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AUDIT COMPANY

Smart Contract Security Audit

TechRate

August, 2021

Audit Details

Audited project

Trust Community Token

Deployer address

0xcc153b00b2ed1872451388c62549f39d5158bf3c

Client contacts:

Trust Community Token team

Blockchain

Ethereum

Project website:

Not provided by Trust Community Token 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 Trust Community Token to perform an audit of smart contracts:

https://etherscan.io/address/0x84155b2be780c8ecedfe06cdad341f295858579d#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

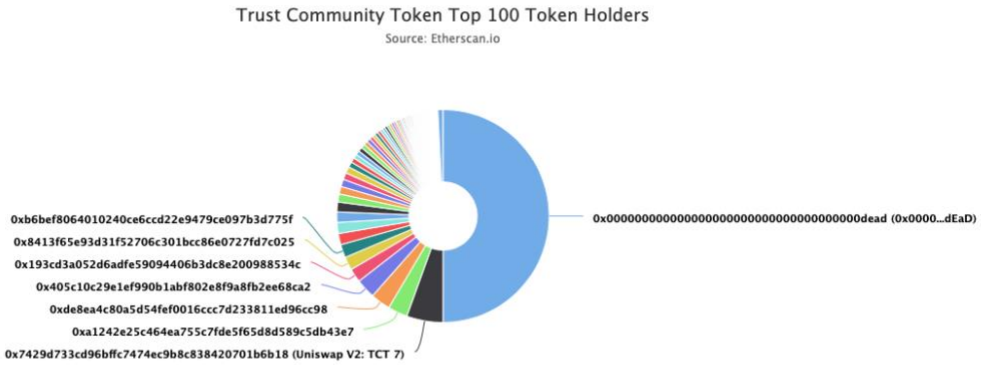
Token contract details for 29.08.2021

Contract name	Trust Community Token
Contract address	0x84155b2be780C8eCEdFe06CDaD341f295858579D
Total supply	100,000,000,000,000
Token ticker	TCT
Decimals	18
Token holders	165
Transactions count	1,339
Top 100 holders dominance	99.24%
Burn wallet	0x88927ae2c17f739df5be18b34d382889febce82f
Community wallet	0x23f7b45043e930b36fcb31d4a44d61bcc044cccf
Contract deployer address	0xcc153b00b2ed1872451388c62549f39d5158bf3c
Contract's current owner address	0xcc153b00b2ed1872451388c62549f39d5158bf3c

Trust Community Token Token Distribution

The top 100 holders collectively own 99.24%
(99,237,282,171,399.60 Tokens) of Trust Community Token

Token Total Supply: 100,000,000,000,000.00 Token | Total Token Holders: 165

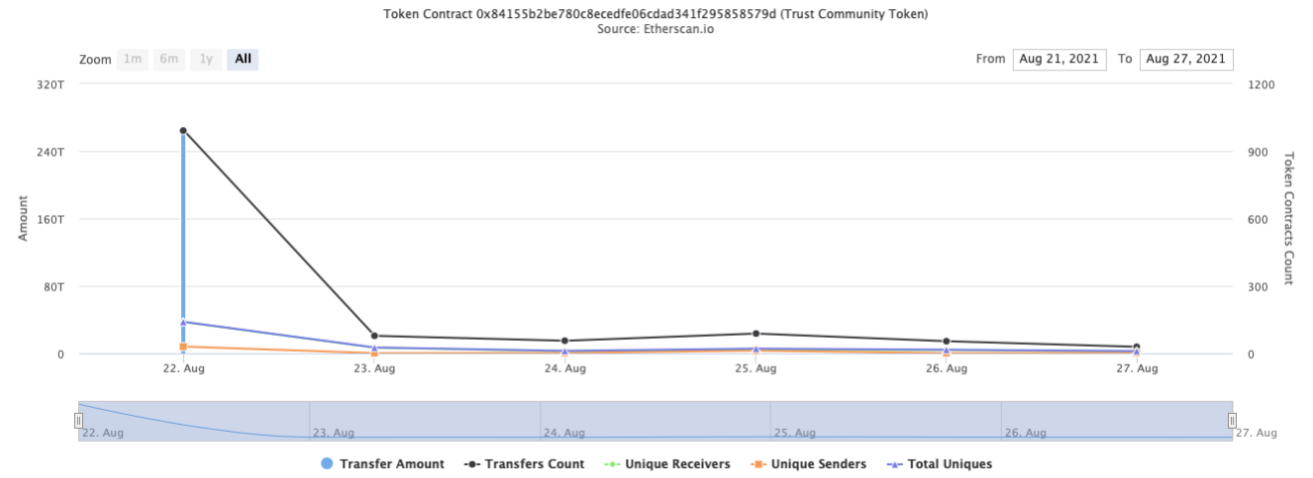


(A total of 99,237,282,171,399.60 tokens held by the top 100 accounts from the total supply of 100,000,000,000,000.00 token)

