TechRate
April, 2022

SMART CONTRACTS SECURITY AUDIT REPORT

Audit Details

Audited project

RevolutionDefi

Deployer address

0x9ae7eeea0e33dc5968176d308b6cd29d32fe0eec

Client contacts:

RevolutionDefi team

Blockchain

Binance Smart Chain

Project website:

Not provided

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 RevolutionDefi to perform an audit of smart contracts:
https://bscscan.com/address/0x8f0fc4f4673be2eceaeb67bf5126ee5082cd4407#code

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

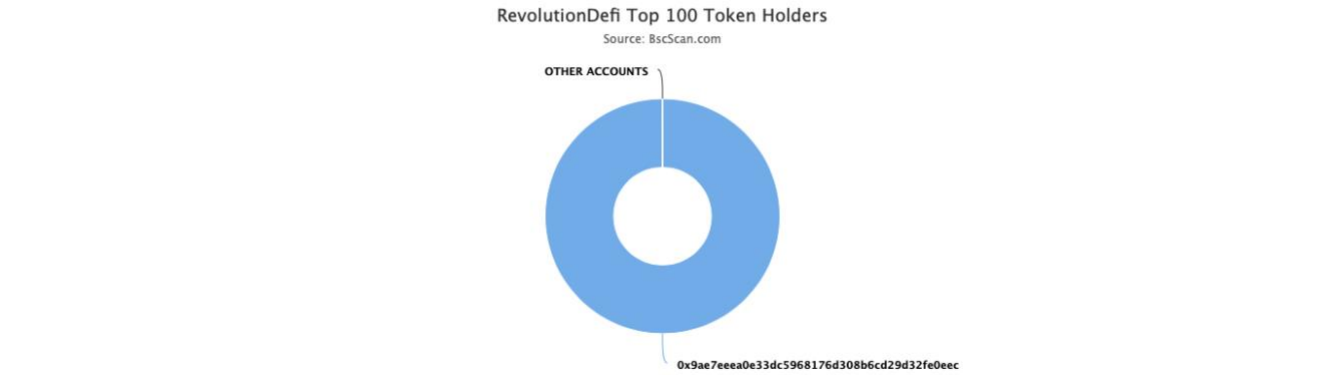
Token contract details for 08.04.2022

Contract name	RevolutionDefi
Contract address	0x8F0fc4F4673be2eCEAEb67bF5126Ee5082Cd4407
Total supply	5,000,000,000
Token ticker	Revolt
Decimals	18
Token holders	1
Transactions count	1
Top 100 holders dominance	100.00%
Next rebase	1680192796
Liquidity receiver	0xafaadd4de290b187ba067b76cf4e1c5ad0e7f543
Liquidity fee	5
pair	0x728a75f9b61173166187ef8b82c605ed78125032
Contract deployer address	0x9ae7eeea0e33dc5968176d308b6cd29d32fe0eec
Owner address	0x9ae7eeea0e33dc5968176d308b6cd29d32fe0eec

RevolutionDefi Token Distribution

The top 100 holders collectively own 100.00% (5,000,000,000.00 Tokens) of RevolutionDefi

Token Total Supply: 5,000,000,000.00 Token | Total Token Holders: 1



(A total of 5,000,000,000.00 tokens held by the top 100 accounts from the total supply of 5,000,000,000.00 token)

RevolutionDefi Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x9ae7eeea0e33dc5968176d308b6cd29d32fe0eec	5,000,000,000	100.0000%

Contract functions details

+ [Lib] SafeMathInt
  - [Int] mul
  - [Int] div
  - [Int] sub
  - [Int] add
  - [Int] abs
  - [Int] max
  - [Int] min

+ [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] allowance
  - [Ext] transfer #
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Lib] SafeMath
  - [Int] add
  - [Int] sub
  - [Int] sub
  - [Int] mul
  - [Int] div
  - [Int] div
  - [Int] mod
  - [Int] max
  - [Int] min

+ [Int] InterfaceLP
  - [Ext] sync #

+ [Lib] Roles
  - [Int] add #
  - [Int] remove #
  - [Int] has

+ ERC20Detailed (IERC20)
  - [Pub] <Constructor> #
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals

+ [Int] IDEXRouter
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidity #
  - [Ext] addLiquidityETH ($)
  - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens ($)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ [Int] IDEXFactory
  - [Ext] createPair #

+ [Int] IBalanceOfSphere
  - [Ext] balanceOfSphere

+ [Int] IPublicBalance
  - [Ext] balanceOf

+ [Int] IDexPair
  - [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] mint #
  - [Ext] burn #
  - [Ext] swap #
  - [Ext] skim #

- [Ext] sync #
- [Ext] initialize #

+ Ownable
- [Pub] <Constructor> #
- [Pub] owner
- [Pub] renounceOwnership #
  - modifiers: onlyOwner
- [Pub] transferOwnership #
  - modifiers: onlyOwner
- [Int] _transferOwnership #

+ RevoltToken (ERC20Detailed, Ownable)
- [Pub] <Constructor> #
  - modifiers: ERC20Detailed
- [Ext] <Fallback> ($)
- [Ext] totalSupply
- [Ext] allowance
- [Pub] balanceOf
- [Pub] markerPairAddress
- [Pub] currentIndex
- [Ext] checkFeeExempt
- [Ext] checkSwapThreshold
- [Int] shouldRebase
- [Int] shouldBurn
- [Int] isStillLaunchPhase
- [Int] isTaxBracket
- [Int] shouldTakeFee
- [Int] shouldSwapBack
- [Pub] getGonBalances
- [Pub] getCirculatingSupply
- [Pub] getCurrentTimestamp
- [Pub] getLiquidityBacking
- [Pub] getUserTotalOnDifferentContractsSphere
- [Pub] getBalanceOfAllSubContracts
- [Pub] getBalanceOfAllSphereGamesContracts
- [Pub] getTokensInLPCirculation
- [Pub] getOneTokenInLPCirculation
- [Pub] getCurrentTaxBracket
- [Pub] isOverLiquified
- [Pub] manualSync #
- [Ext] transfer #
  - modifiers: validRecipient
- [Int] _basicTransfer #
- [Int] _transferFrom #

