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KYC & AUDIT.

Novos is an agency specializing in blockchain technology solutions, Audits, KYC / Doxx.

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CERTIFICATE OF COMLIANCE

Smart Contract Audit by NOVOS

HINUToken

Audit Passed

July 18, 2022

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Audit Summary

This report has been prepared for Hachiro Inu Token on the Binance Chain network. Novos 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.

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Project Overview

Parameter	Result
Address	0x0054917ABa1f5C0257c49BF28267fE22a245FABB
Name	Hachiro Inu
Token Tracker	HINU
Decimals	18
Supply	1,000,000
Platform	Binance Chain
Compiler	v0.8.8+commit.dddeac2f
Optimization	Yes with 200 runs
LicenseType	Unlicense license
Language	Solidity
Codebase	https://bscscan.com/address/0x0054917aba1f5c0257c49bf28267fe22a245fabb#code
Url	https://hachiroinu.com/

Main Contract Assessed

Name	Contract	Live
HINU	0x0054917ABa1f5C0257c49BF28267fE22a245FABB	Yes

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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**



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Smart Contract Vulnerability Checks

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**



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Contract Ownership

The contract ownership of HachiroInu 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.
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01

The current owner is the address 0x7596Dcc9cEFB4fe785a0DdC34434DDeB67949714 which can be viewed from: HERE

02

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.

03

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.

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Important Notes To The Users:

01 The owner cannot stop trading.

02 The owner cannot blacklist wallets.

03 On sells there is an increase of tax based on the fees, this new tax cannot be higher than 20%.

04 Owner can enable trading but cannot pause or disable it.

05 Function updateCooldown(bool state, uint256 time) external onlyOwner { coolDownTime = time * 1 seconds; coolDownEnabled = state; require(time <= 60, "cooldown timer cannot exceed 1 minutes");

06 uint256 public tokenLiquidityThreshold = 2_500 * 10**18; uint256 public maxBuyLimit = 10_000 * 10**18; uint256 public maxSellLimit = 10_000 * 10**18; uint256 public maxWalletLimit = 10_000 * 10**18;

07 Owner - Setting the initial fees uint256 public _buyFee = 10%; uint256 public _sellFee = 10%;

08 Owner can change the maxWalletBalance with no constrains.

09 Owner can change and configure the dividendTracker with no constrains.

10 Require((_marketing +_buyback + _liquidity + _ecosystem) <= 20, "Must keep fees at 20% or less");

11 Owner can add/remove wallets from fee exemption and dividends.

12 Owner can change the minimum token balance needed to get dividends. No high-riskExploits /Vulnerabilities Were Found in token Source Code.

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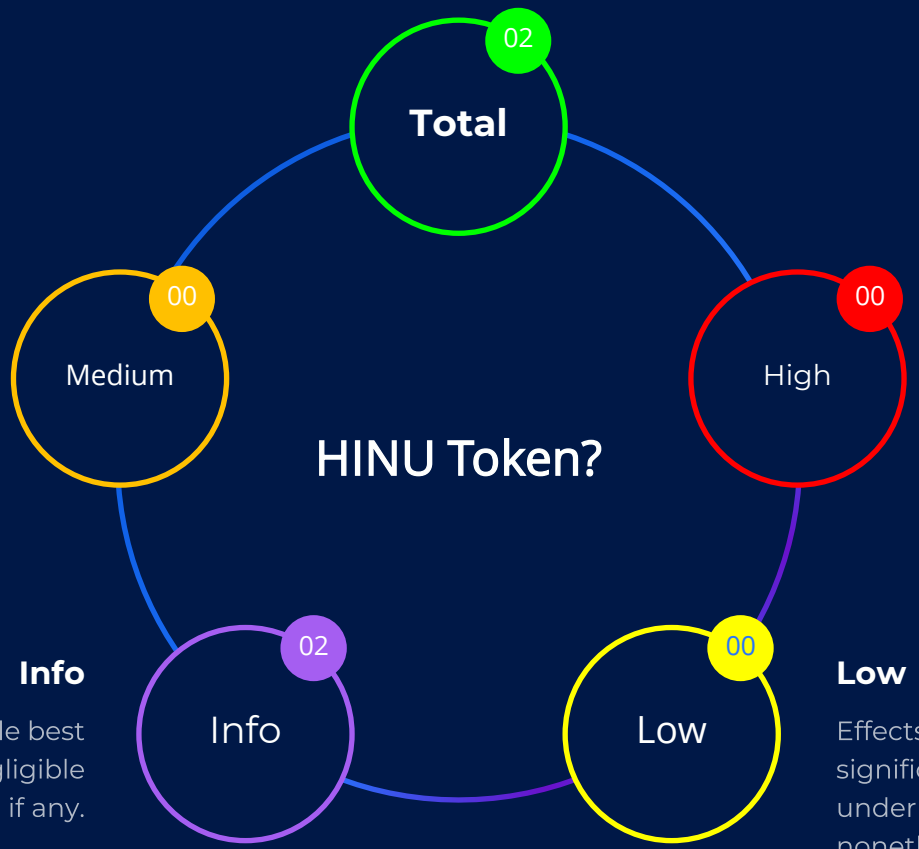
Technical Findings Summary

Classification of Issues

Total

What you should pay attention to



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.

