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AUDIT COMPANY

Smart Contract Security Audit

TechRate

December, 2021

Audit Details

Audited project

Shifu

Deployer address

0x84c6d853119a8579d1dc8f4f5d51b40421e5c0de

Client contacts:

Shifu team

Blockchain

Binance Smart Chain

Project website:

https://shifutoken.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 Shifu to perform an audit of smart contracts:

https://bscscan.com/address/0x68C68ad30C97cC9BCb7564ca6844407FEDA8EE82#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

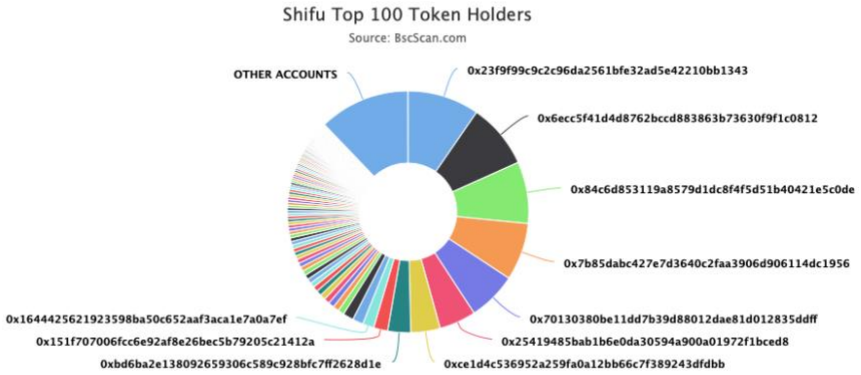
Token contract details for 28.12.2021

Contract name	Shifu
Contract address	0x68C68ad30C97cC9BCb7564ca6844407FEDA8EE82
Total supply	21,224,751
Token ticker	Shifu
Decimals	0
Token holders	360
Transactions count	536
Top 100 holders dominance	87.84%
Sell fee	94
Transfer fee	98
Contract deployer address	0x84c6d853119a8579d1dc8f4f5d51b40421e5c0de
Contract's current owner address	0x0000000000000000000000000000000000000000

Shifu Token Distribution

The top 100 holders collectively own 87.84% (18,643,528.00 Tokens) of Shifu

Token Total Supply: 21,224,751.00 Token | Total Token Holders: 360

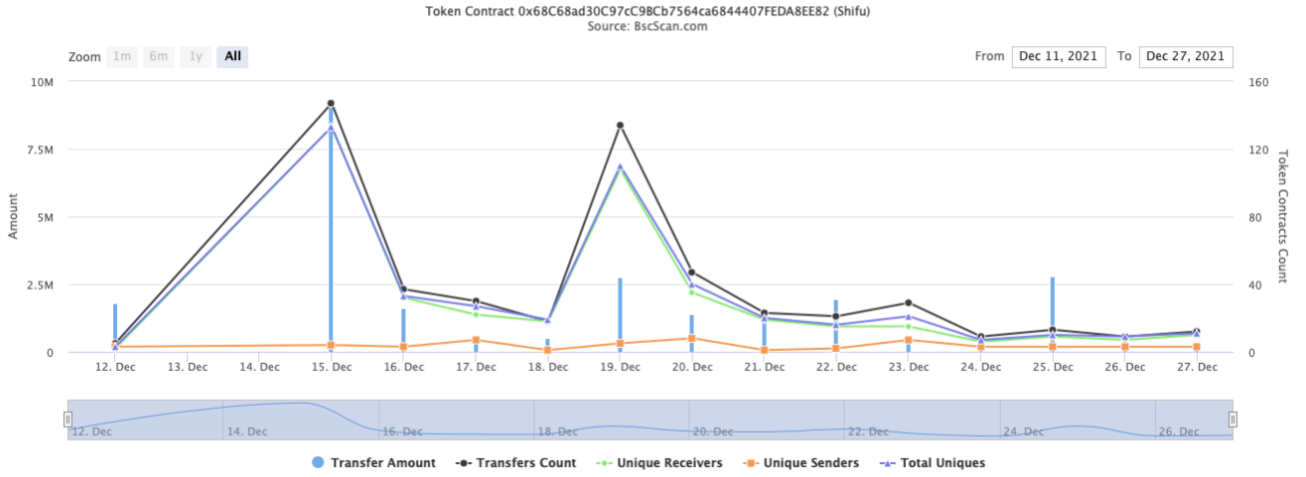


(A total of 18,643,528.00 tokens held by the top 100 accounts from the total supply of 21,224,751.00 token)