- [Ext] transferFrom #
  - modifiers: validRecipient
- [Prv] _swapAndLiquify #
- [Prv] _addLiquidity #
- [Prv] _addLiquidityStableCoin #
- [Prv] _swapTokensForBNB #
- [Prv] _swapTokensForStableCoin #
- [Int] swapBack #
  - modifiers: swapping
- [Ext] manualSwapBack #
  - modifiers: onlyOwner
- [Int] takeFee #
- [Prv] tokenBurner #
- [Ext] decreaseAllowance #
- [Ext] increaseAllowance #
- [Ext] approve #
- [Prv] _rebase #
- [Prv] coreRebase #
- [Ext] manualRebase #
  - modifiers: onlyOwner
- [Prv] updateRebaseIndex #
- [Prv] updateLaunchPeriodFee #
- [Pub] addSubContracts #
  - modifiers: onlyOwner
- [Prv] addSphereGamesAddies #
- [Pub] addPartyAddies #
  - modifiers: onlyOwner
- [Pub] setAutomatedMarketMakerPair #
  - modifiers: onlyOwner
- [Ext] setInitialDistributionFinished #
  - modifiers: onlyOwner
- [Ext] setPartyListDivisor #
  - modifiers: onlyOwner
- [Ext] setFeeExempt #
  - modifiers: onlyOwner
- [Ext] setTaxNonMarketMaker #
  - modifiers: onlyOwner
- [Ext] setTargetLiquidity #
  - modifiers: onlyOwner
- [Ext] setSwapBackSettings #
  - modifiers: onlyOwner
- [Ext] setFeeReceivers #
  - modifiers: onlyOwner
- [Ext] setFees #
  - modifiers: onlyOwner

- [Int] setSellFee #
- [Ext] setStablecoin #
  - modifiers: onlyOwner
- [Ext] setPartyIsOver #
  - modifiers: onlyOwner
- [Ext] setTaxBracketFeeMultiplier #
  - modifiers: onlyOwner
- [Ext] clearStuckBalance #
  - modifiers: onlyOwner
- [Ext] rescueToken #
  - modifiers: onlyOwner
- [Ext] setAutoRebase #
  - modifiers: onlyOwner
- [Ext] setBurnFee #
  - modifiers: onlyOwner
- [Ext] setLaunchPeriod #
  - modifiers: onlyOwner
- [Ext] setTaxBracket #
  - modifiers: onlyOwner
- [Ext] setRebaseFrequency #
  - modifiers: onlyOwner
- [Ext] setRewardYield #
  - modifiers: onlyOwner
- [Ext] setFeesOnNormalTransfers #
  - modifiers: onlyOwner
- [Ext] setIsLiquidityInBNB #
  - modifiers: onlyOwner
- [Ext] setNextRebase #
  - modifiers: onlyOwner
- [Ext] setMaxSellTransaction #
  - modifiers: onlyOwner
- [Ext] setMaxBuyTransactionAmount #
  - modifiers: onlyOwner
- [Ext] setBotBlacklist #
  - modifiers: onlyOwner
- [Int] isContract

($) = 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 setAutomatedMarketMakerPair(), getLiquidityBacking(), getTokensInLPCirculation(), manualSync() uses the loop to iterate through _markerPairs array. Function will be aborted with OUT_OF_GAS exception if there will be a long addresses list.
- The function getBalanceOfAllSubContracts(), addSubContracts() uses the loop for iterating through subContracts. It also could be aborted with OUT_OF_GAS exception if there will be a long list.
- The function addSphereGamesAddies() and addPartyAddies() uses the loop for iterating through sphereGamesContracts and partyArray lists. It also could be aborted with OUT_OF_GAS exception if there will be a long lists.

Recommendation:

Check that the arrays' lengths is not too big.

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

- Owner can manually swap back.
- Owner can manually rebase.
- Owner can add subcontracts.
- Owner can add party addresses.
- Owner can add market maker addresses.
- Owner can mark initial distribution finished.
- Owner can change partyListDivisor.
- Owner can exclude from fees.
- Owner can enable/disable taxNonMarketMaker.
- Owner can change targetLiquidity and targetLiquidityDenominator.
- Owner can change gonSwapThreshold and enable/disable swap.
- Owner can change fee receivers.
- Owner can change fees.
- Owner can change stableCoin address.
- Owner can enable isPartyOver parameter.
- Owner can change taxBracketMultiplier.
- Owner can withdraw contract native tokens.
- Owner can withdraw ERC20 tokens.
- Owner can enable/disable autorebase.
- Owner can enable/disable burn.
- Owner can enable/disable isStillLaunchPeriod.
- Owner can enable/disable isTaxBracketEnabled.
- Owner can change rebaseFrequency.
- Owner can change rewardYield and rewardYieldDenominator.
- Owner can enable/disable feesOnNormalTransfers.
- Owner can enable/disable isLiquidityInBnb.
- Owner can change nextRebase time.
- Owner can change maxSellTransactionAmount and maxBuyTransactionAmount.
- Owner can blacklist addresses.

Conclusion

Smart contracts contain low severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details are NOT provided by the team.

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.