



Smart Contract Security Audit

Audit details:

Audited project:	SpaceSweepStake
Deployer address:	0x3f021c01A79Dbd09aB034bf7ddAF3fcb2975f95D
Client contacts:	SpaceSweepStake team
Blockchain:	Binance Smart Chain
Project website:	http://SpaceSweepStake.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 SpaceSweepStake to perform an audit of smart contracts:

- <https://bscscan.com/address/0x3Cc633623C1890Ea7E4388aE4f609a7C9Cd21C5B#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 15.05.2021.

Contract name:	SpaceSweepStake
Contract address:	0x3Cc633623C1890Ea7E4388aE4f609a7C9Cd21C5B
Total supply:	1_000_000_000_000_000_000_000_000
Token ticker:	SSS
Decimals:	9
Token holders:	1796
Transactions count:	11197
Top 100 holders dominance:	91.21%
Liquidity fee:	3
Tax fee:	5
Total fees:	44291810687095266978468
Uniswap V2 pair:	0x5104866d2f40e9827152786504e2db4d21e07174
Contract deployer address:	0x3f021c01A79Dbd09aB034bf7ddAF3fcb2975f95D
Contract's current owner address:	0x3f021c01a79dbd09ab034bf7ddaf3fcb2975f95d

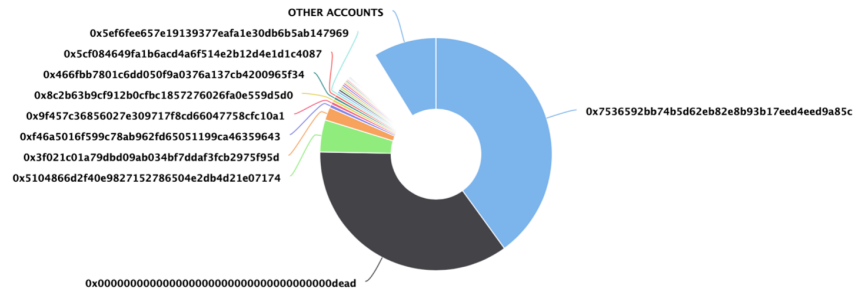
SpaceSweepStake token distribution

The top 100 holders collectively own 91.21% (912,144,190,057,071.00 Tokens) of SpaceSweepStake

Token Total Supply: 1,000,000,000,000.00 Token | Total Token Holders: 1,797

SpaceSweepStake Top 100 Token Holders

Source: BscScan.com



(A total of 912,144,190,057,071.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000.00 token)

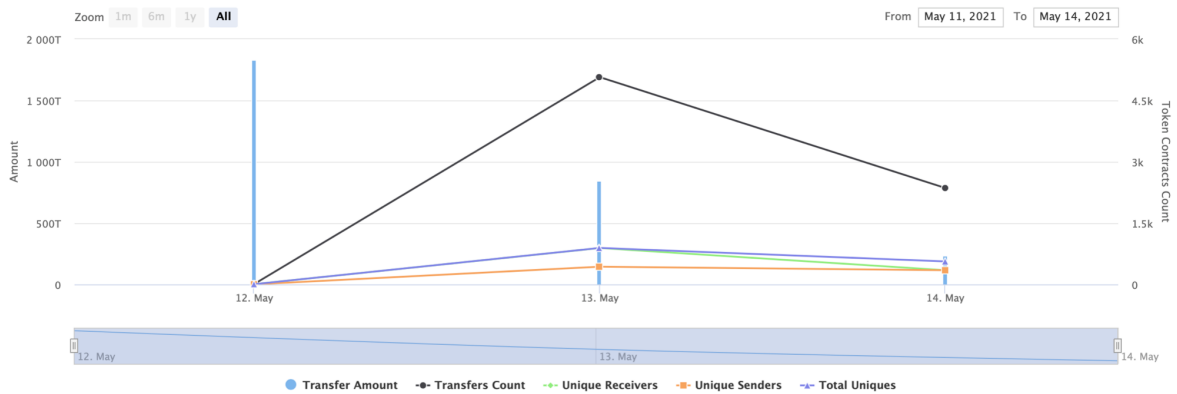
SpaceSweepStake contract interaction details

Time Series: Token Contract Overview

Wed 12, May 2021 - Fri 14, May 2021

Token Contract 0x3Cc633623C1890Ea7E4388aE4f609a7C9Cd21C5B (SpaceSweepStake)





Source: BscScan.com



SpaceSweepStake top 10 token holders

Rank	Address	Quantity (Token)	Percentage
1	0x7536592bb74b5d62eb82e8b93b17eed4eed9a85c	400,000,000,000,000	40.0000%
2	0x00000000000000000000000000000000dead	353,091,531,001,200.448173266	35.3092%
3	0x5104866d2f40e9827152786504e2db4d21e07174	44,602,701,158,441.396441512	4.4603%
4	0x3f021c01a79dbd09ab034bf7dfad3fcb2975f95d	17,900,000,000,000	1.7900%
5	0xf46a5016f599c78ab962fd65051199ca46359643	4,793,632,668,099.031170484	0.4794%
6	0x9f457c36856027e309717f8cd66047758fc10a1	4,229,827,761,549.890303509	0.4230%
7	0x8c2b63b9cf912b0cfbc1857276026fa0e559d5d0	3,871,249,418,008.02869184	0.3871%
8	0x466fbb7801c8dd050f9a0376a137cb4200965f34	3,471,281,117,280.88396139	0.3471%
9	0x5cf084649fa1b6acd4a6f514e2b12d4e1d1c4087	3,452,532,832,408.916773078	0.3453%
10	0x5ef6fee657e19139377afea1e30db6b5ab147969	3,100,176,868,497.897353313	0.3100%

