KISHIELD

Security Audit

KingdomSwap Token

April 16, 2022

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Audit Summary

This report has been prepared for KingdomSwap 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	0x0235fA26758D3f20AEeB8BA1cA0d2ef884DCF3C4
Name	KingdomSwap
Token Tracker	KingdomSwap (KSTST)
Decimals	18
Supply	10,000
Platform	Binance Chain
compiler	v0.8.4+commit.c7e474f2
Optimization	Yes with 200 runs
LicenseType	None
Language	Solidity
Codebase	https://testnet.bscscan.com/address/0x0235fA26758D3f20AEeB8BA1cA0d2ef884DCF3C4
Url	https://kingdom-swap.com/

Main Contract Assessed

Name	Contract	Live
KingdomSwap	0x0235fA26758D3f20AEeB8BA1cA0d2ef884DCF3C4	Testnet

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 KingdomSwap 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 0xd2a2e3f1ec08a5ff343d1ccd8cf6c1c72b394c68 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.
- Once the owner renounces ownership of the contract, none of the following are applicable.
- The owner can add/remove addresses from fees and rewards.
- The owner can add/remove any address from the blacklist.
- The owner can change the max tx amount with no restrictions.
- The owner can set the fees to 50%. (_DevFee 40 & _taxFee 10).
- The owner can swap the contract tokens for BNB and send it to the team.
- No high-risk Exploits/Vulnerabilities Were Found in token Source Code Other than owner priviliges.

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	4
Total	4

Findings

Missing events arithmetic

ID	Severity	Contract	Function
01	Informational	KingdomSwap	Missing events for setMaxTxPercent, setNumofTokensForExchange, _setTaxFee, _setDevFee

Description

Functions that change critical arithmetic parameters should emit an event.

Recommendation

Emit corresponding events for critical parameter changes.

Variables could be declared as constant

ID	Severity	Contract	Function
02	Informational	KingdomSwap	variables _name, _symbol, _decimals, _tTotal

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	KingdomSwap	Functions renounceOwnership, transferOwnership, excludeMultipleAccountsFromFees, deliver, reflectionFromToken, isExcludedFromFee

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.

Tautology

ID	Severity	Contract	Function
04	Informational	KingdomSwap	Tautology in require condition for _setTaxFee, _setDevFee

Description

When using '>= 0' for uint256 this comparison is always true as uint cannot be negative and the default value is 0. 'taxFee >= 0' && 'DevFee >= 0'

Recommendation

Fix the incorrect comparison by changing the value type or the comparison.

Priviliged Functions (onlyOwner)

Function Name	Parameters	Visibility
renounceOwnership	none	public
transferOwnership	address newOwner	public
setExcludeFromFee	address account, bool excluded	external
excludeMultipleAccountsFromFees	calldata accounts, bool excluded	public
excludeAccount	address account	external
includeAccount	address account	external
addBotToBlackList	address account	external
removeBotFromBlackList	address account	external
setMaxTxPercent	uint256 maxTxPercent	external
setNumofTokensForExchange	uint256 numOfTokensToExchangeForDev	external
manualSwap	none	external
manualSend	none	external
setSwapEnabled	bool enabled	external
_setTaxFee	uint256 taxFee	external
_setDevFee	uint256 DevFee	external
_setDevWallet	address DevWalletAddress	external

Statistics

Liquidity Info

Parameter	Result
Pair Address	0x27e043a7af207cdbeb31cdd536069efc494b01ba
KSTST Reserves	0.0 KSTST
BNB Reserves	0.00 BNB
Liquidity Value	$0 USD

Token (KSTST) Holders Info

Parameter	Result
KSTST Percentage Burnt	0.00%
KSTST Amount Burnt	0 KSTST
Top 10 Percentage Own	100%
Top 10 Amount Owned	10,000 KSTST
Top 10 Aprox Value	$0 USD

LP (KSTST/BNB) Holders Info

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

* All the data diplayed above was taken on-chain at block 18506496
* 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 18506496

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