



TechRate
AUDIT COMPANY

Smart Contract Security Audit

Audit Details



Audited project

COWBOY SNAKE



Deployer address

0x99a9f8dcc276e059b66d18b2002295e694e988dc



Client contacts:

COWBOY SNAKE team



Blockchain

Binance Smart Chain



Project website:

<https://cowboysnake.com/>

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

TechRate was commissioned by COWBOY SNAKE to perform an audit of smart contracts:

<https://bscscan.com/address/0x33b48893B8f119Fb45F431b36F830a9584804201#contracts>

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contracts Details

Token contract details for 09.12.2021

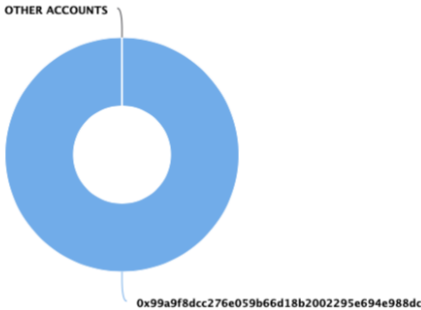
Contract name	COWBOY SNAKE
Contract address	0x33b48893B8f119Fb45F431b36F830a9584804201
Total supply	1,000,000,000
Token ticker	COWS
Decimals	18
Token holders	1
Transactions count	1
Top 100 holders dominance	100.00%
_feeTransfer	10
Uniswap v2 pair	0x33504fd553f85c866679bd7b1f316df057c29937
Contract deployer address	0x99a9f8dcc276e059b66d18b2002295e694e988dc
Contract's current owner address	0x99a9f8dcc276e059b66d18b2002295e694e988dc

COWBOY SNAKE Token Distribution

The top 100 holders collectively own 100.00% (1,000,000,000.00 Tokens) of Cowboy Snake

Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 1

Cowboy Snake Top 100 Token Holders
Source: BscScan.com



(A total of 1,000,000,000.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

COWBOY SNAKE Contract Interaction Details

Time Series: Token Contract Overview

Sun 5, Dec 2021 - Sun 5, Dec 2021

Token Contract 0x33b4889388f119Fb45F431b36F830a9584804201 (Cowboy Snake)
Source: BscScan.com



COWBOY SNAKE Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x99a9f8dcc276e059b66d18b2002295e694e988dc	1,000,000,000	100.0000%



Contract functions details

```
+ [Int] IUniswapV2Factory
- [Ext] feeTo
- [Ext] feeToSetter
- [Ext] getPair
- [Ext] allPairs
- [Ext] allPairsLength
- [Ext] createPair #
- [Ext] setFeeTo #
- [Ext] setFeeToSetter #
+ [Int] IUniswapV2Pair
- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] allowance
- [Ext] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] DOMAIN_SEPARATOR
- [Ext] PERMIT_TYPEHASH
- [Ext] nonces
- [Ext] permit #
- [Ext] MINIMUM_LIQUIDITY
- [Ext] factory
- [Ext] token0
- [Ext] token1
- [Ext] getReserves
- [Ext] price0CumulativeLast
- [Ext] price1CumulativeLast
- [Ext] kLast
- [Ext] burn #
- [Ext] swap #
- [Ext] skim #
- [Ext] sync #
- [Ext] initialize #
+ [Int] IUniswapV2Router01
- [Ext] factory
- [Ext] WETH
- [Ext] addLiquidity #
- [Ext] addLiquidityETH ($)
- [Ext] removeLiquidity #
- [Ext] removeLiquidityETH #
- [Ext] removeLiquidityWithPermit #
- [Ext] removeLiquidityETHWithPermit #
- [Ext] swapExactTokensForTokens #
- [Ext] swapTokensForExactTokens #
- [Ext] swapExactETHForTokens ($)
- [Ext] swapTokensForExactETH #
- [Ext] swapExactTokensForETH #
- [Ext] swapETHForExactTokens ($)
```


