



TechRate
AUDIT COMPANY

Smart Contract Security Audit

Audit Details



Audited project

Mew Inu



Deployer address

0xff37a2c9c13b1f241864e433cdbd4efa6dc4b8fd



Client contacts:

Mew Inu team



Blockchain

Ethereum



Project website:

Not provided by Mew Inu team

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 Mew Inu to perform an audit of smart contracts:

<https://etherscan.io/address/0xe71221fbfcc55d49363c4a2286424b6dbecc368f#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 05.12.2021

| | |
|----------------------------------|--|
| Contract name | Mew Inu |
| Contract address | 0xe71221FBFcc55d49363C4A2286424b6dBEcc368f |
| Total supply | 70,000,000,000 |
| Token ticker | MEW |
| Decimals | 18 |
| Token holders | 1 |
| Transactions count | 1 |
| Top 100 holders dominance | 100.00% |
| Reflection fee | 1 |
| Tx fee | 5 |
| Total reflection fees | 0 |
| Uniswap V2 pair | 0x2ecd9ec2ef8b533d9240cf0f35a4ad00e24dc86f |
| Contract deployer address | 0xff37a2c9c13b1f241864e433cdbd4efa6dc4b8fd |
| Contract's current owner address | 0xff37a2c9c13b1f241864e433cdbd4efa6dc4b8fd |

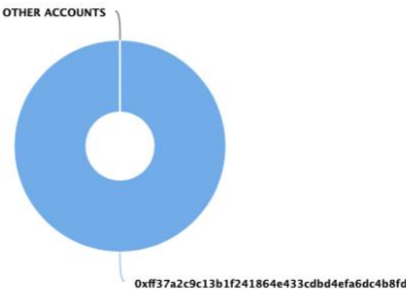
Mew Inu Token Distribution

The top 100 holders collectively own 100.00% (70,000,000,000.00 Tokens) of Mew Inu

Token Total Supply: 70,000,000,000.00 Token | Total Token Holders: 1

Mew Inu Top 100 Token Holders

Source: Etherscan.io



(A total of 70,000,000,000.00 tokens held by the top 100 accounts from the total supply of 70,000,000,000.00 token)

Mew Inu Contract Interaction Details

Time Series: Token Contract Overview

Tue 30, Nov 2021 - Tue 30, Nov 2021

Token Contract 0xe71221fbfcc55d49363c4a2286424b6dbecc368f (Mew Inu)
Source: Etherscan.io



Mew Inu Top 10 Token Holders

| Rank | Address | Quantity (Token) | Percent |
|------|--|------------------|-----------|
| 1. | 0xff37a2c9c13b1f241864e433cdbc4efa6dc4b8fd | 70,000,000,000 | 100.0000% |



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)
 - [Pub] <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] setReflectionFeeTo #

- [Ext] setReflectionFeeToSetter #
- + [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 #
- + MewInu (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] totalReflectionFees
 - [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] setReflectionFeePercent #
 - modifiers: onlyOwner
 - [Ext] setTxFeePercent #
 - modifiers: onlyOwner
 - [Ext] setMaxTxPercent #
 - modifiers: onlyOwner
 - [Pub] setSwapAndWithdrawEnabled #
 - modifiers: onlyOwner
 - [Ext] <Fallback> (\$)
 - [Prv] _reflectReflectionFee #
 - [Prv] _getValues
 - [Prv] _getTValues
 - [Prv] _getRValues
 - [Prv] _getRate
 - [Prv] _getCurrentSupply
 - [Prv] _takeTxFee #
 - [Prv] calculateReflectionTxFee
 - [Prv] calculateTxFee
 - [Prv] removeAllFee #
 - [Prv] restoreAllFee #
 - [Pub] isExcludedFromFee
 - [Prv] _approve #
 - [Prv] _transfer #
 - [Prv] swapAndWithdraw #

- modifiers: lockTheSwap
- [Prv] swapTokensForEth #
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _transferToExcluded #
- [Prv] _transferFromExcluded #
- [Ext] setFeeRecipient #
- [Ext] updateUniRouter #
 - modifiers: onlyOwner
- [Pub] removeFromBlackList #
 - modifiers: onlyOwner
- [Pub] addToBlackList #
 - modifiers: onlyOwner
- [Ext] setMinimunTokenAmountToSwap #
 - 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 included");
    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 exclude from the fee.
- Owner can change the tx and reflection fee.
- Owner can change the maximum transaction amount.
- Owner can enable/disable swapAndWithdrawEnabled.
- Owner can change uniswapV2Router.
- feeRecipient can change feeRecipient.
- Owner can blacklist addresses.
- Owner can change numTokensToSwap.
- Owner can lock and unlock. By the way, using these functions the owner could retake privileges even after the ownership was renounced.

Conclusion

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

Liquidity locking details 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.



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