TECH RATE

SMART CONTRACTS SECURITY

AUDIT REPORT

Techrate_audits   Techrate   Techrate1

Audit Details

Audited project

Archie Neko

Deployer address

0x088b1fb7919fe8e25377590ac759d4cd73378400

Client contacts:

Archie Neko team

Blockchain

Ethereum

Project website:

https://www.archieneko.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 Archie Neko to perform an audit of smart contracts:
https://etherscan.io/address/0xFE5F69dfa2d4501E78078266F6d430c079098f90#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 29.03.2022

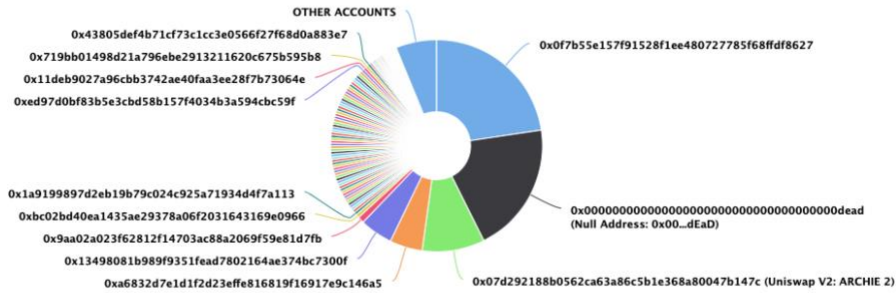|	
Contract name	Archie Neko
Contract address	0xFE5F69dfa2d4501E78078266F6d430c079098f90
Total supply	10,000,000,000,000,000,000,000
Token ticker	ARCHIE
Decimals	9
Token holders	363
Transactions count	551
Top 100 holders dominance	93.78%
Daily max transaction amount	2400000000000000000
Reflect fee buy/sell	6/6
Liquidity fee buy/sell	3/4
Uniswap V2 pair	0x07d292188b0562ca63a86c5b1e368a80047b147c
Contract deployer address	0x088b1fb7919fe8e25377590ac759d4cd73378400
Owner address	0x0f7b55e157f91528f1ee480727785f68ffdf8627

Archie Neko Token Distribution

Archie Neko Top 100 Token Holders
Source: Etherscan.io

OTHER ACCOUNTS

0x43805def4b71cf73c1cc3e0566f27f68d0a883e7
0x719bb01498d21a796ebe2913211620c675b595b8
0x11deb9027a96cbb3742ae40faa3ee28f7b73064e
0xed97d0bf83b5e3cbd58b157f4034b3a594cbc59f

0x0f7b55e157f91528f1ee480727785f68ffdf8627

0x0000000000000000000000000000000000000dead
(Null Address: 0x00...dEaD)

0x1a9199897d2eb19b79c024c925a71934d4f7a113
0xbc02bd40ea1435ae29378a06f2031643169e0966
0x9aa02a023f62812f14703ac88a2069f59e81d7fb
0x13498081b989f9351fead7802164ae374bc7300f
0xa6832d7e1d1f2d23effe816819f16917e9c146a5

0x07d292188b0562ca63a86c5b1e368a80047b147c (Uniswap V2: ARCHIE 2)

(A total of 9,377,952,387,469,470,000,000.00 tokens held by the top 100 accounts from the total supply of 10,000,000,000,000,000,000,000.00 token)

Archie Neko Contract Interaction Details

Time Series: Token Contract Overview   Thu 24, Mar 2022 - Mon 28, Mar 2022

Token Contract 0xFE5F69dfa2d4501E78078266F6d430c079098f90 (Archie Neko)
Source: Etherscan.io

Zoom 1m 6m 1y All   From Mar 23, 2022 To Mar 28, 2022

● Transfer Amount   -●- Transfers Count   -●- Unique Receivers   -■- Unique Senders   -▲- Total Uniques

Archie Neko Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0x0f7b55e157f91528f1ee480727785f68ffdf8627	2,264,000,000,000,000,000	22.6400%
2	Null Address: 0x00...dEaD	2,000,000,000,000,000,000	20.0000%
3	🗎 Uniswap V2: ARCHIE 2	954,819,105,920,474,000.818305378	9.5482%
4	0xa6832d7e1d1f2d23effe816819f16917e9c146a5	500,000,000,000,000,000	5.0000%
5	0x13498081b989f9351fead7802164ae374bc7300f	500,000,000,000,000,000	5.0000%
6	0x9aa02a023f62812f14703ac88a2069f59e81d7fb	99,099,030,366,855,400.680663651	0.9910%
7	0xbc02bd40ea1435ae29378a06f2031643169e0966	54,748,218,186,503,000.005026471	0.5475%
8	0x1a9199897d2eb19b79c024c925a71934d4f7a113	42,763,772,856,050,500.91978674	0.4276%
9	0xa21c8e00bbcd6833c14172177ff065739ec7e90e	41,666,666,666,666,700,000	0.4167%
10	0x5d64ccb45ca78e46e7d31554b858b4585b4244ae	41,666,666,666,666,700,000	0.4167%

Contract functions details

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

+ **[Lib]** SafeMath
  - **[Int]** add
  - **[Int]** sub
  - **[Int]** sub
  - **[Int]** mul
  - **[Int]** div
  - **[Int]** div
  - **[Int]** mod
  - **[Int]** mod

