TechRate
AUDIT COMPANY

Smart Contract Security Audit

TechRate

November, 2021

Audit Details

Audited project

RedZilla

Deployer address

0x6255413d3db7f55731ea52b12261f29d1b8bb645

Client contacts:

RedZilla team

Blockchain

Binance Smart Chain

Project website:

https://www.redzilla.xyz/

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 RedZilla to perform an audit of smart
contracts:
https://bscscan.com/address/0xf9e45bf69d369d3e1ad2e16bd3ec4006c330f33a#cod
e

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
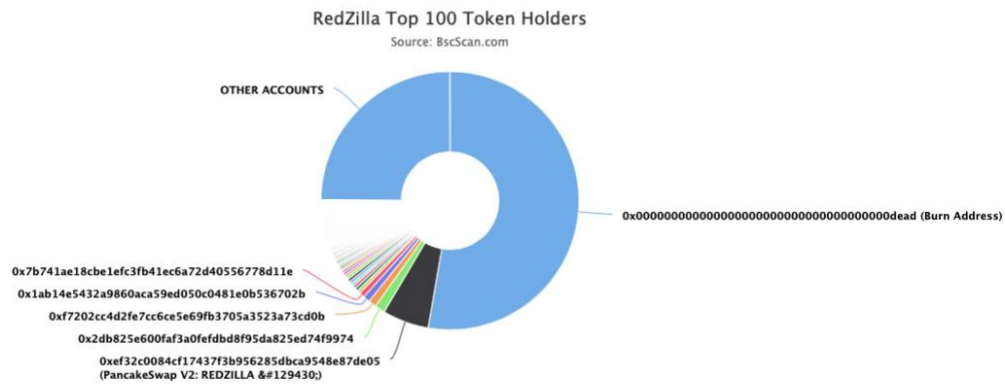by remediating the issues that were identified.

Contracts Details

Token contract details for 11.11.2021

Contract name	**RedZilla**
Contract address	**0xf9E45Bf69d369d3e1aD2E16bD3eC4006C330f33a**
Total supply	**1,000,000,000,000,000,000**
Token ticker	**REDZILLA** 🦖
Decimals	**9**
Token holders	**12,337**
Transactions count	**35,566**
Top 100 holders dominance	**75.13%**
Contract deployer address	**0x6255413d3db7f55731ea52b12261f29d1b8bb645**
Contract's current owner address	**0x0000000000000000000000000000000000000000**

RedZilla Token Distribution

RedZilla Top 100 Token Holders
Source: BscScan.com

OTHER ACCOUNTS

0x0000000000000000000000000000000000000dead (Burn Address)

0x7b741ae18cbe1efc3fb41ec6a72d40556778d11e
0x1ab14e5432a9860aca59ed050c0481e0b536702b
0xf7202cc4d2fe7cc6ce5e69fb3705a3523a73cd0b
0x2db825e600faf3a0fefdbd8f95da825ed74f9974
0xef32c0084cf17437f3b956285dbca9548e87de05
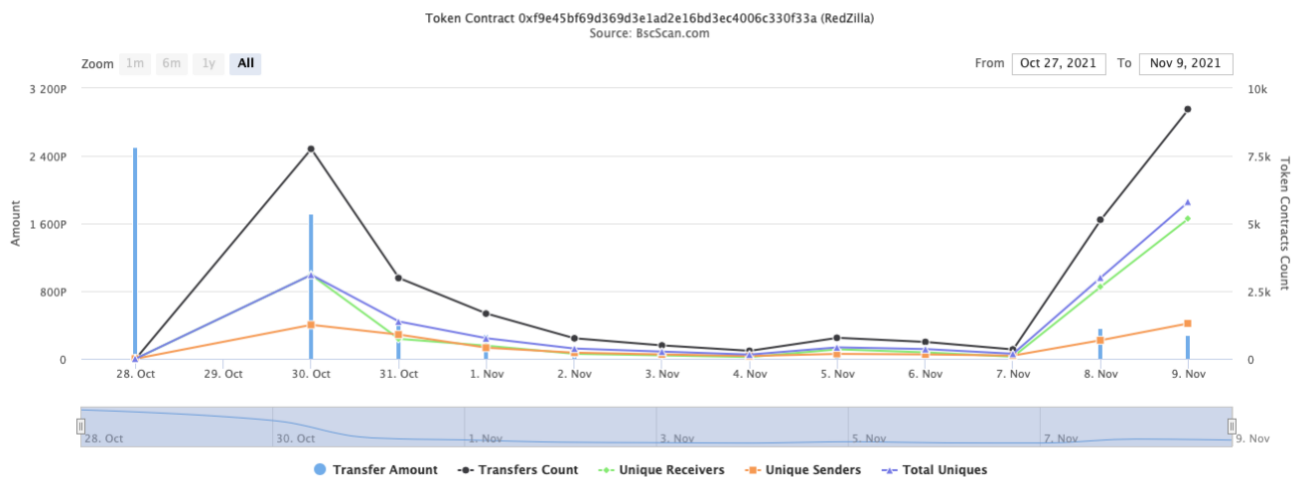(PancakeSwap V2: REDZILLA 🦖)

