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TechRate

AUDIT COMPANY

Smart Contract Security Audit

TechRate

February, 2022

Audit Details

Audited project

METRA

Deployer address

0xb642c89583e608fd1efcf13087aaf7f11321457d

Client contacts:

GameFi Team

Blockchain

Ethereum

Project website:

https://pikacrypto.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 METRA to perform an audit of smart contracts:
https://etherscan.io/address/0x3cd06b0010feba4216b85b4477125cac1e708de0#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

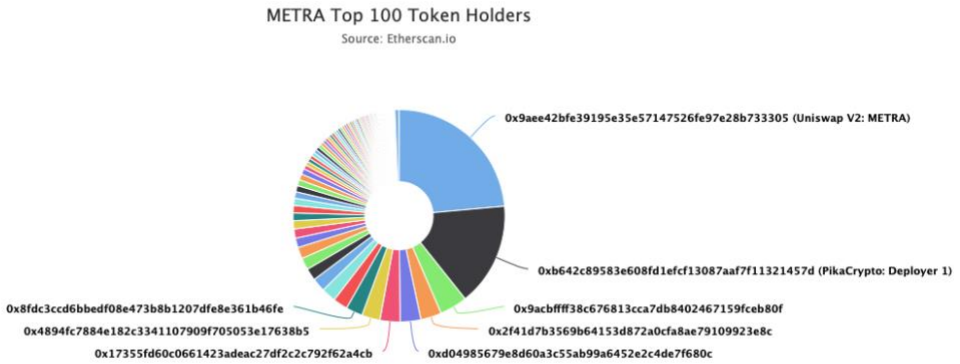
Token contract details for 25.02.2022

Contract name	METRA
Contract address	0x3cD06B0010fEba4216B85B4477125cAc1E708de0
Total supply	381,404,927.983073040118562982 (as Proxy)
Token ticker	METRA (as Proxy)
Decimals	18 (as Proxy)
Token holders	137 (as Proxy)
Transactions count	1,279 (as Proxy)
Top 100 holders dominance	99.39% (as Proxy)
Beneficiary	127958166273558535498362907840349363084334368246672 8 (as Proxy)
Liquidity	731634552595914015514879780615676392359230350211087 (as Proxy)
Contract deployer address	0xb642c89583e608fd1efcf13087aaf7f11321457d
Contract’s current owner address	0xb642c89583e608fd1efcf13087aaf7f11321457d (as Proxy)

METRA Token Distribution

The top 100 holders collectively own 99.39% (379,084,280.23 Tokens) of METRA

Token Total Supply: 381,404,927.98 Token | Total Token Holders: 137

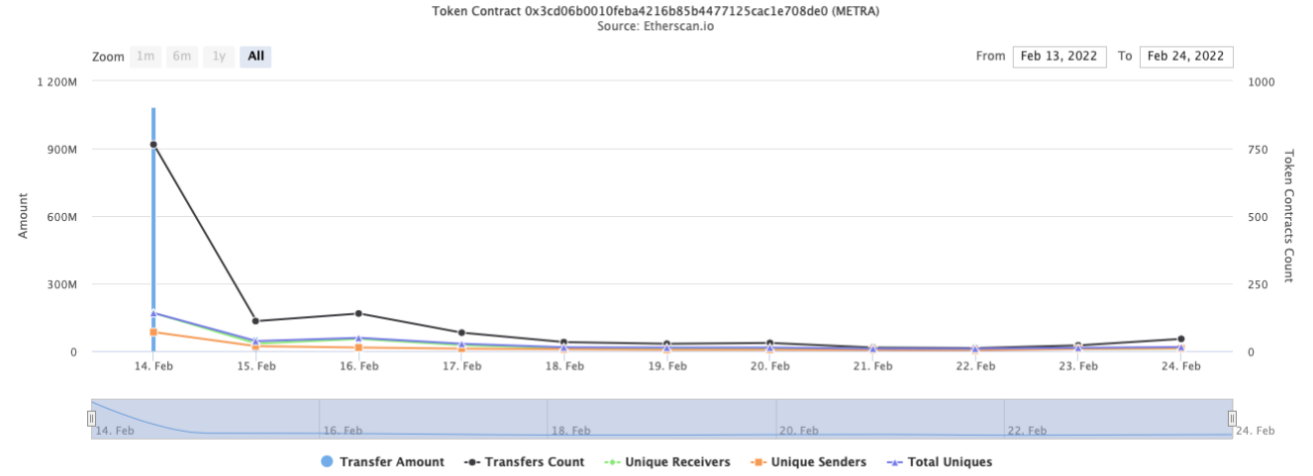


(A total of 379,084,280.23 tokens held by the top 100 accounts from the total supply of 381,404,927.98 token)

