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AUDIT COMPANY

Smart Contract Security Audit

TechRate

August, 2021

Audit Details

Audited project

MiniFootball

Deployer address

0x26a8db072748092398c84b3ab23d9ca61396647c

Client contacts:

MiniFootball team

Blockchain

Binance Smart Chain

Project website:

MiniFootballtoken.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 MiniFootball to perform an audit of smart contracts:

https://bscscan.com/address/0xd024ac1195762f6f13f8cfdf3cdd2c97b33b248b#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.

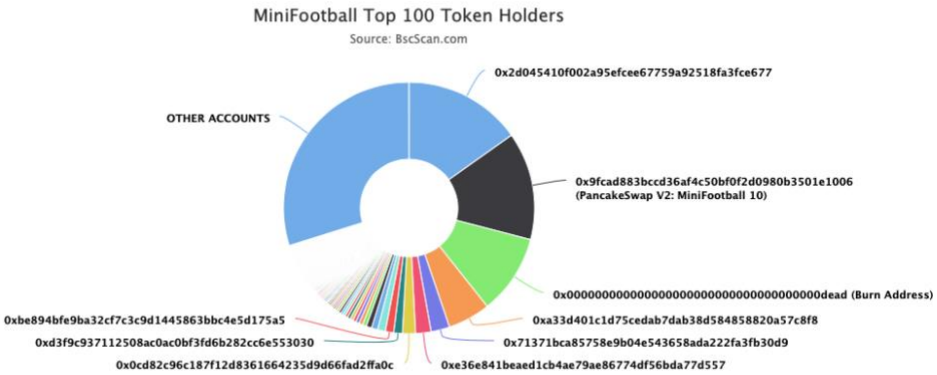
Contracts Details

Token contract details for 17.08.2021

Contract name	MiniFootball
Contract address	0xD024Ac1195762F6F13f8CfDF3cdd2c97b33B248b
Total supply	100,000,000,000,000,000
Token ticker	MiniFootball
Decimals	9
Token holders	12,300
Transactions count	32,854
Top 100 holders dominance	70.17%
Liquidity fee	4
Tax fee	1
Total fees	1240235277766919692421225
Uniswap V2 pair	0x9fcad883bccd36af4c50bf0f2d0980b3501e1006
Contract deployer address	0x26a8db072748092398c84b3ab23d9ca61396647c
Contract's current owner address	0x26a8db072748092398c84b3ab23d9ca61396647c

MiniFootball Token Distribution

The top 100 holders collectively own 70.17% (70,169,322,960,136,600.00 Tokens) of MiniFootball | Token Total Supply: 100,000,000,000,000,000.00 Token | Total Token Holders: 12,300

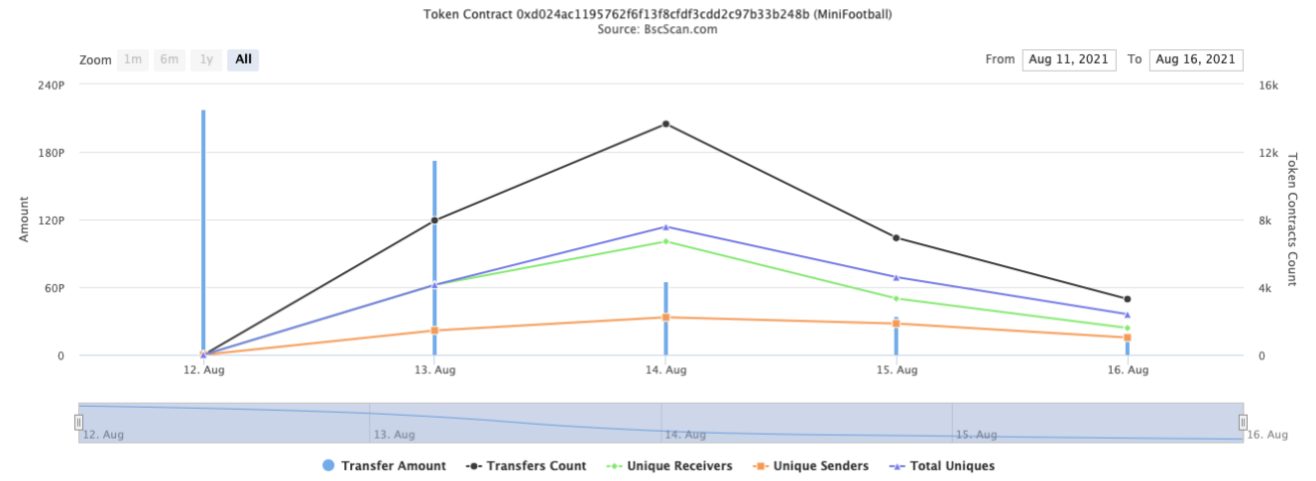


(A total of 70,169,322,960,136,600.00 tokens held by the top 100 accounts from the total supply of 100,000,000,000,000,000.00 token)

