



TechRate
AUDIT COMPANY

Smart Contract Security Audit

TechRate

December, 2021

Audit Details



Audited project

ShibaSlap



Deployer address

0x2d1a51301dc3df8b4df52c2b2013d87cf9ffe55c



Client contacts:

ShibaSlap team



Blockchain

Binance Smart Chain



Project website:

<https://shibaslap.me/>

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 ShibaSlap to perform an audit of smart contracts:

<https://bscscan.com/address/0xbc30d59aff36d7ade2faf8152fb1a66757410fee#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 24.12.2021

Contract name	ShibaSlap
Contract address	0xBC30d59aFF36D7AdE2faF8152fb1a66757410fEE
Total supply	1,000,000,000,000,000
Token ticker	SLAP
Decimals	9
Token holders	371
Transactions count	2,160
Top 100 holders dominance	97.80%
Liquidity fee	5
Tax fee	5
Total fees	88562338852094005344550
Uniswap V2 pair	0x5a4612b183a9b73f991e37e8c7e7fbb1c2fd0774
Contract deployer address	0x2d1a51301dc3df8b4df52c2b2013d87cf9ffe55c
Contract's current owner address	0x00

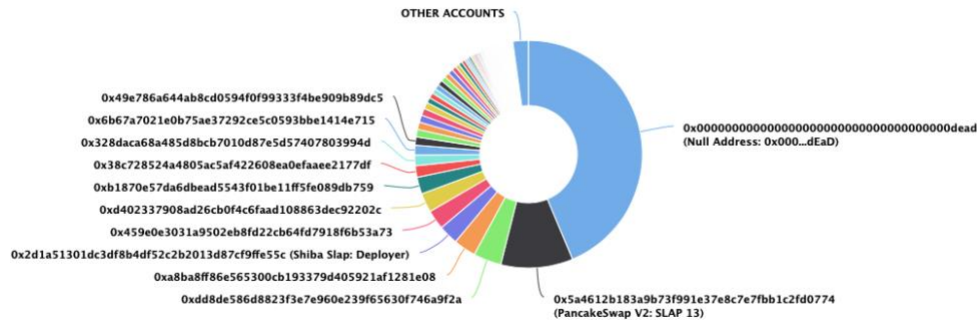
ShibaSlap Token Distribution

The top 100 holders collectively own 97.80% (978,046,295,533,233.00 Tokens) of Shiba Slap

Token Total Supply: 1,000,000,000,000.00 Token | Total Token Holders: 371

Shiba Slap Top 100 Token Holders

Source: BscScan.com



(A total of 978,046,295,533,233.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000.00 token)