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

Info

Consistency, syntax or style best practices. Generally pose a negligible level of risk, if any.

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.

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Findings

Public function that could be declared external

ID	Severity	Contract	Function
01	Informational	HINU	Functions: size, getKeyAtIndex, getIndexOfKey

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.

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Findings

Missing events arithmetic

ID	Severity	Contract	Function
02	Informational	HINU	Missing events for setWalletBalance, setMaxBuyTransaction, setMaxSellTransaction, setSwapTokensAtAmount, setSellTransactionMultiplier

Description

Functions that change critical arithmetic parameters should emit an event.

Recommendation

Emit corresponding events for critical parameter changes.

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Priviliged Functions (onlyOwner & Others)

Function Name	Parameters	Visibility
✓ renounceOwnership	▪ none	▪ **external**
✓ transferOwnership	▪ address newOwner	▪ **public**
✓ prepareForPartherOrExchang eListing	▪ address_partnerOrExchangeAddress	▪ **external**
✓ setWalletBalance	▪ uint256 _maxWalletBalance	▪ **external**
✓ setMaxBuyTransaction	▪ uint256 _maxTxn	▪ **external**
✓ setMaxSellTransaction	▪ uint256 _maxTxn	▪ **external**
✓ updateBusdDividendToken	▪ address _newContract	▪ **external**
✓ updateMarketingWallet	▪ address _newWallet	▪ **external**
✓ setSwapTokensAtAmount	▪ uint256 _swapAmount	▪ **external**
✓ setSellTransactionMultiplier	▪ uint256 _multiplier	▪ **external**
✓ setTradingIsEnabled	▪ none	▪ **external**
✓ setBusdDividendEnabled	▪ bool _enabled	▪ **external**
✓ setMarketingEnabled	▪ bool _enabled	▪ **external**
✓ setSwapAndLiquifyEnabled	▪ bool _enabled	▪ **external**
✓ updatebusdDividendTracker	▪ address newAddress	▪ **external**
✓ updateUniswapV2Router	▪ address newAddress	▪ **external**

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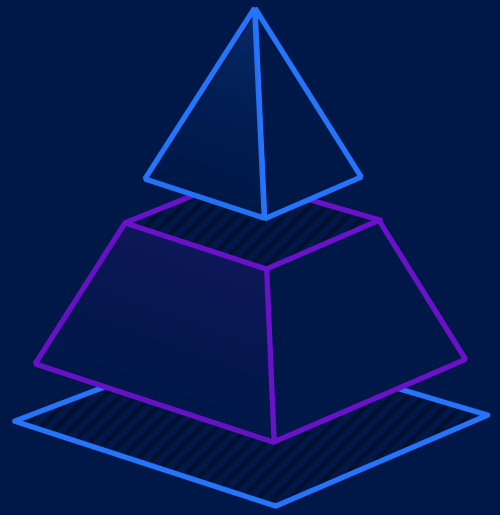
Priviliged Functions (onlyOwner & Others)

Function Name	Parameters	Visibility
✓ excludeFromFees	▪ address account, bool excluded	▪ **public**
✓ excludeFromDividend	▪ address account	▪ **public**
✓ setAutomatedMarketMakerP air	▪ address pair, bool value	▪ **external**
✓ updateGasForProcessing	▪ uint256 newValue	▪ **external**
✓ updateMinimumBalanceForDi vidends	▪ uint256 newMinimumBalance	▪ **external**
✓ updateClaimWait	▪ uint256 claimWait	▪ **external**
✓ processDividendTracker	▪ uint256 gas	▪ **external**



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Statistics

Liquidity Info

Parameter	Result
Pair Address	0xa882507361d25e87d737342f2d9d2b03e7c404a4
HINU Reserves	195,877.8372552107764370 37 HINU
BNB Reserves	16.6460635847527973 62 BNB
Liquidity Value	$4,344.08 USD

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Statistics

Token (HINU) Holders Info

The top 100 holders collectively own 98.40% (984,020.84 Tokens) of Hachiro Inu

Token Total Supply: 1,000,000.00 Token | Total Token Holders: 243

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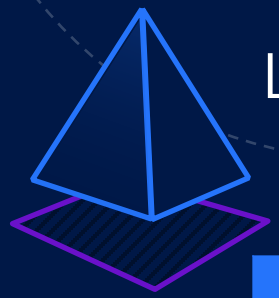
Statistics

LP (HINU) Holders Info



Parameter	Result
HINU% Burnt	27%
HINU Amount Burnt	270,000 HINU
Top 10 Percentage Owned	80.89%
Top 10 Amount Owned	808,850.81 HINU
Token Locked %	22%
Token Locked Amount	220,000 HINU

- All the data diplayed above was taken on-chain at block 19574263
- The tokens on industry-standard burn wallets are not included on the top 10 wallets calculations

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Disclaimer

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