- [Ext] quote
- [Ext] getAmountOut
- [Ext] getAmountIn
- [Ext] getAmountsOut
- [Ext] getAmountsIn
- + [Int] IUniswapV2Router02 (IUniswapV2Router01)
 - [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
 - [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
 - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
 - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens (\$)
 - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
- + [Lib] SafeMath
 - [Int] tryAdd
 - [Int] trySub
 - [Int] tryMul
 - [Int] tryDiv
 - [Int] tryMod
 - [Int] add
 - [Int] sub
 - [Int] mul
 - [Int] div
 - [Int] mod
 - [Int] sub
 - [Int] div
 - [Int] mod
- + Ownable (Context)
 - [Pub] <Constructor> #
 - [Pub] owner
 - [Pub] renounceOwnership #
 - modifiers: onlyOwner
 - [Pub] transferOwnership #
 - modifiers: onlyOwner
 - [Pub] getUnlockTime
 - [Pub] lock #
 - modifiers: onlyOwner
 - [Pub] unlock #
- + [Int] IERC20
 - [Ext] totalSupply
 - [Ext] balanceOf
 - [Ext] transfer #
 - [Ext] allowance
 - [Ext] approve #
 - [Ext] transferFrom #
- + ERC20 (Context, IERC20, Ownable)
 - [Int] _initialize #
 - [Pub] name
 - [Pub] symbol
 - [Pub] decimals
 - [Pub] totalSupply
 - [Pub] balanceOf
 - [Pub] transfer #
 - [Pub] allowance
 - [Pub] approve #
 - [Pub] transferFrom #
 - [Pub] increaseAllowance #

- [Pub] decreaseAllowance #
- [Int] _transfer #
- [Int] _mint #
- [Int] _burn #
- [Int] _approve #
- [Int] _setupDecimals #
- [Int] _beforeTokenTransfer #
- [Pub] mint #
 - modifiers: onlyOwner
- [Pub] enableMint #
 - modifiers: onlyOwner
- [Pub] setNumTokensSellToAddToLiquidityt #
 - modifiers: onlyOwner
- [Pub] modifyWhiteListSender #
 - modifiers: onlyOwner
- [Pub] isExcludedFromFee
- [Pub] modifyWhiteListReceiver #
 - modifiers: onlyOwner
- [Pub] isExcludedToFee
- [Pub] modifyBlackList #
 - modifiers: onlyOwner
- [Pub] isBlackList
- [Ext] setAntiBot #
 - modifiers: onlyOwner
- [Ext] setSwapWhiteList #
 - modifiers: onlyOwner
- [Ext] setLimitSell #
 - modifiers: onlyOwner
- [Pub] transferToken #
 - modifiers: onlyOwner
- [Pub] modifyWhiteListBot #
 - modifiers: onlyOwner
- [Pub] isExcludedFromBot
- [Pub] changeFeeWallet #
 - modifiers: onlyOwner
- [Pub] changeFee #
 - modifiers: onlyOwner
- [Pub] modifyWhiteListPool #
 - modifiers: onlyOwner
- [Pub] isExcludedFromPool
- + Context
 - [Int] _msgSender
 - [Int] _msgData
- + COWSToken (ERC20)
 - [Pub] <Constructor> #
 - [Pub] burn #
 - [Int] _transfer #
 - [Ext] <Fallback> (\$)

(\$)= payable function

= non-constant function

Issues Checking Status

Issue description		Checking status
1.	Compiler errors.	Passed
2.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
3.	Possible delays in data delivery.	Passed
4.	Oracle calls.	Passed
5.	Front running.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow.	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Low issues
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	The impact of the exchange rate on the logic.	Passed
13.	Private user data leaks.	Passed
14.	Malicious Event log.	Passed
15.	Scoping and Declarations.	Passed
16.	Uninitialized storage pointers.	Passed
17.	Arithmetic accuracy.	Passed
18.	Design Logic.	Passed
19.	Cross-function race conditions.	Passed
20.	Safe Open Zeppelin contracts implementation and usage.	Passed
21.	Fallback function security.	Passed

Security Issues

✓ High Severity Issues

No high severity issues found.

✓ Medium Severity Issues

No medium severity issues found.

✓ Low Severity Issues

1. Out of gas

Issue:

- The function `modifyWhiteListSender()`, `modifyWhiteListReceiver()`, `modifyBlackList()`, `modifyWhiteListBot()`, `modifyWhiteListPool()` uses the loop to iterate through addresses from the function argument lists. Function will be aborted with `OUT_OF_GAS` exception if there will be a long addresses list.

Recommendation:

Check that the arrays length is not too big.

Notes:

- `_numTokensSellToAddToLiquidity` needs only as max transaction amount.

Owner privileges (In the period when the owner is not renounced)

- Owner can lock and unlock. By the way, using these functions the owner could retake privileges even after the ownership was renounced.
- Owner can mint any amount of tokens.
- Owner can enable and disable minting.
- Owner can change `_numTokensSellToAddToLiquidity`.
- Owner can enable and disable antibot.
- Owner can enable and disable `swapWhiteList` and `limitSell`.
- Owner can change fee wallet.
- Owner can change fee value.
- Owner can exclude from fees.
- Owner can withdraw contract tokens and BNBs.

Conclusion

Smart contracts contain low severity issues!

TechRate note:

Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.



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