TechRate
March, 2022

SMART CONTRACTS SECURITY AUDIT REPORT

Audit Details

Audited project

Durham Inu

Deployer address

0xb6a951981381be12238568d8a960f3bfc6dc2987

Client contacts:

Durham Inu team

Blockchain

Ethereum

Project website:

https://durhaminu.com

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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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

TechRate was commissioned by Durham Inu to perform an audit of smart contracts:
https://etherscan.io/address/0x42f3a4901b2b2c5e2d6bc8dadb8c1d8d5afd2618#code

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Contracts Details

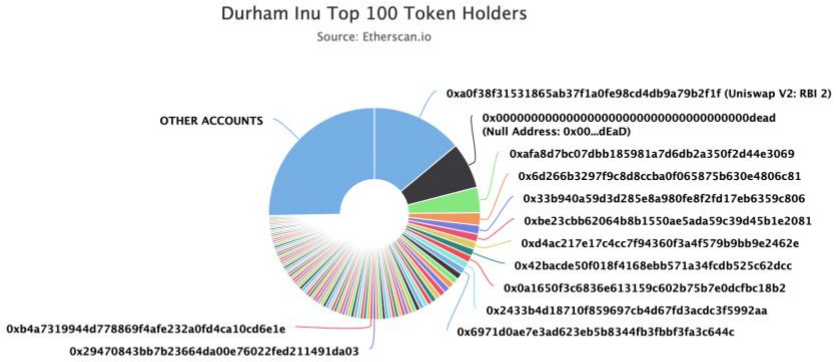
Token contract details for 12.03.2022

Contract name	Durham Inu
Contract address	0x42F3A4901B2B2c5E2d6bc8dADb8c1D8d5AfD2618
Total supply	1,000,000,000
Token ticker	RBI
Decimals	18
Token holders	817
Transactions count	12,358
Top 100 holders dominance	74.70%
Sell total fees	15
Buy total fees	10
Trading active	True
Uniswap V2 pair	0xa0f38f31531865ab37f1a0fe98cd4db9a79b2f1f
Contract deployer address	0xb6a951981381be12238568d8a960f3bfc6dc2987
Owner address	0xb6a951981381be12238568d8a960f3bfc6dc2987

Durham Inu Token Distribution

The top 100 holders collectively own 74.70% (746,986,572.74 Tokens) of Durham Inu

Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 817

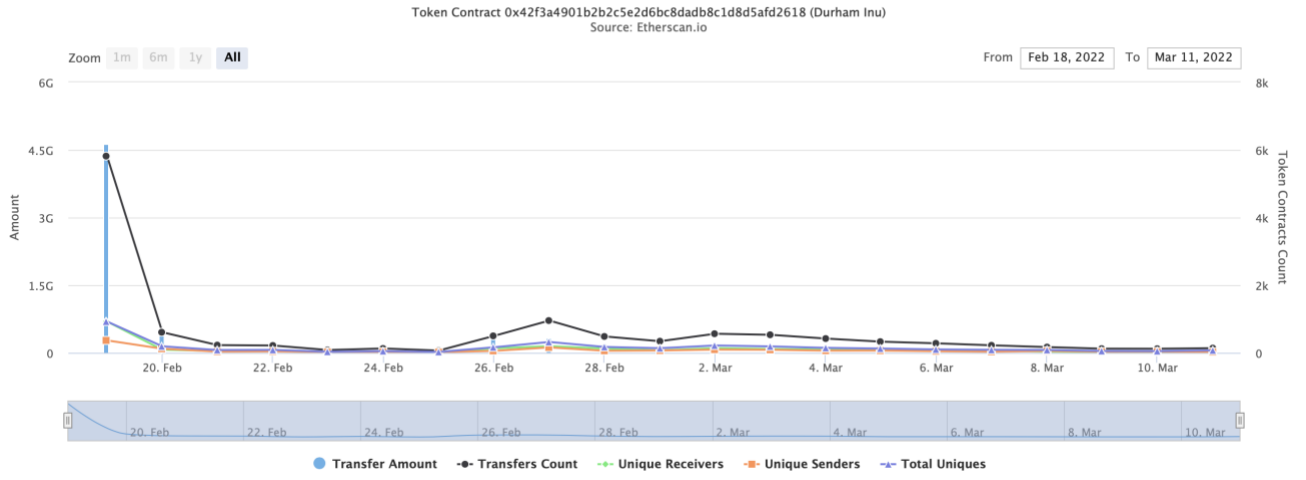


(A total of 746,986,572.74 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

Durham Inu Contract Interaction Details

Time Series: Token Contract Overview

Sat 19, Feb 2022 - Fri 11, Mar 2022



Durham Inu Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Uniswap V2: RBI 2	139,464,408.529262585183464583	13.9464%
2	Null Address: 0x00...dEaD	70,384,441.092832444091925065	7.0384%
3	0xafa8d7bc07dbb185981a7d6db2a350f2d44e3069	39,078,886.571877844422448144	3.9079%
4	0x6d266b3297f9c8d8ccba0f065875b630e4806c81	19,060,230.181813778787984247	1.9060%
5	0x33b940a59d3d285e8a980fe8f2fd17eb6359c806	13,309,028.921188338454613078	1.3309%
6	0xbe23cbb62064b8b1550ae5ada59c39d45b1e2081	11,945,580.301745689402894231	1.1946%
7	0xd4ac217e17c4cc7f94360f3a4f579b9bb9e2462e	11,571,751.763150070558751141	1.1572%
8	0x42bacde50f018f4168ebb571a34fcdb525c62dcc	10,966,648.799303725404657246	1.0967%
9	0x0a1650f3c6836e613159c602b75b7e0dcfbc18b2	10,402,030.572760575206345764	1.0402%
10	0x2433b4d18710f859697cb4d67fd3acdc3f5992aa	10,369,093.084273512318589058	1.0369%

Contract functions details

+ [Int] IUniswapV2Router01
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidity #
  - [Ext] addLiquidityETH ($)
  - [Ext] removeLiquidity #
  - [Ext] removeLiquidityETH #
  - [Ext] removeLiquidityWithPermit #
  - [Ext] removeLiquidityETHWithPermit #
  - [Ext] swapExactTokensForTokens #
  - [Ext] swapTokensForExactTokens #
  - [Ext] swapExactETHForTokens ($)
  - [Ext] swapTokensForExactETH #
  - [Ext] swapExactTokensForETH #
  - [Ext] swapETHForExactTokens ($)
  - [Ext] quote
  - [Ext] getAmountOut
  - [Ext] getAmountIn
  - [Ext] getAmountsOut
  - [Ext] getAmountsIn

+ [Int] IUniswapV2Router02 (IUniswapV2Router01)
  - [Ext] removeLiquidityETHSupportingFeeOnTransferTokens #
  - [Ext] removeLiquidityETHWithPermitSupportingFeeOnTransferTokens #
  - [Ext] swapExactTokensForTokensSupportingFeeOnTransferTokens #
  - [Ext] swapExactETHForTokensSupportingFeeOnTransferTokens ($)
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #

+ [Int] IUniswapV2Factory
  - [Ext] feeTo
  - [Ext] feeToSetter
  - [Ext] getPair
  - [Ext] allPairs
  - [Ext] allPairsLength
  - [Ext] createPair #
  - [Ext] setFeeTo #
  - [Ext] setFeeToSetter #

+ [Int] IUniswapV2Pair
  - [Ext] name
  - [Ext] symbol

  - [Ext] decimals
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transfer #
  - [Ext] transferFrom #
  - [Ext] DOMAIN_SEPARATOR
  - [Ext] PERMIT_TYPEHASH
  - [Ext] nonces
  - [Ext] permit #
  - [Ext] MINIMUM_LIQUIDITY
  - [Ext] factory
  - [Ext] token0
  - [Ext] token1
  - [Ext] getReserves
  - [Ext] price0CumulativeLast
  - [Ext] price1CumulativeLast
  - [Ext] kLast
  - [Ext] mint #
  - [Ext] burn #
  - [Ext] swap #
  - [Ext] skim #
  - [Ext] sync #
  - [Ext] initialize #

+ [Int] IERC20
  - [Ext] totalSupply
  - [Ext] balanceOf
  - [Ext] transfer #
  - [Ext] allowance
  - [Ext] approve #
  - [Ext] transferFrom #

+ [Int] IERC20Metadata (IERC20)
  - [Ext] name
  - [Ext] symbol
  - [Ext] decimals

+ Context
  - [Int] _msgSender
  - [Int] _msgData

+ ERC20 (Context, IERC20, IERC20Metadata)
  - [Pub] <Constructor> #

- [Pub] name
- [Pub] symbol
- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Int] _transfer #
- [Int] _mint #
- [Int] _burn #
- [Int] _approve #
- [Int] _spendAllowance #
- [Int] _beforeTokenTransfer #
- [Int] _afterTokenTransfer #

