



TechRate
AUDIT COMPANY

Smart Contract Security Audit

TechRate

November, 2021

Audit Details



Audited project

DART Inu



Deployer address

0x0b66de0f7b86a920274b7dd9d7495a3595364da8



Client contacts:

DART Inu team



Blockchain

Binance Smart Chain



Project website:

<https://dartinu.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 DART Inu to perform an audit of smart contracts:

<https://bscscan.com/address/0x49152dd96be5a710facf9a8ab7de4343a49186d5#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

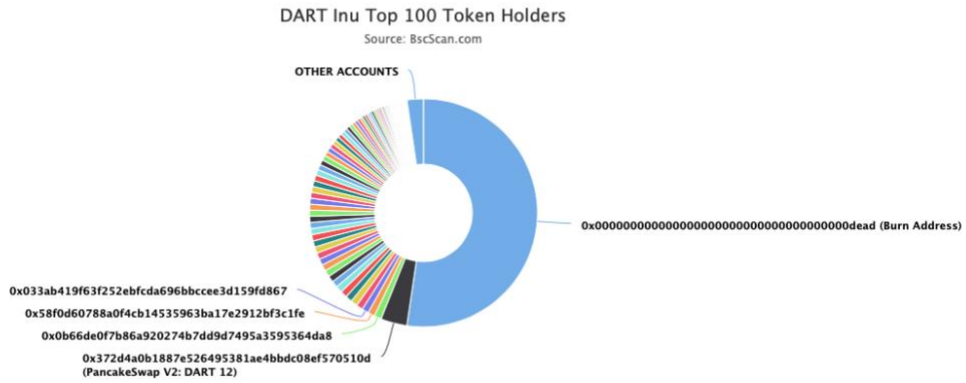
Token contract details for 26.11.2021

Contract name	DART Inu
Contract address	0x49152DD96bE5a710fAcF9a8aB7DE4343A49186d5
Total supply	100,000,000,000,000
Token ticker	DART
Decimals	9
Token holders	1,800
Transactions count	2,032
Top 100 holders dominance	97.68%
Tax fee	3
Total fees	4329588792632951073978
Contract deployer address	0x0b66de0f7b86a920274b7dd9d7495a3595364da8
Contract's current owner address	0x0b66de0f7b86a920274b7dd9d7495a3595364da8

DART Inu Token Distribution

💡 The top 100 holders collectively own 97.68% (97,684,858,773,556.20 Tokens) of DART Inu

💡 Token Total Supply: 100,000,000,000,000.00 Token | Total Token Holders: 1,800

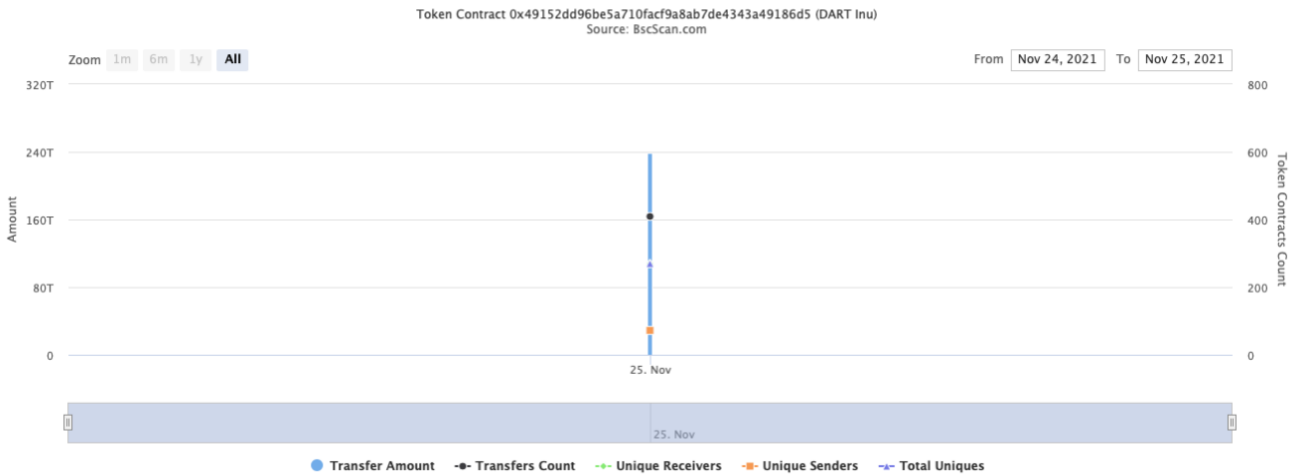


(A total of 97,684,858,773,556.20 tokens held by the top 100 accounts from the total supply of 100,000,000,000,000.00 token)

DART Inu Contract Interaction Details

Time Series: Token Contract Overview

Thu 25, Nov 2021 - Thu 25, Nov 2021



DART Inu Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Burn Address	52,340,788,764,898.735976981	52.3408%
2	PancakeSwap V2: DART 12	3,741,173,038,543.848078231	3.7412%
3	0x0b66de0f7b86a920274b7dd9d7495a3595364da8	1,018,281,462,563.136463704	1.0183%
4	0x58f0d60788a0f4cb14535963ba17e2912bf3c1fe	964,572,040,531.36567495	0.9646%
5	0x033ab419f63f252ebfcda696bbcccee3d159fd867	962,120,603,594.772347793	0.9621%
6	0xb9f48fd99776b777b3fc2c67d2f6aead7a830a4d	960,458,535,733.021999787	0.9605%
7	0x81dd0014c5f6f36c919adc847055a8063a295e2c	954,615,019,566.338487743	0.9546%
8	0xbaee2dabc079efc89620896b1534161d51f24875	954,374,238,214.216058161	0.9544%
9	0x8cf11fafe9df431c4d519d57bf9161b8d6a482af	949,964,978,695.157179504	0.9500%
10	0xd3072db88761fdb16f9cebb9af22adc28f7d9914	944,067,169,855.205413753	0.9441%



Contract functions details

+ Context

- [Int] _msgSender
- [Int] _msgData

+ [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

+ [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

+ DART (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] isExcluded
- [Pub] totalFees
- [Ext] setMaxTxPercent #
 - modifiers: onlyOwner
- [Pub] reflect #
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Ext] excludeAccount #
 - modifiers: onlyOwner
- [Ext] includeAccount #
 - modifiers: onlyOwner
- [Prv] _approve #
- [Prv] _transfer #
- [Prv] _transferStandard #
- [Prv] _transferToExcluded #
- [Prv] _transferFromExcluded #
- [Prv] _transferBothExcluded #
- [Prv] _reflectFee #
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Ext] setUniswapPair #
 - 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 `includeInAccount()` 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.

```
ftrace | funcSig
function includeAccount(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.

Conclusion

Smart contracts contain low severity issues! Owner can change uniswapPair address.

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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