

AUDIT.



Smart Contract Audit

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AUDIT-SC
PARTNER
SafeSwap

WWW.AUDIT.SC

2021





FULL SMART CONTRACT AUDIT SOLIDITY CHECK

Audit SC Guarantees that every smart contract that has been audited has gone through both automated Smart Contract Scanner Softwares and is manually verified by one of our highly experienced smart contract experts.



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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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OVERVIEW

PROJECT SUMMARY

Project Name **SafeSwap**

Platform **Binance Smartchain**

Language **Solidity**

AUDIT SUMMARY

Date **02-09-2021**

Audit Type **Static Analysis, Manual Review**

Audit Result **PASSED**

RISK SUMMARY

Risk Level	Total	Found	Pending	Solved	Acknowledgde	Objected
Critical	0	0	0	0	0	0
Major	0	0	0	0	0	0
Medium	0	0	0	0	0	0
Minor	0	0	0	0	0	0
Informative	11	11	0	0	11	0
Discussion	0	0	0	0	0	0

FINDINGS

Function Default Visibility

SWC-ID: SWC-100

Relationship:

CWE-710: Improper Adherence to Coding Standards

Description:

Functions that do not have a function visibility type specified are public by default. This can lead to a vulnerability if a developer forgot to set the visibility and a malicious user is able to make unauthorized or unintended state changes or unnecessary gas usage.

Relevance:

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

Category	Risk Level	Number of Findings	Status
SWC-100	Informative	11	Acknowledged

Status: Acknowledged

We reported the minor optimization opportunities to the client, who has acknowledged and responded with the following statement:

"We made every effort to ensure a completely safe token without any vulnerabilities and were satisfied that this had been created. Our development team has calculated the minor improvements that the function visibility would yield, and we have decided that it would be more efficient to stay with our current contract, than it would be to save fractions of cents by redeploying. "

Response from the Auditor:

We concur with the decision of the client to stay with their current smart contract. Performing a tokenswap with a complicated ecosystem like SafeSwap's (running staking- & rewardspools) would be inefficient against the relatively small improvements in gas usage by changing the function visibility.

AUDIT DETAILS

SCW-100 Function Default Visibility

renounceOwnership() should be declared external
allowance() should be declared external

transferOwnership() should be declared external
increaseAllowance() should be declared external

decimals() should be declared external
decreaseAllowance() should be declared external

symbol() should be declared external
approve() should be declared external

totalSupply() should be declared external
transferFrom() should be declared external

transfer() should be declared external

AUDIT RESULT

Basic Coding Bugs

1. Constructor Mismatch

o Description: Whether the contract name and its constructor are not identical to each other.

o Result: PASSED

o Severity: Critical

Ownership Takeover

o Description: Whether the set owner function is not protected.

o Result: PASSED

o Severity: Critical

Redundant Fallback Function

o Description: Whether the contract has a redundant fallback function.

o Result: PASSED

o Severity: Critical

Overflows & Underflows

Description: Whether the contract has general overflow or underflow

Vulnerabilities

o Result: PASSED

o Severity: Critical

Reentrancy

o Description: Reentrancy is an issue when code can call back into your contract and change state, such as withdrawing ETHs.

o Result: PASSED

o Severity: Critical

MONEY-Giving Bug

o Description: Whether the contract returns funds to an arbitrary address.

o Result: PASSED

o Severity: High

Blackhole

o Description: Whether the contract locks ETH indefinitely; merely in without out.

o Result: PASSED

o Severity: High

Unauthorized Self-Destruct

o Description: Whether the contract can be killed by any arbitrary address.

o Result: PASSED

o Severity: Medium

Revert DoS

o Description: Whether the contract is vulnerable to DoS attack because of unexpected revert.

o Result: PASSED

o Severity: Medium

Unchecked External Call

o Description: Whether the contract has any external call without checking the return value.

o Result: PASSED

o Severity: Medium

Gasless Send

o Description: Whether the contract is vulnerable to gasless send.

o Result: PASSED

o Severity: Medium

Send Instead of Transfer

o Description: Whether the contract uses send instead of transfer.

o Result: PASSED

o Severity: Medium

Costly Loop

o Description: Whether the contract has any costly loop which may lead to Out-Of-Gas exception.

o Result: PASSED

o Severity: Medium

(Unsafe) Use of Untrusted Libraries

o Description: Whether the contract use any suspicious libraries.

o Result: PASSED

o Severity: Medium

(Unsafe) Use of Predictable Variables

o Description: Whether the contract contains any randomness variable, but its value can be predicated.

o Result: PASSED

o Severity: Medium

Transaction Ordering Dependence

o Description: Whether the final state of the contract depends on the order of the transactions.

o Result: PASSED

o Severity: Medium

. Deprecated Uses

o Description: Whether the contract use the deprecated tx.origin to perform the authorization.

o Result: PASSED

o Severity: Medium

AUDIT.



CONTACTUS

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