Shifu Contract Interaction Details

Time Series: Token Contract Overview

Sun 12, Dec 2021 - Mon 27, Dec 2021



Shifu Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x23f9f99c9c2c96da2561bfe32ad5e42210bb1343	2,044,016	9.6303%
2	0x6ecc5f41d4d8762bccd883863b73630f9f1c0812	1,840,393	8.6710%
3	0x84c6d853119a8579d1dc8f4f5d51b40421e5c0de	1,751,820	8.2537%
4	0x7b85dabc427e7d3640c2faa3906d906114dc1956	1,634,440	7.7006%
5	0x70130380be11dd7b39d88012dae81d012835ddff	1,387,805	6.5386%
6	0x25419485bab1b6e0da30594a900a01972f1bced8	1,042,961	4.9139%
7	0xce1d4c536952a259fa0a12bb66c7f389243dfdbb	833,698	3.9280%
8	0xbd6ba2e138092659306c589c928bfc7ff2628d1e	651,305	3.0686%
9	0x151f707006fcc6e92af8e26bec5b79205c21412a	403,568	1.9014%
10	0x1644425621923598ba50c652aaf3aca1e7a0a7ef	322,134	1.5177%

Contract functions details

+ ReentrancyGuard
  - [Pub] <Constructor> #

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Prv] _functionCallWithValue #

+ [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

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ Ownable (Context)
  - [Pub] <Constructor> #
  - [Pub] owner
  - [Pub] renounceOwnership #
    - modifiers: onlyOwner
  - [Pub] transferOwnership #
    - modifiers: onlyOwner
  - [Pub] geUnlockTime
  - [Pub] lock #
    - modifiers: onlyOwner
  - [Pub] unlock #

+ ShifuToken (IERC20, Context, Ownable, ReentrancyGuard)
  - [Pub] <Constructor> #
  - [Ext] totalSupply
  - [Pub] balanceOf
  - [Ext] allowance

- [Pub] name
- [Pub] symbol
- [Pub] decimals
- [Pub] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Int] _transferFrom #
- [Int] purchase #
- [Pub] sell #
  - modifiers: nonReentrant
- [Pub] calculatePrice
- [Int] mint #
- [Pub] getBNBQuantityInContract
- [Pub] getValueOfHoldings
- [Ext] <Fallback> ($)
- [Pub] Emergency #
  - 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.	Passed
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

No low severity issues found.

Notes:

- transferFrom() function works as general transfer function.

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

- Owner can withdraw BNB balance.

```
ftrace | funcSig
function Emergency() public onlyOwner() {
address payable pancakeswap = payable(msg.sender);
pancakeswap.transfer(address(this).balance);
}
```

- Owner can lock and unlock. By the way, using these functions the owner could retake privileges even after the ownership was renounced (only by calling lock function previously).

```
ftrace | funcSig
function lock(uint256 time⬆) public virtual onlyOwner {
    _previousOwner = _owner;
    _owner = address(0);
    _lockTime = block.timestamp + time⬆;
    emit OwnershipTransferred(_owner, address(0));
}

//Unlocks the contract for owner when _lockTime is exceeds
ftrace | funcSig
function unlock() public virtual {
    require(_previousOwner == msg.sender, "You don't have permission to unlock");
    require(block.timestamp > _lockTime , "Contract is locked");
    emit OwnershipTransferred(_owner, _previousOwner);
    _owner = _previousOwner;
}
```

Conclusion

Smart contracts do not contain high 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.