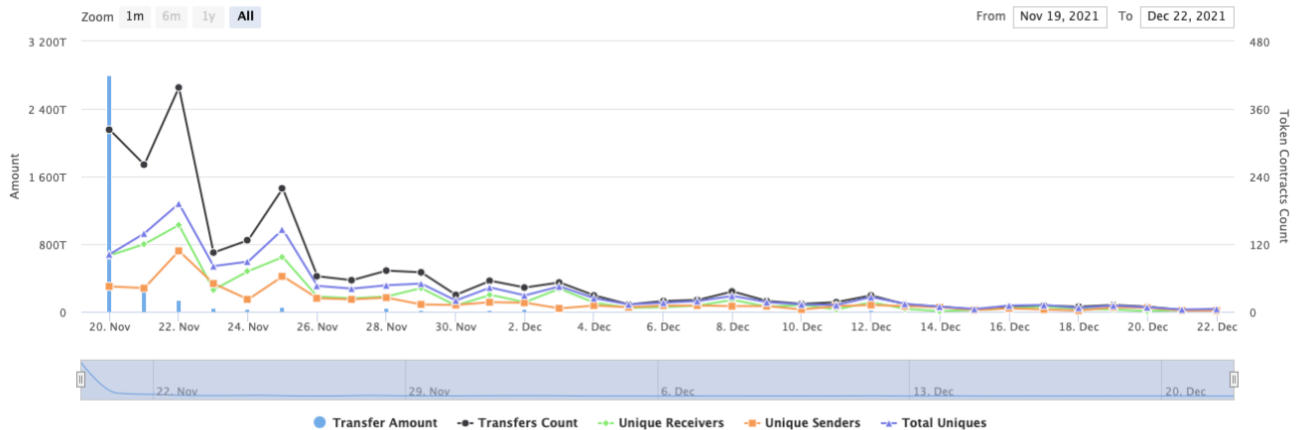
ShibaSlap Contract Interaction Details

Time Series: Token Contract Overview


Sat 20, Nov 2021 - Wed 22, Dec 2021

Token Contract 0xbc30d59aff36d7ade2faf8152fb1a66757410fee (Shiba Slap)

Source: BscScan.com



ShibaSlap Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Null Address: 0x000...dEaD	436,870,580,849,681.884777096	43.6871%
2	 PancakeSwap V2: SLAP 13	102,424,944,386,752.645194883	10.2425%
3	0xdd8de586d8823f3e7e960e239f65630f746a9f2a	39,736,900,702,549.989817573	3.9737%
4	0xa8ba8ff86e565300cb193379d405921af1281e08	31,808,862,966,431.93361241	3.1809%
5	Shiba Slap: Deployer	27,750,596,758,611.670859705	2.7751%
6	0x459e0e3031a9502eb8fd22cb64fd7918f6b53a73	27,610,226,209,861.328768172	2.7610%
7	0xd402337908ad26cb0f4c8faad108863dec92202c	27,297,291,300,755.866007321	2.7297%
8	0xb1870e57da6dbead5543f01be11f5fe089db759	24,009,864,178,212.206018186	2.4010%
9	0x38c728524a4805ac5af422608ea0efaaee2177df	16,336,876,873,197.094642392	1.6337%
10	0x328daca68a485d8bc7010d87e5d57407803994d	15,092,287,251,755.601851722	1.5092%



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 #
- + ShibaSlap (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 #
 - [Pub] excludeFromFee #
 - modifiers: onlyOwner
 - [Pub] includeInFee #
 - modifiers: onlyOwner
 - [Ext] setTaxFeePercent #
 - modifiers: onlyOwner
 - [Ext] setLiquidityFeePercent #
 - modifiers: onlyOwner
 - [Ext] setMaxTxPercent #
 - modifiers: onlyOwner
 - [Pub] setSwapAndLiquifyEnabled #
 - modifiers: onlyOwner
 - [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 #

(\$) = 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:

Check that the excluded array length is not too big.

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

- Owner can change the tax and liquidity fee.

```
function setTaxFeePercent(uint256 taxFee) external onlyOwner() {
    _taxFee = taxFee;
}

function setLiquidityFeePercent(uint256 liquidityFee) external onlyOwner() {
    _liquidityFee = liquidityFee;
}
```

- 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;
}
```

- Owner can lock and unlock. By the way, using these functions the owner could retake privileges even after the ownership was renounced.

```
//Locks the contract for owner for the amount of time provided
function lock(uint256 time) public virtual onlyOwner {
    _previousOwner = _owner;
    _owner = address(0);
    _lockTime = now + time;
    emit OwnershipTransferred(_owner, address(0));
}

//Unlocks the contract for owner when _lockTime is exceeds
function unlock() public virtual {
    require(_previousOwner == msg.sender, "You don't have permission to unlock");
    require(now > _lockTime, "Contract is locked until 7 days");
    emit OwnershipTransferred(_owner, _previousOwner);
    _owner = _previousOwner;
}
```


Conclusion

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

Liquidity locking details are provided by the team:

<https://mudra.website/?certificate=yes&type=0&lp=0x5a4612b183a9b73f991e37e8c7e7fbb1c2fd0774>

Ownership renounce details are provided by the team:

<https://bscscan.com/tx/0x59f24f4c5871c6966db6dab76601310c97f76fc2246eb6d5405ab110c52131a2>

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.