

# Security Assessment

## **TATA Coin**

Dec 9th, 2021





# Summary

This report has been prepared for TATA Coin (TATA) to discover issues and vulnerabilities in the source code of the TATA Coin (TATA) project as well as any contract dependencies that were not part of an officially recognized library. A comprehensive examination has been performed, utilizing Static Analysis, Manual Review, and Testnet Deployment techniques.

The auditing process pays special attention to the following considerations:

Testing the smart contracts against both common and uncommon attack vectors.

Assessing the codebase to ensure compliance with current best practices and industry standards.

Ensuring contract logic meets the specifications and intentions of the client.

Cross-referencing contract structure and implementation against similar smart contracts produced by industry leaders.

Thorough line-by-line manual review of the entire codebase by industry experts.

The security assessment resulted in findings that ranged from critical to informational. We recommend addressing these findings to ensure a high level of security standards and industry practices.

We suggest recommendations that could better serve the project from the security perspective:

Enhance general coding practices for better structures of source codes;

Add enough unit tests to cover the possible use cases;

Provide more comments per each function for readability, especially contracts that are verified in public;

Provide more transparency on privileged activities once the protocol is live.

This is a limited report on our findings based on our analysis, in accordance with good industry practice as of 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 disclaimer below - please make sure to read it in full.



# Overview

Digital Ocean was commissioned by TATA Coin to perform an audit of smart contracts:

**0x6f112c6AaF661684E99f1b4A45F861587c0595F1**

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 improving the security posture of the smart contract by remediating the issues that were identified.



## Project Summary

<b>Name</b>	TATA Coin
<b>Description</b>	World's first 100% fully community-driven and decentralized cryptocurrency. Tata Coin aims to make decentralized finance completely secure and to provide the most secure payment system.
<b>Platform</b>	BSC
<b>Language</b>	Solidity
<b>Codebase</b>	<a href="https://bit.ly/TATACoinContract">https://bit.ly/TATACoinContract</a>
<b>Website</b>	<a href="https://www.tatacoin.net">https://www.tatacoin.net</a>

## Contract Details

<b>Contract Address</b>	0x6f112c6AaF661684E99f1b4A45F861587c0595F1
<b>Total Supply</b>	9,000,000 TATA
<b>Symbol</b>	TATA
<b>Decimals</b>	18
<b>Deployer Address</b>	0xaaC9d1a8A3234dd83ee3eCAC232E5699880b268a
<b>Owner Address</b>	Ownership Renounced



## Audit Summary

<b>Delivery Date</b>	Dec 09, 2021
<b>Audit Methodology</b>	Static Analysis, Manual Review, Testnet Deployment
<b>Key Components</b>	TATACoin.sol

## Vulnerability Summary

<b>Vulnerability Level</b>	<b>Total</b>
<b>Critical</b>	0
<b>Major</b>	0
<b>Medium</b>	0
<b>Minor</b>	0
<b>Informational</b>	0
<b>Discussion</b>	0



## **Introduction** (Source: Whitepaper)

Tata Coin aims to make decentralized finance completely secure and to provide the most secure payment system to multinational companies and organizations, including investors, around the world, allowing them to easily and securely transact digital transactions using blockchain technology and be able to own their valuable assets.

Tata Coin is a fully Community-Driven Decentralized Cryptocurrency based on the goal that it will be the safest Global Digital Currency in the world and will be used worldwide as a payment method. A Digital Currency that will not be owned or controlled by any individual, organization, entity, or group, and Tata Coin has been made 100% Community driven. Tata Coin has been launched as the world's first Digital Currency owned by 'You'.

Ownership Renounced

Liquidity Locked




## Source Code (Verified)

Transactions **Contract**  Events Analytics Comments

Code Read Contract Write Contract

 Search Source Code  

 **Contract Source Code Verified** (Exact Match) 



Contract Name: **TATA\_Coin**

Optimization Enabled: **No** with 200 runs

Compiler Version: **v0.5.16+commit.9c3226ce**

Other Settings: **default** evmVersion, **None** [license](#)

 **Contract Source Code** (Solidity)

Outline  More Options 

```
1  /**
2   *Submitted for verification at BscScan.com on 2021-12-09
3   */
4
5  pragma solidity 0.5.16;
6  // SPDX-License-Identifier: None
7
8  /**
9
10 TATA
11
12  * Copyright © 2021 TATA Coin - A New Era of Finance | All Rights Reserved
13  * For more details please visit the website (www.tatacoin.net)
14
15  * Name: TATA Coin
16  * Symbol: TATA
17  * Decimals: 18
18  * Total Supply: 9,000,000
19  * Max Supply: 9,000,000
20  * Circulating Supply: 9,000,000
21
22  * TATA Coin is a fully Decentralized Cryptocurrency based on the goal that it will be the safest global Digital Currency in the world and will be used worldwide as a payment method. A
23  Digital Currency that will not be owned or controlled by any individual, organization, entity, or group. TATA Coin has been made 100% complete Community-driven.
24
25  */
26
27  interface IBEP20 {
28  /**
29   * @dev Returns the amount of tokens in existence.
30   */
31   function totalSupply() external view returns (uint256);
32
33  /**
34   * @dev Returns the token decimals.
35   */
36   function decimals() external view returns (uint8);
37
38  /**
39   * @dev Returns the token symbol.
40   */
41   function symbol() external view returns (string memory);
42
43  /**
44   * @dev Returns the token name.
45   */
46   function name() external view returns (string memory);
47  }
```



## Website Test (SSL Secured) [www.tatacoin.net](http://www.tatacoin.net)


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# TATA Coin A New Era of Finance Global Payment Solution

World's first 100% fully community-driven and decentralized cryptocurrency. Owners are solely investors. No person, organization, or group can control it and there's no CEO.

