TechRate
March, 2022

SMART CONTRACTS SECURITY AUDIT REPORT

Audit Details

Audited project

HypeApes

Deployer address

0xe2c8d27541749629383f35cc6c0dd30e089d91e2

Client contacts:

HypeApes team

Blockchain

Ethereum

Project website:

https://www.hypeapestoken.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 HypeApes to perform an audit of smart contracts:
https://etherscan.io/address/0xf36119c88fb85ffa09219dd8e8bdba5007ce2aa0#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

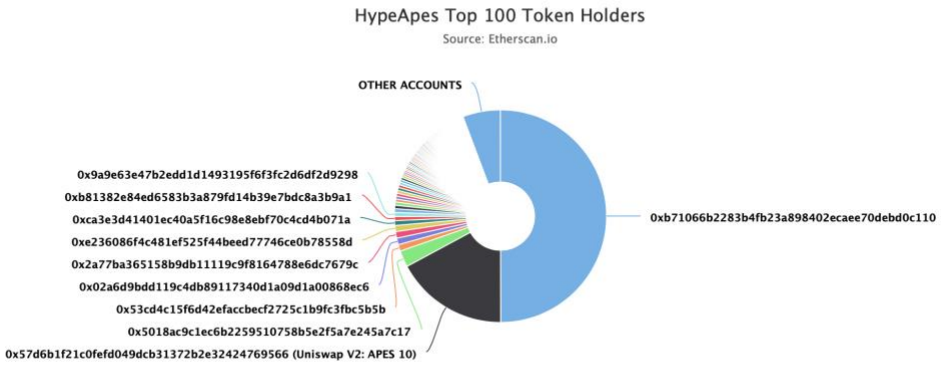
Token contract details for 15.03.2022

Contract name	HypeApes
Contract address	0xf36119c88Fb85FFA09219DD8E8BdBa5007cE2aA0
Total supply	1,000,000,000,000
Token ticker	APES
Decimals	9
Token holders	358
Transactions count	2,264
Top 100 holders dominance	94.27%
amountInPool	172063166773862286114
thisBalance	307381006475728212
Contract deployer address	0xe2c8d27541749629383f35cc6c0dd30e089d91e2
Contract's current owner address	0xe2c8d27541749629383f35cc6c0dd30e089d91e2

HypeApes Token Distribution

The top 100 holders collectively own 94.27% (942,691,409,081.32 Tokens) of HypeApes

Token Total Supply: 1,000,000,000,000.00 Token | Total Token Holders: 358

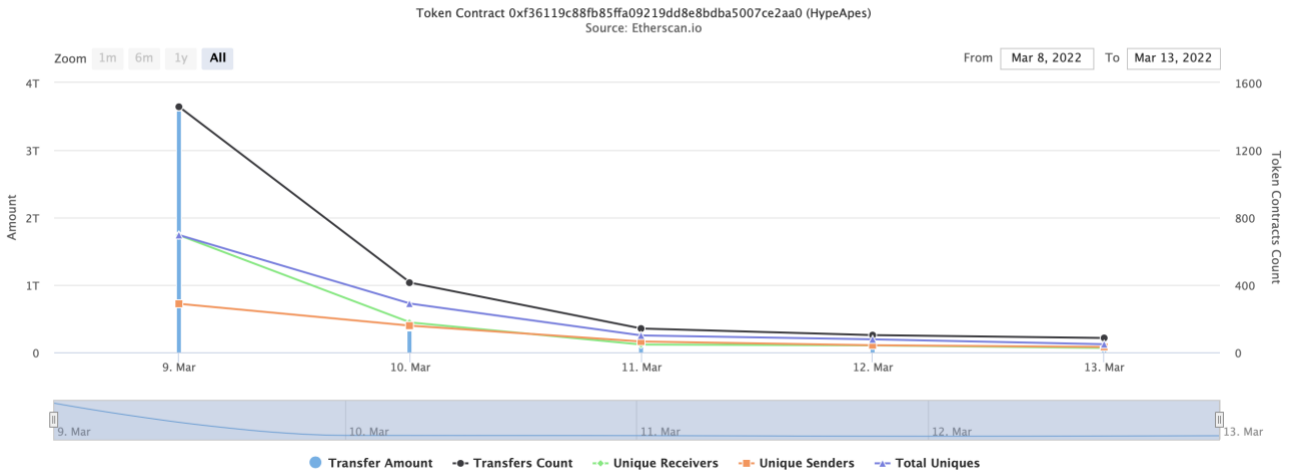


(A total of 942,691,409,081.32 tokens held by the top 100 accounts from the total supply of 1,000,000,000,000.00 token)