Trust Community Token Contract Interaction Details

Time Series: Token Contract Overview

Sun 22, Aug 2021 - Fri 27, Aug 2021



Trust Community Token Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x0000...dEaD	50,000,000,000,000	50.0000%
2	Uniswap V2: TCT 7	5,540,806,359,900.012760040583380935	5.5408%
3	0xa1242e25c464ea755c7fde5f65d8d589c5db43e7	3,000,000,000,000	3.0000%
4	0xde8ea4c80a5d54fef0016ccc7d233811ed96cc98	3,000,000,000,000	3.0000%
5	0x405c10c29e1ef990b1abf802e8f9a8fb2ee68ca2	3,000,000,000,000	3.0000%
6	0x193cd3a052d6adfe59094406b3dc8e200988534c	2,097,570,804,012.975119268506411249	2.0976%
7	0x8413f65e93d31f52706c301bcc86e0727fd7c025	2,017,924,296,029.171523351624214084	2.0179%
8	0xb6bef8064010240ce6ccd22e9479ce097b3d775f	2,000,000,000,000	2.0000%
9	0xd877282f5a1a22d7f96a4d3c984edceacce44689	1,701,375,029,502.133378323169184644	1.7014%
10	0x4a7cd48a84c33df5c018fab1828ef3147dfa6d99	1,676,408,318,613.72	1.6764%

Contract functions details

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Int] functionDelegateCall #
  - [Int] functionDelegateCall #
  - [Prv] _verifyCallResult
+ Context
  - [Int] _msgSender
  - [Int] _msgData
+ ERC20 (Context, IERC20, IERC20Metadata)
  - [Pub] <Constructor> #
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals
  - [Pub] totalSupply
  - [Pub] balanceOf
  - [Pub] transfer #
  - [Pub] allowance
  - [Pub] approve #
  - [Pub] transferFrom #
  - [Pub] increaseAllowance #
  - [Pub] decreaseAllowance #
  - [Int] _transfer #
  - [Int] _mint #
  - [Int] _burn #
  - [Int] _approve #
  - [Pub] burnAddress #
  - [Int] _beforeTokenTransfer #
  - [Int] _afterTokenTransfer #
+ [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #
+ [Int] IERC20Metadata (IERC20)
  - [Ext] name
  - [Ext] symbol
  - [Ext] decimals

+ Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #

    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [Prv] _setOwner #

+ TrustCommunityToken (ERC20, Ownable)
  - [Pub] <Constructor> #
    - modifiers: ERC20
  - [Pub] transfer #
  - [Pub] transferFrom #
  - [Pub] communityWallet
  - [Pub] burnWallet
  - [Pub] isAddressBlocked
  - [Ext] isSellLimitForAddress
  - [Ext] isSellLimitEnabled
  - [Ext] burnTokens #
    - modifiers: onlyOwner
  - [Ext] taxFreeTransfer #
    - modifiers: onlyOwner
  - [Ext] taxFreeTransferFrom #
    - modifiers: onlyOwner
  - [Ext] taxFreeTransfers #
    - modifiers: onlyOwner
  - [Ext] blockAddresses #
    - modifiers: onlyOwner
  - [Ext] enableOrDisableSellLimit #
    - modifiers: onlyOwner
  - [Ext] setBuyLimitBasePoints #
    - modifiers: onlyOwner
  - [Ext] getBuyLimitBasePoints
  - [Ext] setEnableDisableFailSafe #
    - modifiers: onlyOwner
  - [Ext] setEnableDisableFailSafe
  - [Ext] setSellLimitBasePoints #
    - modifiers: onlyOwner
  - [Ext] getSellLimitBasePoints
  - [Ext] unblockAddresses #
    - modifiers: onlyOwner
  - [Ext] addSellLimitAddresses #
    - modifiers: onlyOwner
  - [Ext] addBuyAddresses #
    - modifiers: onlyOwner
  - [Ext] removedBuyAddresses #
    - modifiers: onlyOwner
  - [Ext] removeSellLimitAddresses #
    - modifiers: onlyOwner
  - [Int] checkIfSellExceedsLimit #
  - [Int] checkIfExceedsLimit #
  - [Int] isBuyAddress #
  - [Int] doValidateBeforeTransfer #

($) = 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:

- Functions `unblockAddresses()`, `addSellLimitAddresses()`,`addBuyAddresses()`, `removedBuyAddresses()`, `removeSellLimitAddresses()`, `taxFreeTransfers()` uses the loop to operate with addresses list to apply operations with it. Functions will be aborted with `OUT_OF_GAS` exception if there will be a long excluded addresses list.

Recommendation:
Be careful about addresses list length.

Notes:

- Internal _burn function works wrong, but do not affect anything.
- checkIfExceedsLimit function compares _buyLimitBasePoints with zero, but probably should check basePoints value.
- There is sending tokens to burn address instead of decreasing total supply.

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

- Owner can burn tokens.
- Owner can transfer without taxes.
- Owner can block addresses.
- Owner can enable/disable sell limit.
- Owner can change _buyLimitBasePoints.
- Owner can enable/disable _failSafe.
- Owner can change _sellLimitBasePoints.
- Owner can add addresses in _sellLimit.
- Owner can add buy addresses.

Conclusion

Smart contracts contain low severity issues!

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.