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

+ **[Lib]** Address
  - **[Int]** isContract
  - **[Int]** sendValue #
  - **[Int]** functionCall #
  - **[Int]** functionCall #
  - **[Int]** functionCallWithValue #
  - **[Int]** functionCallWithValue #
  - **[Prv]** _functionCallWithValue #

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

+ **[Int]** IUniswapV2Factory
  - **[Ext]** feeTo

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- [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] 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 #

+ ArhcieNeko (Context, IERC20, Ownable)
  - [Pub] <Constructor> #
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals
  - [Pub] totalSupply
  - [Pub] balanceOf
  - [Pub] transfer #
  - [Pub] allowance
  - [Pub] approve #
  - [Prv] _approve #
  - [Pub] transferFrom #
  - [Pub] increaseAllowance #
  - [Pub] decreaseAllowance #
  - [Ext] burn #
  - [Int] _burnTokens #
  - [Int] _transfer #
  - [Pub] _getRateTokenAndETH
  - [Int] swapAndLiquify #
    - modifiers: lockTheSwap
  - [Int] swapTokensForEth #
  - [Int] addLiquidity #
  - [Int] _tokenTransfer #
  - [Int] removeAllTax #
  - [Int] setTaxBuyTax #

- [Int] setTaxSellTax #
- [Prv] _transferStandard #
- [Prv] _transferToExcluded #
- [Prv] _transferFromExcluded #
- [Prv] _transferBothExcluded #
- [Prv] _takeLiquidity #
- [Prv] _takeMarketing #
- [Prv] _takeTreasury #
- [Prv] _takeFoundation #
- [Prv] _reflectTax #
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Prv] calculateReflectionTax
- [Prv] calculateTotalTax
- [Pub] tokenFromReflection
- [Pub] reflectionFromToken
- [Pub] isExcludedFromReward
- [Pub] totalFees
- [Pub] deliver #
- [Pub] isExcludedFromFee
- [Pub] gettansactionDataAmount
- [Pub] gettransactionDataTime
- [Pub] getTransactionDataIsLocked
- [Pub] getTransactionDataLockedTime
- [Pub] getTransactionDataLockedPeriod
- [Prv] transferToAddressETH #
- [Pub] excludeFromReward #
  - modifiers: onlyOwner
- [Ext] includeInReward #
  - modifiers: onlyOwner
- [Pub] excludeFromFee #
  - modifiers: onlyOwner
- [Pub] includeInFee #
  - modifiers: onlyOwner
- [Ext] setBuyTaxPercent #
  - modifiers: onlyOwner
- [Ext] setSellTaxPercent #
  - modifiers: onlyOwner
- [Ext] setMarketingAddress #
  - modifiers: onlyOwner
- [Ext] setTreasuryAddress #
  - modifiers: onlyOwner

- [Ext] setFoundationAddress #
  - modifiers: onlyOwner
- [Pub] setSwapAndLiquifyEnabled #
  - modifiers: onlyOwner
- [Ext] setEnableTrading #
  - modifiers: onlyOwner
- [Ext] setNumTokensSellToAddToLiquidityPercentageAndmaxwalletamount #
  - modifiers: onlyOwner
- [Ext] setDailymaxTxAmountAndmaxTxAmount #
  - modifiers: onlyOwner
- [Ext] setAutomatedMarketMakerPairs #
  - modifiers: onlyOwner
- [Ext] lockAccount #
  - modifiers: onlyOwner
- [Ext] unLockAccount #
  - modifiers: onlyOwner
- [Ext] SetAccountMaxWalletLimit #
  - modifiers: onlyOwner
- [Ext] airdrop #
  - modifiers: onlyOwner
- [Int] airdropInternal #
- [Ext] airdropArray #
  - modifiers: onlyOwner
- [Ext] <Fallback> ($)

($) = 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.**	Low issues
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

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Security Issues

⊘ High Severity Issues

No high severity issues found.

⊘ Medium Severity Issues

No medium severity issues found.

✓ Low Severity Issues

1. Out of gas

Issue:

- The function includeInReward() uses the loop to find and remove addresses from the _excluded list. Function will be aborted with OUT_OF_GAS exception if there will be a long excluded addresses list.
- The function _getCurrentSupply() also uses the loop for evaluating total supply. It also could be aborted with OUT_OF_GAS exception if there will be a long excluded addresses list.

Recommendation:
Check that the excluded array length is not too big.

Issue:

- The function airdropArray() uses the loop to airdrop tokens amounts list to addresses list. Function will be aborted with OUT_OF_GAS exception if there will be a long lists.

Recommendation:
Check that the array's length is not too big.

Notes:

- 10% of the marketing, treasury and foundation fees remain on the contract.

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

- Owner can exclude addresses from the fees.
- Owner can change all fees.
- Owner can change fee receivers addresses.
- Owner can enable/disable swap and liquify.
- Owner can enable trading.
- Owner can change numTokensSellToAddToLiquidity and _maxwalletamount.
- Owner can change _dailymaxTxAmount and _maxTxAmount.
- Owner can mark addresses as automatedMarketMakerPairs.
- Owner can lock/unlock users accounts.
- Owner can exclude from max transaction amount.
- Owner can airdrop tokens.

Conclusion

Smart contracts contain low 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 are NOT provided by the team.

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.