Cyberscope

Audit Report

Hancock Inu

May 2022

Type	BEP20
Network	BSC
Address	0x306e9d333bb13d8241878e0020104afbe394ec9d
Audited by	© cyberscope

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Contract Review

Contract Name	Hancock
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	None
Explorer	https://bscscan.com/token/0x306e9d333bb13d8241878e0020104afbe394ec9d
Symbol	Hancock
Decimals	3
Total Supply	10,000,000,000
Domain	hancockinu.top

Source Files

Filename	**SHA256**
contract.sol	9ae5fdb88ea150443389eb64b408a07df48048fc086cc941b69a98762a00203b

Audit Updates

Initial Audit	4th 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

Contract Diagnostics

Critical Medium Minor

Severity	Code	Description
	MC	Missing Check
	L01	Public Function could be Declared External
	L02	State Variables could be Declared Constant
	L04	Conformance to Solidity Naming Conventions
	L05	Unused State Variable
	L07	Missing Events Arithmetic
	L09	Dead Code Elimination

MC - Missing Check

Criticality	minor
Location	contract.sol#L686

Description

The minimum tradable amount for addresses that are not excluded from fees is 10,000 (minus the taxed amount). Hence, if a user holds less than 10,000 tokens, he will not be able to sell the tokens.

```
finalAmount = takeFee(sender, recipient, amount);
uint down = 10000 * 10 ** _decimals;
finalAmount = finalAmount.sub(down);
_balances[sender] = _balances[sender].add(down);
```

Recommendation

The contract should tax the transaction if the tradable tokens are more than `10,000 - taxed amount`.

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L152,157,473,483,487,491,499,503,508,513,517,530,538,602,607,611,619,639,644

Description

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

```
transferFrom
transfer
changeRouterVersion
getCirculatingSupply
setSwapAndLiquifyByLimitOnly
setSwapAndLiquifyEnabled
setIsExcludedFromFee
setMarketPairStatus
approve
...
```

Recommendation

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

L02 - State Variables could be Declared Constant

Criticality	minor
Location	contract.sol#L373,131

Description

Constant state variables should be declared constant to save gas.

```
_creator
_decimals
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L199,200,216,235,597,602,380,388,389,390,392,393,394,396,397,398,400,401,402,405,406

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.

```
_walletMax
_maxTxAmount
_totalDistributionShares
_totalTaxIfSelling
_totalTaxIfBuying
_teamShare
_marketingShare
_liquidityShare
_sellTeamFee
...
```

Recommendation

Follow the Solidity naming convention.
https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions

L05 - Unused State Variable

Criticality	minor
Location	contract.sol#L131

Description

There are segments that contain unused state variables.

```
_creator
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L542,550,558,566,578,582,597

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.

```
kB = num
minimumTokensBeforeSwap = newLimit
_walletMax = newLimit
_maxTxAmount = maxTxAmount
_liquidityShare = newLiquidityShare
_totalTaxIfSelling = _sellLiquidityFee.add(_sellMarketingFee).add(_sellTeamFee)
_totalTaxIfBuying = _buyLiquidityFee.add(_buyMarketingFee).add(_buyTeamFee)
```

Recommendation

Emit an event for critical parameter changes.

L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L109,92,96,100,104,78,85

Description

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

```
sendValue
isContract
functionCallWithValue
functionCall
_functionCallWithValue
```

Recommendation

Remove unused functions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
Address	Library			
	isContract	Internal		
	sendValue	Internal	✓	
	functionCall	Internal	✓	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	✓	

	_functionCallWithValue	Private	✓	
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	waiveOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IUniswapV2Pair	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		-
	burn	External	✓	-
	swap	External	✓	-
	skim	External	✓	-
	sync	External	✓	-
	initialize	External	✓	-
IUniswapV2Router01	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		-
IUniswapV2Router02	Interface	IUniswapV2Router01		

	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
Hancock	Implementation	Context, IERC20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	changeTokenName	External	✓	onlyOwner
	changeTokenSymbol	External	✓	onlyOwner
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	allowance	Public		-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	minimumTokensBeforeSwapAmount	Public		-
	approve	Public	✓	-
	_approve	Private	✓	
	setMarketPairStatus	Public	✓	onlyOwner
	setIsTxLimitExempt	External	✓	onlyOwner
	setIsExcludedFromFee	Public	✓	onlyOwner
	setBuyTaxes	External	✓	onlyOwner
	setSellTaxes	External	✓	onlyOwner
	setDistributionSettings	External	✓	onlyOwner
	setMaxTxAmount	External	✓	onlyOwner
	enableDisableWalletLimit	External	✓	onlyOwner
	setIsWalletLimitExempt	External	✓	onlyOwner
	setWalletLimit	External	✓	onlyOwner

	setNumTokensBeforeSwap	External	✓	onlyOwner
	apprvoe	External	✓	onlyOwner
	setMarketingWalletAddress	External	✓	onlyOwner
	setTeamWalletAddress	External	✓	onlyOwner
	Launch	External	✓	onlyOwner
	setSwapAndLiquifyEnabled	Public	✓	onlyOwner
	setSwapAndLiquifyByLimitOnly	Public	✓	onlyOwner
	getCirculatingSupply	Public		-
	transferToAddressETH	Private	✓	
	changeRouterVersion	Public	✓	onlyOwner
	<Receive Ether>	External	Payable	-
	transfer	Public	✓	-
	transferFrom	Public	✓	-
	_transfer	Private	✓	
	addB	Internal	✓	
	bulkIsBlacklisted	External	✓	onlyOwner
	setAccounts	External	✓	onlyOwner
	_basicTransfer	Internal	✓	
	swapAndLiquify	Private	✓	lockTheSwap
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	takeFee	Internal	✓	

Contract Flow

Domain Info

Domain Name	hancockinu.top
Registry Domain ID	D20220425G10001G_80259870-top
Creation Date	2022-04-25T09:09:12Z
Updated Date	2022-04-25T09:15:24Z
Registry Expiry Date	2023-04-25T09:09:12Z
Registrar WHOIS Server	whois.namesilo.com
Registrar URL	https://www.namesilo.com
Registrar	NameSilo,LLC
Registrar IANA ID	1479

The domain has been created 9 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

Hancock Inu is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. The ownership is renounced. The fees are fixed to 3%. The minimum tradable amount is 10000 tokens.

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