<b>Registry Domain ID</b>	4eb0d59d3d37408fa1009d028f44b4dd-DONUTS
<b>Creation Date</b>	2021-12-02T10:48:08Z
<b>Updated Date</b>	2021-12-07T10:49:05Z
<b>Registry Expiry Date</b>	2022-12-02T10:48:08Z
<b>Registrar WHOIS Server</b>	whois.namecheap.com
<b>Registrar URL</b>	<a href="https://www.namecheap.com/">https://www.namecheap.com/</a>
<b>Registrar</b>	NameCheap, Inc.
<b>Registrar IANA ID</b>	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

Anime Hatchery is aiming to create a Decentralized Community-Driven NFT-based online video game. The token has a friendly and growing community. There are some functions that can be abused by the owner, like manipulating fees and blacklisting addresses. 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

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CoinScope is aiming to make crypto discoverable and efficient globally. It provides all the essential tools to assist users draw their own conclusions.



The Coinscope.co team

<https://www.coinscope.co>