+ Ownable (Context)
- [Pub] <Constructor> #
- [Pub] owner
- [Pub] renounceOwnership #
  - modifiers: onlyOwner
- [Pub] transferOwnership #
  - modifiers: onlyOwner
- [Int] _transferOwnership #

+ [Lib] SafeMath
- [Int] tryAdd
- [Int] trySub
- [Int] tryMul
- [Int] tryDiv
- [Int] tryMod
- [Int] add
- [Int] sub
- [Int] mul
- [Int] div
- [Int] mod
- [Int] sub
- [Int] div
- [Int] mod

+ DurhamInu (ERC20, Ownable)
- [Pub] <Constructor> #

  - modifiers: ERC20
- [Ext] <Fallback> ($)
- [Ext] enableTrading #
  - modifiers: onlyOwner
- [Ext] removeLimits #
  - modifiers: onlyOwner
- [Ext] disableTransferDelay #
  - modifiers: onlyOwner
- [Ext] updateSwapTokensAtAmount #
  - modifiers: onlyOwner
- [Ext] updateMaxTxnAmount #
  - modifiers: onlyOwner
- [Ext] updateMaxWalletAmount #
  - modifiers: onlyOwner
- [Pub] excludeFromMaxTransaction #
  - modifiers: onlyOwner
- [Ext] updateSwapEnabled #
  - modifiers: onlyOwner
- [Ext] updateBuyFees #
  - modifiers: onlyOwner
- [Ext] updateSellFees #
  - modifiers: onlyOwner
- [Pub] excludeFromFees #
  - modifiers: onlyOwner
- [Pub] setAutomatedMarketMakerPair #
  - modifiers: onlyOwner
- [Prv] _setAutomatedMarketMakerPair #
- [Ext] updateMarketingWallet #
  - modifiers: onlyOwner
- [Ext] updateDevWallet #
  - modifiers: onlyOwner
- [Pub] isExcludedFromFees
- [Int] _transfer #
- [Prv] swapTokensForEth #
- [Prv] addLiquidity #
- [Prv] swapBack #
- [Ext] setAutoLPBurnSettings #
  - modifiers: onlyOwner
- [Int] autoBurnLiquidityPairTokens #
- [Ext] manualBurnLiquidityPairTokens #
  - modifiers: onlyOwner

($) = payable function
= non-constant function

Issues Checking Status

	Issue description	Checking status
1.	**Compiler errors.**	Passed
2.	**Race conditions and Reentrancy. Cross-function race conditions.**	Passed
3.	**Possible delays in data delivery.**	Passed
4.	**Oracle calls.**	Passed
5.	**Front running.**	Passed
6.	**Timestamp dependence.**	Passed
7.	**Integer Overflow and Underflow.**	Passed
8.	**DoS with Revert.**	Passed
9.	**DoS with block gas limit.**	Passed
10.	**Methods execution permissions.**	Passed
11.	**Economy model of the contract.**	Passed
12.	**The impact of the exchange rate on the logic.**	Passed
13.	**Private user data leaks.**	Passed
14.	**Malicious Event log.**	Passed
15.	**Scoping and Declarations.**	Passed
16.	**Uninitialized storage pointers.**	Passed
17.	**Arithmetic accuracy.**	Passed
18.	**Design Logic.**	Passed
19.	**Cross-function race conditions.**	Passed
20.	**Safe Open Zeppelin contracts implementation and usage.**	Passed
21.	**Fallback function security.**	Passed

Security Issues

High Severity Issues

No high severity issues found.

Medium Severity Issues

No medium severity issues found.

Low Severity Issues

No low severity issues found.

Notes:

- There is sending tokens to dead address instead of really burning (decreasing total supply).

Owner privileges (In the period when the owner is not renounced)

- Owner can enable trading.
- Owner can remove limits and disable transferDelayEnabled.
- Owner can change swapTokensAtAmount, maxTransactionAmount and maxWallet.
- Owner can exclude from max transaction amount.
- Owner can enable/disable swapEnabled.
- Owner can change all fees.
- Owner can exclude from the fees.
- Owner can include in automated market pair array.
- Owner can change marketing and dev wallets.
- Owner can change auto burn settings.
- Owner can manually burn tokens.

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope. The further transfers and operations with the funds raise are not related to this particular contract.

Liquidity locking details provided by the team:
https://etherscan.io/tx/0x5916e82f8b9c1e6292c4827b8b0b53cecc4d22bb579f4d2542372bf34a7ac3e0

TechRate note:
Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.