[BUY NOW](#)
[How to Buy](#) [White Paper](#)

JOIN OUR COMMUNITY



### Presale Ends On

13th Dec 2021, 15:00 UTC

04 Days 02 Hours 44 Min 23 Sec

Raised so far **37.28 BNB**


[BUY TOKEN NOW](#)

Minimum Purchase: 0.01 BNB

### CONTRACT

0x6f112c6AaF661684E99fb4A45F861587



## Latest Performance Report for: <http://tatacoin.net/>

Report generated: Thu, Dec 9, 2021 4:18 AM -0800

Test Server Location: Vancouver, Canada

Using: Chrome (Desktop) 90.0.4430.212, Lighthouse 8.3.0

### GTmetrix Grade ?

C

Performance ?

62%

Structure ?

93%

### Web Vitals ?

LCP ?

1.6s

TBT ?

385ms

CLS ?

0.03

Summary

Performance

Structure

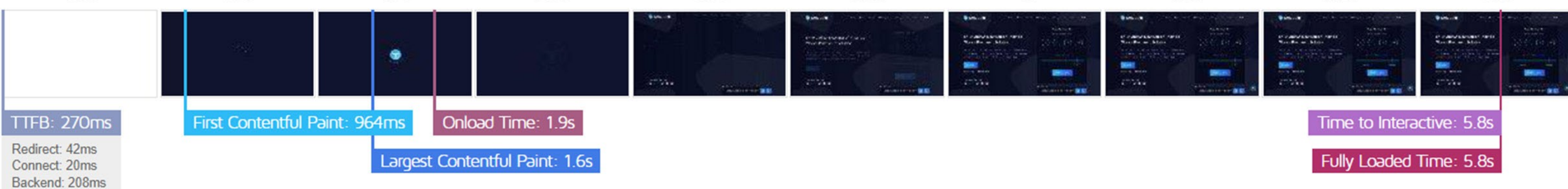
Waterfall

Video

History

### Speed Visualization ?

0.6s 1.2s 1.7s 2.3s 2.9s 3.5s 4s 4.6s 5.2s 5.8s





## Contract Function Details

### + Int IBEP20

- [Ext] totalSupply
- [Ext] decimals
- [Ext] symbol
- [Ext] name
- [Ext] getOwner
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

### + Context

- [Int] \_msgSender
- [Int] \_msgData

### + [Lib] SafeMath

- [Int] add
- [Int] sub
- [Int] mul
- [Int] div
- [Int] mod

### + Ownable

- [Int]<Constructor>
- [Pub]owner
  - modifiers: onlyOwner
- [Pub]renounceOwnership#
  - modifiers: OnlyOwner
- [Pub]transferOwnership#
  - modifiers: onlyOwner

### + TATACoin (Context, IBEP20, Ownable)

- [Pub]<Constructor>#
- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] getOwner
- [Ext] balanceOf
- [Ext] transfer#
- [Ext] allowance



- [Ext] approve#
- [Ext] transferFrom#
- [Ext] increaseAllowance#
- [Ext] decreaseAllowance#
- [Int] \_transfer
- [Int] \_burn
- [Int] \_approve
- [Ext] Repay#
- [Int] \_burnFrom



## Issues Checking System

Issue Description	Checking Status
Compiler errors	Passed
Race conditions and Reentrancy	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Timestamp dependence	Passed
Integer Overflow and Underflow	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model of the contract	Passed
The impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and Declaration	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Design Logic	Passed



## Security Issues

### ✔ High Severity Issues

No high severity issues were found.

### ✔ Medium Severity Issues

No medium severity issues were found.

### ✔ Low Severity Issues

No low severity issues were found.

## Conclusion

### ✔ No issues found in smart contracts

### ✔ Ownership renounced

Ownership renounced details:

<https://bscscan.com/tx/0x8c75ab996f1788fea6bebb2d526eef3f99b92a9705698a2dff64ed56864d7758>

### ✔ Liquidity Locked:

✔ Liquidity will be locked on Digital Ocean Locker (100 Years) after pancake listing

<https://digitalocean.finance/locker-view?address=0x6f112c6AaF661684E99f1b4A45F861587c0595F1>

## Digital Ocean Note:

Please check the disclaimer above and note. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by the Owner.



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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.



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Blockchain technology and cryptographic assets present a high level of ongoing risk. Digital Ocean’s position is that each company and individual are responsible for their own due diligence and continuous security.

Digital Ocean’s goal is to help reduce the attack vectors and the high level of variance associated with utilizing new and consistently changing technologies, and in no way claims any guarantee of security or the functionality of the technology we agree to analyze.

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