MiniFootball Contract Interaction Details

Time Series: Token Contract Overview

Thu 12, Aug 2021 - Mon 16, Aug 2021



MiniFootball Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x2d045410f002a95efcee67759a92518fa3fce677	15,188,427,296,031,900.907491508	15.1884%
2	PancakeSwap V2: MiniFootball 10	13,866,680,508,071,200.250838032	13.8667%
3	Burn Address	10,248,254,739,584,700.64024941	10.2483%
4	0xa33d401c1d75cedab7dab38d584858820a57c8f8	5,475,215,639,112,520.833608527	5.4752%
5	0x71371bca85758e9b04e543658ada222fa3fb30d9	2,399,955,291,286,430.272348204	2.4000%
6	0xe36e841beaed1cb4ae79ae86774df56bda77d557	2,003,934,131,950,670.302057774	2.0039%
7	0x0cd82c96c187f12d8361664235d9d66fad2ffa0c	1,669,469,012,000,950.271159243	1.6695%
8	0xd3f9c937112508ac0ac0bf3fd6b282cc6e553030	1,104,173,591,892,660.894615267	1.1042%
9	0xbe894bfe9ba32cf7c3c9d1445863bbc4e5d175a5	1,085,791,966,405,660.452384161	1.0858%
10	0x1f57edbe0518f2dd1a48e80d3b0d908c135181ce	1,000,000,013,027,670.802171071	1.0000%

MiniFootball LP Token Holders

Rank	Address	Quantity	Percentage
1	0x71371bca85758e9b04e543658ada222fa3fb30d9	129,475.494532211695669062	99.4050%
2	0xad5053d222aac568d4bc71eca78ebcc9217a6a73	659.225447741708527163	0.5061%
3	0x8cc7bc33f5188b1fb683bedc4dbffa77b136833b	95.342794400963946082	0.0732%
4	0xff8e44af0e509fe7c5b9a87fd06d447bb01eae88	8.284617102879715291	0.0064%
5	0xa619da2377feb9151090bd9f41bf482807bbccec	6.281598671126089903	0.0048%
6	0x717cb0eebbd1fe60f2cc2971cfc2f1d135b84547	5.862503415590658588	0.0045%
7	0xaa61c2b7ca17fc6b85e958b1f6c45483ef55c089	0.007327336090251641	0.0000%
8	0xb95ffa9a1508743fa0d0eef6cd1fca97c9bb38f8	0.000000603931007053	0.0000%
9	0xb7eded56806a1af150d7c1e1c3e814c5980886b2	0.00000000000779988	0.0000%
10	0x0000000000000000000000000000000000000000	0.000000000000001	0.0000%

Contract functions details

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

+ [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

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Int] functionDelegateCall #
  - [Int] functionDelegateCall #
  - [Prv] _verifyCallResult

+ Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [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 #

+ CoinToken (Context, IERC20, Ownable)
- [Pub] <Constructor> ($)
- [Pub] name
- [Pub] symbol
- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Pub] isExcludedFromReward
- [Pub] totalFees
- [Pub] deliver #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Pub] excludeFromReward #
  - modifiers: onlyOwner
- [Ext] includeInReward #
  - modifiers: onlyOwner
- [Prv] _transferBothExcluded #
- [Pub] excludeFromFee #
  - modifiers: onlyOwner
- [Pub] includeInFee #
  - modifiers: onlyOwner
- [Ext] setTaxFeePercent #
  - modifiers: onlyOwner
- [Ext] setDevFeePercent #
  - modifiers: onlyOwner
- [Ext] setLiquidityFeePercent #
  - modifiers: onlyOwner
- [Pub] setMaxTxPercent #
  - modifiers: onlyOwner
- [Pub] setDevWalletAddress #
  - modifiers: onlyOwner
- [Pub] setSwapAndLiquifyEnabled #
  - modifiers: onlyOwner
- [Ext] <Fallback> ($)
- [Prv] _reflectFee #
- [Prv] _getValues
- [Prv] _getTValues

- [Prv] _getRValues
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Prv] _takeLiquidity #
- [Prv] _takeDev #
- [Prv] calculateTaxFee
- [Prv] calculateDevFee
- [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 #
- [Ext] setRouterAddress #
  - modifiers: onlyOwner
- [Ext] setNumTokensSellToAddToLiquidity #
  - 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:

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, dev and liquidity fee.

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

ftrace | funcSig
function setDevFeePercent(uint256 devFee) external onlyOwner() {
    _devFee = devFee;
}

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

- Owner can change the maximum transaction amount.

```
function setMaxTxPercent(uint256 maxTxPercent) public onlyOwner {
    _maxTxAmount = maxTxPercent  * 10 ** _decimals;
}
```

- Owner can exclude from the fee.

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

- Owner can change dev address.

```
function setDevWalletAddress(address _addr) public onlyOwner {
    _devWalletAddress = _addr;
}
```

- Owner can change router address.

```
function setRouterAddress(address newRouter) external onlyOwner {
    IUniswapV2Router02 _uniswapV2Router = IUniswapV2Router02(newRouter);
    uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory()).createPair(address(this), _uniswapV2Router.WETH());
    uniswapV2Router = _uniswapV2Router;
}
```

- Owner can minimum number of tokens to add to liquidity.

```
function setNumTokensSellToAddToLiquidity(uint256 amountToUpdate) external onlyOwner {
    numTokensSellToAddToLiquidity = amountToUpdate;
}
```

- 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 = 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(block.timestamp > _lockTime , "Contract is locked.");
    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 provided by the team:
https://dxsale.app/app/v2_9/dxlockview?id=2474&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.