KISHIELD

Security Audit

MinionsINU Token

January 16, 2023

Contract Audited

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Audit Summary

This report has been prepared for MinionsINU Token on the BSC network. KISHIELD provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Ensuring contract logic meets the specifications and intentions of the client without exposing the user's funds to risk.
- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.
- Thorough line-by-line manual review of the entire codebase by industry experts.

Project Overview

Token Summary

Parameter	Result
Address	0xba7e2a9e5193e60368f440e4ae881cc312d6a160
Name	MinionsINU
Token Tracker	MinionsINU (MINION)
Decimals	9
Supply	1,000,000,000,000,000
Platform	BSC
compiler	v0.8.9+commit.e5eed63a
Optimization	Yes with 200 runs
LicenseType	Unlicense
Language	Solidity
Codebase	https://bscscan.com/address/0x167AEB725f5BE0eA30505468c750B87aA23b7Fde#code
Url	https://MinionsINU.net/

Main Contract Assessed

Name	Contract	Live
MinionsINU	0xba7e2a9e5193e60368f440e4ae881cc312d6a160	Yes

Smart Contract Vulnerability Checks

Vulnerability	Automatic Scan	Manual Scan	Result
Unencrypted Private Data On-Chain	Complete	Complete	Low / No Risk
Code With No Effects	Complete	Complete	Low / No Risk
Message call with hardcoded gas amount	Complete	Complete	Low / No Risk
Hash Collisions With Multiple Variable Length Arguments	Complete	Complete	Low / No Risk
Unexpected Ether balance	Complete	Complete	Low / No Risk
Presence of unused variables	Complete	Complete	Low
Right-To-Left-Override control character (U+202E)	Complete	Complete	Low / No Risk
Typographical Error	Complete	Complete	Low / No Risk
DoS With Block Gas Limit	Complete	Complete	Low / No Risk
Arbitrary Jump with Function Type Variable	Complete	Complete	Low / No Risk
Insufficient Gas Griefing	Complete	Complete	Low / No Risk
Incorrect Inheritance Order	Complete	Complete	Low / No Risk
Write to Arbitrary Storage Location	Complete	Complete	Low / No Risk
Requirement Violation	Complete	Complete	Low / No Risk
Missing Protection against Signature Replay Attacks	Complete	Complete	Low / No Risk
Weak Sources of Randomness from Chain Attributes	Complete	Complete	Low / No Risk

Vulnerability	Automatic Scan	Manual Scan	Result
Authorization through tx.origin	Complete	Complete	Low / No Risk
Delegatecall to Untrusted Callee	Complete	Complete	Low / No Risk
Use of Deprecated Solidity Functions	Complete	Complete	Low / No Risk
Assert Violation	Complete	Complete	Low / No Risk
Reentrancy	Complete	Complete	Low / No Risk
Unprotected SELFDESTRUCT Instruction	Complete	Complete	Low / No Risk
Unprotected Ether Withdrawal	Complete	Complete	Low / No Risk
Unchecked Call Return Value	Complete	Complete	Low
Outdated Compiler Version	Complete	Complete	Low / No Risk
Integer Overflow and Underflow	Complete	Complete	Low / No Risk
Function Default Visibility	Complete	Complete	Low / No Risk

Contract Ownership

The contract ownership of MinionsINU is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible ownable functions that may alter the state of the protocol.

The current owner is the address 0x67015F4aC46b1535886580F31D2e1aAcaE4D4d27 which can be viewed from:
HERE

The owner wallet has the power to call the functions displayed on the priviliged functions chart below, if the owner wallet is compromised this privileges could be exploited.

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.

Important Notes To The Users:

- The Owner cannot change the fees.
- The Owner cannot mint tokens.
- The Owner cannot pause trading.
- The Owner cannot set a min/max txn amount.
- The Ownable contract used does not follows the OpenZeppelin Ownable.sol implementation. For this altered contract the owner cannot renounce to the ownership nor transfer it to another wallet.
- The Owner can enable/disable trading (blacklist) for given users by using the functions happiness() and sadness().
- The Owner can remove BNB from the contract and send it to the marketingAddres by calling manualsend().
- The Owner can sell the tokens on the contract for BNB by calling manualswap().
- The Owner can add/exclude addresses from fees.
- The Owner can remove extra tokens sent to the contract.

