KISHIELD

Security Audit

SweepStaker Token

April 23, 2022

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Audit Summary

This report has been prepared for SweepStaker Token on the Binance Chain 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	0x937937c611670b3b2a38cd1607fc4419be1b2e1e
Name	SweepStaker
Token Tracker	SweepStaker (SSTR)
Decimals	18
Supply	8,000,000,000
Platform	Binance Chain
compiler	v0.8.12+commit.f00d7308
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://bscscan.com/address/0x937937c611670b3b2a38cd1607fc4419be1b2e1e
Url	Sweepstaker.co

Main Contract Assessed

Name	Contract	Live
SweepStaker	0x937937c611670b3b2a38cd1607fc4419be1b2e1e	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 / No Risk
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 / No Risk
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 SweepStaker 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 0x7Ca2288088f925f0644bF819B6497B525aD7A09b 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 mint tokens after intial deployment.
- The owner cannot stop Trading.
- The owner cannot blacklist addresses.
- The owner cannot set the fees up to 45%.
- Hourly, Daily, and Yearly lottery use Chainlink Oracles to get the winning number, the funds are transfer from the owner to the winner.
- Only the operator can draw the lottery, at the moment the operator is also the owner.
- Once the owner renounces ownership of the contract, none of the following are applicable.
- The owner can add/remove addresses from fees and maxTxAmount.
- The owner cam change the max tx amount, but it cannot be set to less than 1%.
- The owner can change the min balance required to enter the lottery.
- The owner can change the fees amount to a value no greater that 45%.
- No high-risk Exploits/Vulnerabilities Were Found in token Source Code.

Audit Passed

Findings Summary

Classification of Issues

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	0
Info	3
Total	3

Findings

Variables could be declared as constant

ID	Severity	Contract	Function
01	Informational	SweepStaker	variables _decimals, _name, _symbol, _totalSupply, daily, dailyAmount, hourly, hourlyAmount, yearly, yearlyAmount

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
02	Informational	SweepStaker	Functions enterLottery, transferOperator, changeMinTokenHold, changeCharityAddress, drawHourlyLottery, drawDailyLottery, drawYearyLottery

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.

Missing events arithmetic

ID	Severity	Contract	Function
03	Informational	SweepStaker	Missing events for setTxAllocations, setMaxTxPercent

Description

Functions that change critical arithmetic parameters should emit an event.

Recommendation

Emit corresponding events for critical parameter changes.

Priviliged Functions (onlyOwner)

Function Name	Parameters	Visibility
renounceOwnership	none	public
transferOwnership	address newOwner	public
excludeIncludeToFee	address account, bool status	external
excludeIncludeToAntiWhale	address account, bool status	external
setTxAllocations	uint16 _hourly, uint16 _daily, uint16 _yearly, uint16 _charityTax, uint16 _liq	external
setMaxTxPercent	uint16 maxPercent	external
updateRouter	address newAddress	external
transferOperator	none	public
changeMinTokenHold	uint256 _newMin	public
changeCharityAddress	address _newCharityAdd	public
drawHourlyLottery	none	public
drawDailyLottery	none	public
drawYearyLottery	none	public

Statistics

Liquidity Info

Parameter	Result
Pair Address	0x9e15092603227dc973b7CC22028362aFbb634E11
SSTR Reserves	0.00 SSTR
BNB Reserves	0.00 BNB
Liquidity Value	$0 USD

Token (SSTR) Holders Info

Parameter	Result
SSTR Percentage Burnt	0.00%
SSTR Amount Burnt	0 SSTR
Top 10 Percentage Own	100.00%
Top 10 Amount Owned	8,000,000,000 SSTR
Top 10 Aprox Value	$NaN USD

LP (SSTR/BNB) Holders Info

Parameter	Result
SSTR/BNB % Burnt	0.00%
SSTR/BNB Amount Burnt	0 SSTR
Top 10 Percentage Owned	0.00%
Top 10 Amount Owned	0 SSTR
Locked Tokens Percentage	0.00%
Locked Tokens Amount	0 SSTR

* All the data diplayed above was taken on-chain at block 17198105
* The tokens on industry-standard burn wallets are not included on the top 10 wallets calculations

Liquidity Ownership

The token does not have liquidity at the moment of the audit, block 17198105

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