SpaceSweepStake LP token holders

Rank	Address	Quantity	Percentage	Analytics
1	 0x9af68cb9848f8fe881bc0e8027566b047aff6abe	2,846.434005660090829836	100.0000%	
2	 0x00	0.0000000000000001	0.0000%	

Contract functions details

+ [Int] IERC20

- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

+ [Lib] SafeMath

- [Int] add
- [Int] sub
- [Int] sub
- [Int] mul
- [Int] div
- [Int] div
- [Int] mod
- [Int] mod

+ Context

- [Int] _msgSender
- [Int] _msgData

+ [Lib] Address

- [Int] isContract
- [Int] sendValue #
- [Int] functionCall #
- [Int] functionCall #
- [Int] functionCallWithValue #
- [Int] functionCallWithValue #
- [Prv] _functionCallWithValue #

+ Ownable (Context)

- [Int] <Constructor> #
- [Pub] owner
- [Pub] renounceOwnership #
 - modifiers: onlyOwner
- [Pub] transferOwnership #
 - modifiers: onlyOwner
- [Pub] geUnlockTime
- [Pub] lock #
 - modifiers: onlyOwner
- [Pub] unlock #

+ [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] mint #
- [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 #
- + SpaceSweepStake (Context, IERC20, Ownable)
- [Pub] <Constructor> #
 - [Pub] name
 - [Pub] symbol
 - [Pub] decimals
 - [Pub] totalSupply
 - [Pub] balanceOf
 - [Pub] transfer #
 - [Pub] allowance
 - [Pub] approve #
 - [Pub] transferFrom #
 - [Pub] increaseAllowance #
 - [Pub] decreaseAllowance #
 - [Pub] isExcludedFromReward
 - [Pub] totalFees
 - [Pub] deliver #
 - [Pub] reflectionFromToken
 - [Pub] tokenFromReflection
 - [Pub] excludeFromReward #
 - modifiers: onlyOwner
 - [Ext] includeInReward #
 - modifiers: onlyOwner
 - [Prv] _transferBothExcluded #
 - [Ext] <Fallback> (\$)
 - [Prv] _reflectFee #
 - [Prv] _getValues
 - [Prv] _getTValues
 - [Prv] _getRValues

- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Prv] _takeLiquidity #
- [Prv] calculateTaxFee
- [Prv] calculateLiquidityFee
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Pub] isExcludedFromFee
- [Prv] _approve #
- [Prv] _transfer #
- [Prv] swapAndLiquify #
 - modifiers: lockTheSwap
- [Prv] swapTokensForEth #
- [Prv] addLiquidity #
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _transferToExcluded #
- [Prv] _transferFromExcluded #
- [Pub] excludeFromFee #
 - modifiers: onlyOwner
- [Pub] includeInFee #
 - modifiers: onlyOwner
- [Ext] enableAllFees #
 - modifiers: onlyOwner
- [Ext] disableAllFees #
 - modifiers: onlyOwner
- [Ext] setMarketingWallet #
 - modifiers: onlyOwner
- [Ext] setMaxTxPercent #
 - modifiers: onlyOwner
- [Pub] setSwapAndLiquifyEnabled #
 - modifiers: onlyOwner

(\$) = 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 `includeInReward()` uses the loop to find and remove addresses from the `_excluded` list. Function will be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

```
function includeInReward(address account) external onlyOwner() {
    require(!_isExcluded[account], "Account is already excluded");
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (_excluded[i] == account) {
            _excluded[i] = _excluded[_excluded.length - 1];
            tOwned[account] = 0;
            _isExcluded[account] = false;
            _excluded.pop();
            break;
        }
    }
}
```

- ❑ The function `_getCurrentSupply` also uses the loop for evaluating total supply. It also could be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

```
function _getCurrentSupply() private view returns (uint256, uint256) {
    uint256 rSupply = _rTotal;
    uint256 tSupply = _tTotal;
    for (uint256 i = 0; i < _excluded.length; i++) {
        if (
            _rOwned[_excluded[i]] > rSupply ||
            _tOwned[_excluded[i]] > tSupply
        ) return (_rTotal, _tTotal);
        rSupply = rSupply.sub(_rOwned[_excluded[i]]);
        tSupply = tSupply.sub(_tOwned[_excluded[i]]);
    }
    if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
    return (rSupply, tSupply);
}
```

Recommendation:

Use EnumerableSet instead of array or do not use long arrays.

Owner privileges

- ❑ Owner can change the maximum transaction amount.

```
function setMaxTxPercent(uint256 maxTxPercent) external onlyOwner() {  
    maxTxAmount = _tTotal.mul(maxTxPercent).div(  
        10**2  
    );  
}
```

- ❑ Owner can exclude from the fee.

```
function excludeFromFee(address account) public onlyOwner {  
    isExcludedFromFee[account] = true;  
}
```

Recommendations

- ❑ BurnFee is always zero, recommend to remove it usages from contract
- ❑ Transferring zero amount of burnFee makes excess transfers, recommend to remove it

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details provided by the team:

<https://dxsale.app/app/pages/dxlockview?id=993&add=0&type=lpdefi&chain=BSC>

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.