Read carefully the notes section and make your own decision before interacting with the audited contract.

Audit Passed

Technical Findings Summary

Classification of Issues

*All Issues Found are Informational

Severity	Description
High	Exploits, vulnerabilities or errors that will certainly or probabilistically lead towards loss of funds, control, or impairment of the contract and its functions. Issues under this classification are recommended to be fixed with utmost urgency
Medium	Bugs or issues with that may be subject to exploit, though their impact is somewhat limited. Issues under this classification are recommended to be fixed as soon as possible.
Low	Effects are minimal in isolation and do not pose a significant danger to the project or its users. Issues under this classification are recommended to be fixed nonetheless.
Info	Consistency, syntax or style best practices. Generally pose a negligible level of risk, if any.

Findings

Severity	Found
High	0
Medium	0
Low	1
Info	5
Total	6

Findings

Unchecked transfer

ID	Severity	Contract	Function
01	Low	MinionsINU	In function withdrawToken()

Description

Ignores return value by tokenContract.transfer(msg.sender,_amount). Several tokens do not revert in case of failure and return false. If one of these tokens is used in the contract, it will not revert if the transfer fails

Recommendation

Use SafeERC20, or ensure that the transfer/transferFrom return value is checked.

Variables could be declared as constant

ID	Severity	Contract	Function
02	Informational	MinionsINU	Variables _redisFeeOnBuy,_redisFeeOnSell,_swapTokensAtAmount,_taxFeeOnBuy,_taxFeeOnSell, marketingAddress, _previousOwner, swapEnabled

Description

Gas Optimization. Variables that are never changed could be declared as constant.

Recommendation

We recommend declaring those variables as constant.

Public function that could be declared external

ID	Severity	Contract	Function
03	Informational	MinionsINU	Functions: happiness, sadness, excludeMultipleAccountsFromFees

Description

Gas Optimization. Public function that could be declared external

Recommendation

Public functions that are never called by the contract should be declared external to save gas.

Too many digits

ID	Severity	Contract	Function
04	Informational	MinionsINU	Variable _swapTokensAtAmount, _tTotal

Description

Literals with many digits are difficult to read and review.

Recommendation

Make use of scientific notation, use underscores, and/or use ether suffix.

Unused Variable

ID	Severity	Contract	Function
05	Informational	MinionsINU	Variables _previousOwner, _tOwned, _buyMap

Description

Variables are never used in the contract logic in a meaningful way.

Recommendation

We recommend deleting this variable.

Code with no effects

ID	Severity	Contract	Function
06	Informational	MinionsINU	_buyMap mapping, _tOwned, _previousOwner

Description

Statements/Variables/Mappings are not used by the contract.

Recommendation

We recommend deleting the statements.

Priviliged Functions (onlyOwner & Others)

Function Name	Parameters	Visibility
swapTokensForEth	none	private
sendETHToFee	none	private
manualswap	none	external
manualsend	none	external
happiness	calldata happy_	public
sadness	address sad	public
withdrawToken	address _tokenContract, uint256 _amount	external
excludeMultipleAccountsFromFees	calldata accounts, bool excluded	public

Statistics

Liquidity Info

Parameter	Result
Pair Address	0x675b21e2339291BdA903dD3Ed2246879c61Ed879
MINION Reserves	87373379440329.36 MINION
BNB Reserves	33363.56 BNB
Liquidity Value	$33,363.56 USD

Token (MINION) Holders Info

Parameter	Result
MINION Percentage Burnt	51.90%
MINION Amount Burnt	519,000,000,000,000 MINION
Top 10 Percentage Own	19.05%
Top 10 Amount Owned	190,494,407,140,967.12 MINION
Top 10 Aprox Value	$72,740.366 USD

LP (MINION/BNB) Holders Info

Parameter	Result
MINION/BNB % Burnt	0.00%
MINION/BNB Amount Burnt	0 MINION/BNB
Top 10 Percentage Owned	100.00%
Top 10 Amount Owned	53,001.604 MINION/BNB
Locked Tokens Percentage	100.00%
Locked Tokens Amount	53,001.604 MINION/BNB

* All the data diplayed above was taken on-chain at block 24850011
* The tokens on industry-standard burn wallets are not included on the top 10 wallets calculations

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