METRA Contract Interaction Details

Time Series: Token Contract Overview

Mon 14, Feb 2022 - Thu 24, Feb 2022



METRA Top 10 Token Holders

Rank	Address	Quantity (Token)	Percentage
1	Uniswap V2: METRA	89,882,486.28370556885324789	23.5662%
2	PikaCrypto: Deployer 1	60,000,001	15.7313%
3	0x9acbffff38c676813cca7db8402467159fceb80f	16,056,600.419735509727933477	4.2099%
4	0x2f41d7b3569b64153d872a0cfa8ae79109923e8c	12,143,353.37	3.1838%
5	0xd04985679e8d60a3c55ab99a6452e2c4de7f680c	11,988,911.111982853398935963	3.1434%
6	0x17355fd60c0661423adeac27df2c2c792f62a4cb	11,689,100	3.0647%
7	0x4894fc7884e182c3341107909f705053e17638b5	10,661,545.759371063469712915	2.7953%
8	0x8fdc3ccd6bbedf08e473b8b1207dfe8e361b46fe	9,765,000	2.5603%
9	0x370d79f914dd12dd1b35bf56d23db8d7d2a5e91e	8,500,000	2.2286%
10	0x6cd16ecd2382e45ea4c6e1bc023feb4d238378b4	8,425,393.50827374628122981	2.2090%

Contract functions details

+ Proxiable (UUPSUpgradeable)
  - [Int] _authorizeUpgrade #
  - [Int] _beforeUpgrade #

+ ChildOfProxiable (Proxiable)
  - [Int] _beforeUpgrade #

+ UUPSUpgradeable (ERC1967Upgrade)
  - [Ext] upgradeTo #
  - [Ext] upgradeToAndCall ($)
  - [Int] _authorizeUpgrade #

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

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

+ [Lib] StorageSlot
  - [Int] getAddressSlot
  - [Int] getBooleanSlot
  - [Int] getBytes32Slot
  - [Int] getUint256Slot

+ [Lib] Address
  - [Int] isContract
  - [Int] sendValue #
  - [Int] functionCall #
  - [Int] functionCall #
  - [Int] functionCallWithValue #
  - [Int] functionCallWithValue #
  - [Int] functionStaticCall
  - [Int] functionStaticCall
  - [Int] functionDelegateCall #
  - [Int] functionDelegateCall #
  - [Prv] _verifyCallResult

+ [Int] IBeacon
  - [Ext] implementation

+ ERC1967Upgrade
  - [Int] _getImplementation
  - [Prv] _setImplementation #
  - [Int] _upgradeTo #
  - [Int] _upgradeToAndCall #

  - [Int] _upgradeToAndCallSecure #
  - [Int] _upgradeBeaconToAndCall #
  - [Int] _getAdmin
  - [Prv] _setAdmin #
  - [Int] _changeAdmin #
  - [Int] _getBeacon
  - [Prv] _setBeacon #

+ Proxy
  - [Int] _delegate #
  - [Int] _implementation
  - [Int] _fallback #
  - [Ext] <Fallback> ($)
  - [Ext] <Fallback> ($)
  - [Int] _beforeFallback #

+ ProxyAdmin (Ownable)
  - [Pub] getProxyImplementation
  - [Pub] getProxyAdmin
  - [Pub] changeProxyAdmin #
    - modifiers: onlyOwner
  - [Pub] upgrade #
    - modifiers: onlyOwner
  - [Pub] upgradeAndCall ($)
    - modifiers: onlyOwner

+ TransparentUpgradeableProxy (ERC1967Proxy)
  - [Pub] <Constructor> ($)
    - modifiers: ERC1967Proxy
  - [Ext] admin #
    - modifiers: ifAdmin
  - [Ext] implementation #
    - modifiers: ifAdmin
  - [Ext] changeAdmin #
    - modifiers: ifAdmin
  - [Ext] upgradeTo #
    - modifiers: ifAdmin
  - [Ext] upgradeToAndCall ($)
    - modifiers: ifAdmin
  - [Int] _admin
  - [Int] _beforeFallback #

+ ERC1967Proxy (Proxy, ERC1967Upgrade)
  - [Pub] <Constructor> ($)
  - [Int] _implementation

+ AdminUpgradeabilityProxy (TransparentUpgradeableProxy)
  - [Pub] <Constructor> ($)
    - modifiers: TransparentUpgradeableProxy

($) = 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.

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

- ProxyAdmin owner can upgrade the implementation of the proxy.

Conclusion

Smart contracts do not contain high severity issues! Liquidity pair contract's security is not checked due to out of scope. Audited proxy contract, implementation contract is now on 0x39228bc7ad8a83cfa71c91d0e9ffbc21ba145713 but NOT verified.

Liquidity locking details 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.