



## **Smart Contract Security Audit**

TechRate
July, 2021

## **Audit Details**



**Audited project** 

**ADAMUS** 



Deployer address

0x25059EC07DB149207b65B612DC4124dA2A082522



**Client contacts:** 

**ADAMUS** team



Blockchain

**Binance Smart Chain** 





## **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 ADAMUS to perform an audit of smart contracts:

https://bscscan.com/address/0xfF4e936fFF1AA247c849aE5Cda8B655992Fb2c6D#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.

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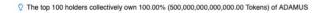
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## **Contracts Details**

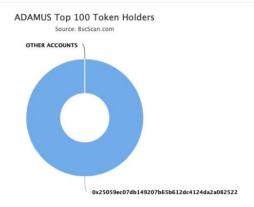
#### Token contract details for 15.07.2021

Contract name	ADAMUS
Contract address	0xfF4e936fFF1AA247c849aE5Cda8B655992Fb2c6D
Total supply	500,000,000,000
Token ticker	ADAMUS
Decimals	9
Token holders	1
Transactions count	1
Top 100 holders dominance	100.00%
Liquidity fee	10
Tax fee	5
Total fees	0
Uniswap V2 pair	0x5b4f628fb7e0646eced594ad49bcc3431276f234
Contract deployer address	0x25059EC07DB149207b65B612DC4124dA2A08252 2
Contract's current owner address	0x25059ec07db149207b65b612dc4124da2a082522

## **ADAMUS Token Distribution**



▼ Token Total Supply: 500,000,000,000,000.00 Token I Total Token Holders: 1



(A total of 500,000,000,000,000,000,000 tokens held by the top 100 accounts from the total supply of 500,000,000,000,000,000 token)

# ADAMUS Contract Interaction Details



# **ADAMUS Top 10 Token Holders**

0x25059ec07db149207b65b612dc4124da2a082522 500,000,000,000,000,000 100.0000%



## **Contract functions details**

#### + [Int] IERC20 - [Ext] totalSupply - [Ext] balanceOf - [Ext] transfer # - [Ext] allowance - [Ext] approve # - [Ext] transferFrom # + [Lib] SafeMath - [Int] 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] IUniswapV2Factorv - [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] IUniswapV2Route
```

- + [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.

 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.

#### 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.

Owner can change the maximum transaction amount.

```
function setMaxTxPercent(uint256 maxTxPercent1) public onlyOwner {
    _maxTxAmount = maxTxPercent1 * 10 ** _decimals;
}
```

Owner can exclude from the fee.

```
function excludeFromFee(address account1) public onlyOwner {
         isExcludedFromFee[account1] = true;
}
```

Owner can change dev address.

```
function setDevWalletAddress(address _addr 1) public onlyOwner {
    _devWalletAddress = _addr 1;
}
```

Owner can change router address.

```
function setRouterAddress(address newRouter1) external onlyOwner {
    IUniswapV2Router02 _uniswapV2Router = IUniswapV2Router02(newRouter1);
    uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory()).createPair(address(this), _uniswapV2Router.WETH());
    uniswapV2Router = _uniswapV2Router;
}
```

Owner can minimum number of tokens to add to liquidity.

```
function setNumTokensSellToAddToLiquidity(uint256 amountToUpdate1) external onlyOwner {
   numTokensSellToAddToLiquidity = amountToUpdate1;
}
```

 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 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.

