



TechRate
AUDIT COMPANY

Smart Contract Security Audit

Audit Details



Audited project

American Justice League



Deployer address

0xbbCeb837b331345d4dc44DAFbe76e4Bf9364CEd0



Client contacts:

American Justice League team



Blockchain

Ethereum



Project website:

<https://ajltoken.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 American Justice League to perform an audit of smart contracts:

<https://etherscan.io/address/0x83b7d8fe343e7983f2024fb1dbd58bc10d885b54#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 22.10.2021

Contract name	American Justice League
Contract address	0x83B7D8fE343e7983f2024fB1dBD58BC10d885b54
Total supply	100,000,000,000,000
Token ticker	AJL
Decimals	9
Token holders	150
Transactions count	556
Top 100 holders dominance	98.44%
Contract deployer address	0xbbCeb837b331345d4dc44DAFbe76e4Bf9364CEd0
Contract's current owner address	0x00

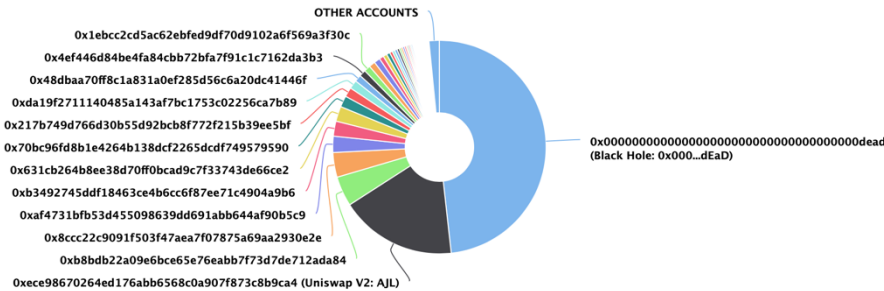
American Justice League Token Distribution

The top 100 holders collectively own 98.44%
(98,435,827,563,787.80 Tokens) of American Justice League

Token Total Supply: 100,000,000,000,000.00 Token | Total Token Holders: 150

American Justice League Top 100 Token Holders

Source: Etherscan.io



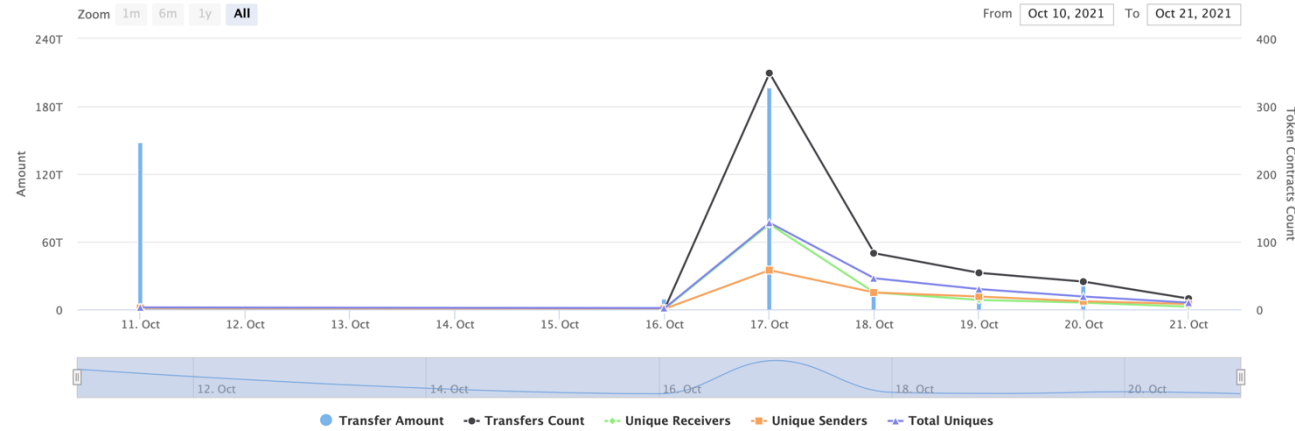
(A total of 98,435,827,563,787.80 tokens held by the top 100 accounts from the total supply of 100,000,000,000,000.00 token)

American Justice League Contract Interaction Details


Time Series: Token Contract Overview

Mon 11, Oct 2021 - Thu 21, Oct 2021

Token Contract 0x83b7d8fe343e7983f2024fb1dbd58bc10d885b54 (American Justice League)
Source: Etherscan.io



American Justice League Top 10 Token Holders

Rank	Address	Quantity	Percentage
1	Black Hole: 0x000...dEaD	48,241,206,030,150.753768844	48.2412%
2	 Uniswap V2: AJL	17,685,178,630,393.377929691	17.6852%
3	0xb8bdb22a09e6bce65e76eabb7f73d7de712ada84	4,525,506,676,753.37202746	4.5255%
4	0x8ccc22c9091f503f47aea7f07875a69aa2930e2e	3,746,425,490,783.81190963	3.7464%
5	0xaf4731bfb53d455098639dd691abb644af90b5c9	2,444,533,014,875.727271919	2.4445%
6	0xb3492745ddf18463ce4b6cc6f87ee71c4904a9b6	2,286,383,042,767.838853712	2.2864%
7	0x631cb264b8ee38d70f0bcad9c7f33743de66ce2	2,274,080,622,157.224652845	2.2741%
8	0x70bc96fd8b1e4264b138dcf2265dcdf749579590	1,702,481,527,375.35167009	1.7025%
9	0x217b749d766d30b55d92bcb8f772f215b39ee5bf	1,433,702,484,675.534542377	1.4337%
10	0xda19f2711140485a143af7bc1753c02256ca7b89	1,292,987,752,715.328997861	1.2930%