(A total of 751,272,439,628,497,000.00 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000,000,000.00 token)

RedZilla Contract Interaction Details

Time Series: Token Contract Overview

Thu 28, Oct 2021 - Tue 9, Nov 2021

Token Contract 0xf9e45bf69d369d3e1ad2e16bd3ec4006c330f33a (RedZilla)
Source: BscScan.com

Zoom 1m 6m 1y **All**   From Oct 27, 2021 To Nov 9, 2021

● Transfer Amount -●- Transfers Count -+- Unique Receivers -■- Unique Senders -▲- Total Uniques

RedZilla Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Burn Address	527,312,268,260,814,000.805508408	52.7312%
2	📄 PancakeSwap V2: REDZILLA 🦖	58,084,261,051,800,200.900840902	5.8084%
3	0x2db825e600faf3a0fefdbd8f95da825ed74f9974	12,682,249,100,761,600.641810888	1.2682%
4	0xf7202cc4d2fe7cc6ce5e69fb3705a3523a73cd0b	10,068,374,644,657,300.898944733	1.0068%
5	0x1ab14e5432a9860aca59ed050c0481e0b536702b	8,456,207,990,310,700.436067536	0.8456%
6	0x7b741ae18cbe1efc3fb41ec6a72d40556778d11e	6,658,383,781,442,720.323515434	0.6658%
7	0x05b47ab551d107cd9616bdfd3ec69270364f08c7	4,173,971,340,249,960.460395656	0.4174%
8	0xbe57a8071e6234624ba90208f40714d4e886fd43	4,016,540,237,274,150.943180134	0.4017%
9	0xc0fa8e099dcc61ca512486b67ea5ab88c62bfcba	3,653,014,176,502,220.577441535	0.3653%
10	0xab0c927deb5e7a3c5d22865df9344f6bed339c19	3,550,740,262,675,810.954377941	0.3551%

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 **($)**

+ RedZilla (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]** removeAllFee **#**
 - **[Prv]** restoreAllFee **#**
 - **[Prv]** _approve **#**

- **[Prv]** _transfer **#**
- **[Prv]** swapTokensForEth **#**
  - modifiers: lockTheSwap
- **[Prv]** sendETHToFee **#**
- **[Ext]** prepareTrading **#**
  - modifiers: onlyOwner
- **[Ext]** openTrading **#**
  - modifiers: onlyOwner
- **[Pub]** setBots **#**
  - modifiers: onlyOwner
- **[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
- **[Pub]** setMaxTxPercent **#**
  - modifiers: onlyOwner
- **[Pub]** setTradingOpen **#**
  - modifiers: onlyOwner
- **[Ext]** withdraw **#**
  - 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.

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

- Owner can prepare and open trading.
- Owner can withdraw contract BNBs.
- Owner can enable cooldown(user to user trading with time offset).
- Owner can change the maximum transaction amount.
- Owner can add and remove bots(no transferring between this addresses).
- Fee address can withdraw half of the contract balance to fee address another half to marketing address.

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope.

Liquidity locking details provided by the team:
https://app.unicrypt.network/amm/pancake-v2/pair/0xef32c0084cf17437f3b956285dbca9548e87de05

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.