HypeApes Contract Interaction Details

Time Series: Token Contract Overview

Wed 9, Mar 2022 - Sun 13, Mar 2022



HypeApes Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	0xb71066b2283b4fb23a898402ecaee70debd0c110	499,700,000,000	49.9700%
2	Uniswap V2: APES 10	172,063,166,773.862286114	17.2063%
3	0x5018ac9c1ec6b2259510758b5e2f5a7e245a7c17	25,000,000,000	2.5000%
4	0x53cd4c15f6d42efaccbecf2725c1b9fc3fbc5b5b	10,000,000,000	1.0000%
5	0x02a6d9bdd119c4db89117340d1a09d1a00868ec6	10,000,000,000	1.0000%
6	0x2a77ba365158b9db11119c9f8164788e6dc7679c	9,960,592,846.096643138	0.9961%
7	0xe236086f4c481ef525f44beed77746ce0b78558d	9,388,396,127.327780063	0.9388%
8	0xca3e3d41401ec40a5f16c98e8ebf70c4cd4b071a	7,292,496,600.807427147	0.7292%
9	0xb81382e84ed6583b3a879fd14b39e7bdc8a3b9a1	6,210,000,000	0.6210%
10	0x9a9e63e47b2edd1d1493195f6f3fc2d6df2d9298	6,067,179,678.200000003	0.6067%

Contract functions details

+ Context
  - [Int] _msgSender

+ [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

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

+ [Int] IUniswapV2Factory
  - [Ext] createPair #

+ [Int] IUniswapV2Router02
  - [Ext] swapExactTokensForETHSupportingFeeOnTransferTokens #
  - [Ext] factory
  - [Ext] WETH
  - [Ext] addLiquidityETH ($)

+ APES (Context, IERC20, Ownable)
  - [Pub] <Constructor> #
  - [Pub] name
  - [Pub] symbol
  - [Pub] decimals

- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #
- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Prv] tokenFromReflection
- [Prv] removeAllFee #
- [Prv] restoreAllFee #
- [Prv] _approve #
- [Prv] _transfer #
- [Prv] addLiquidity #
- [Prv] swapAndLiquify #
  - modifiers: lockTheSwap
- [Prv] swapWithoutLiquify #
  - modifiers: lockTheSwap
- [Prv] swapTokensForEth #
- [Prv] manualSwapTokensForEth #
  - modifiers: lockTheSwap
- [Prv] sendETHToFee #
- [Prv] _tokenTransfer #
- [Prv] _transferStandard #
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRate
- [Prv] _getCurrentSupply
- [Prv] _getRValues
- [Prv] _takeTeam #
- [Prv] _reflectFee #
- [Ext] <Fallback> ($)
- [Ext] openTrading #
  - modifiers: onlyOwner
- [Ext] setMarketingWallet #
  - modifiers: onlyOwner
- [Ext] setFeeAddress #
  - modifiers: onlyOwner
- [Ext] excludeFromFee #
  - modifiers: onlyOwner
- [Ext] includeToFee #
  - modifiers: onlyOwner
- [Ext] setTakeFeeFromTransfer #
  - modifiers: onlyOwner
- [Ext] setBaseFee #
  - modifiers: onlyOwner
- [Ext] setTaxFee #

    - modifiers: onlyOwner
  - [Ext] setNoTaxMode #
    - modifiers: onlyOwner
  - [Ext] setLiquidityFeePercent #
    - modifiers: onlyOwner
  - [Ext] setMinContractTokensToSwap #
    - modifiers: onlyOwner
  - [Ext] setMaxWalletPercentage #
    - modifiers: onlyOwner
  - [Ext] setMaxBuy #
    - modifiers: onlyOwner
  - [Ext] setSwapAll #
    - modifiers: onlyOwner
  - [Ext] setBots #
    - modifiers: onlyOwner
  - [Ext] delBot #
    - modifiers: onlyOwner
  - [Pub] isBot
  - [Ext] manualswap #
    - modifiers: onlyOwner
  - [Ext] manualsend #
    - modifiers: onlyOwner
  - [Pub] thisBalance
  - [Pub] amountInPool
  - [Ext] setAutomatedMarketMakerPair #
    - modifiers: onlyOwner
  - [Prv] _setAutomatedMarketMakerPair #

($) = 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

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 setBots() uses the loop to add bots from list. Function will be aborted with OUT_OF_GAS exception if there will be a long addresses list.

```
function setBots(address[] calldata bots_) external onlyOwner {
    for (uint i = 0; i < bots_.length; i++) {
        if (bots_[i] != uniswapV2Pair && bots_[i] != address(uniswapV2Router)) {
            _bots[bots_[i]] = true;
        }
    }
}
```

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

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

- Owner can open trading.
- Owner can add and remove bots.
- Owner can change marketing and fee wallet addresses.
- Owner can include in and exclude from fees.
- Owner can enable/disable _takeFeeFromTransfer.
- Owner can change base and tax fees.
- Owner can enable no tax mode.
- Owner can change liquidity fee percentage.
- Owner can change minContractTokensToSwap.
- Owner can change max wallet and max buy amounts.
- Owner can enable/disable _swapAll value.
- Owner can add addresses in automatedMarketMakerPairs array.
- Owner can manually swap contract tokens.
- Owner can withdraw 30% of the contract ETHs to fee address and 70% to marketing wallet address.

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 adding in wrong proportion. Fee depends on transfer amount.

Liquidity locking details are provided by the team:
https://dingerlock.com/dlock/erc/locks/0x57D6B1f21c0Fefd049dCB31372B2e32424769566

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.