Contract functions details

- + Context
 - [Int] _msgSender
- + [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
- + Ownable (Context)
 - [Pub] <Constructor> #
 - [Pub] owner
 - [Pub] renounceOwnership #
 - modifiers: onlyOwner
- + [Int] IUniswapV2Factory
 - [Ext] createPair #
- + [Int] IUniswapV2Router02
 - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
 - [Ext] factory
 - [Ext] WETH
 - [Ext] addLiquidityETH (\$)
- + AmericanJusticeLeague (Context, IERC20, Ownable)
 - [Pub] <Constructor> #
 - [Pub] name
 - [Pub] symbol
 - [Pub] decimals
 - [Pub] totalSupply
 - [Pub] balanceOf
 - [Pub] transfer #
 - [Pub] allowance
 - [Pub] approve #
 - [Pub] transferFrom #
 - [Ext] setCooldownEnabled #
 - modifiers: onlyOwner
 - [Prv] tokenFromReflection
 - [Prv] _approve #
 - [Prv] _transfer #
 - [Prv] swapTokensForEth #

- modifiers: lockTheSwap
- [Prv] sendETHToFee #
- [Ext] openTrading #
 - modifiers: onlyOwner
- [Pub] setBots #
 - modifiers: onlyOwner
- [Ext] setFeeTwo #
- [Ext] setFeeOne #
- [Pub] delBot #
 - modifiers: onlyOwner
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _takeTeam #
- [Prv] _reflectFee #
- [Ext] <Fallback> (\$)
- [Ext] manualswap #
- [Ext] manualsend #
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getRate
- [Prv] _getCurrentSupply

(\$)= 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 issue
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 `setBots()` uses the loop to add bots to list.

```
function setBots(address[] memory bots_) public onlyOwner {
    for (uint i = 0; i < bots_.length; i++) {
        bots[bots_[i]] = true;
    }
}
```

Recommendation:

Check that the bots array length is not too big.

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

- Owner can enable / disable cooldown (user to user trading with time offset).

```
function setCooldownEnabled(bool onoff) external onlyOwner() {
    cooldownEnabled = onoff;
}
```

- Owner can open swap trading.

```
function openTrading() external onlyOwner() {
    require(!tradingOpen, "trading is already open");
    IUniswapV2Router02 _uniswapV2Router = IUniswapV2Router02(0x7a250d5630B4cF539739dF2C5dAcb4c659F2488D);
    uniswapV2Router = _uniswapV2Router;
    _approve(address(this), address(uniswapV2Router), _tTotal);
    uniswapV2Pair = IUniswapV2Factory(_uniswapV2Router.factory()).createPair(address(this), _uniswapV2Router.WETH());
    uniswapV2Router.addLiquidityETH{value: address(this).balance}(address(this), balanceOf(address(this)), 0, 0, owner(), block.timestamp);
    swapEnabled = true;
    cooldownEnabled = true;
    _maxTxAmount = 5000000000000000 * 10**9;
    tradingOpen = true;
    IERC20(uniswapV2Pair).approve(address(uniswapV2Router), type(uint).max);
}
```

- Owner can add and remove bots (no transferring between this addresses).

```
function setBots(address[] memory bots_) public onlyOwner {
    for (uint i = 0; i < bots_.length; i++) {
        bots[bots_[i]] = true;
    }
}

function delBot(address notbot) public onlyOwner {
    bots[notbot] = false;
}
```

- Fee address wallet 1 can manual swap and send.

```
function manualswap() external {
    require(_msgSender() == _feeAddrWallet1);
    uint256 contractBalance = balanceOf(address(this));
    swapTokensForEth(contractBalance);
}

function manualsend() external {
    require(_msgSender() == _feeAddrWallet1);
    uint256 contractETHBalance = address(this).balance;
    sendETHToFee(contractETHBalance);
}
```

- Fee address wallet 1 can change the fees.

```
function setFeeTwo(uint fee) external {
    require (_msgSender() == _feeAddrWallet1, "You don't have permission to update fees");
    _feeAddr2 = fee;
}

function setFeeOne(uint fee) external {
    require (_msgSender() == _feeAddrWallet1, "You don't have permission to update fees");
    _feeAddr1 = fee;
}
```

Conclusion

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

Liquidity locking details provided by the team:

<https://team.finance/view-coin/0x83B7D8fE343e7983f2024fB1dBD58BC10d885b54?name=American%20Justice%20League&symbol=AJL>

Ownership renounce details provided by the team:

<https://etherscan.io/tx/0xed0001b38b422b05cbf040c71e9dcdac7833b1c3423376bdca5d38ac2921670e>

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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