Guard

Smart contracts security assessment

Final report

Tariff: Standard

MUNCAT

September 2024

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Contents

Introduction

In accordance with the Memtember initiative, the MUNCAT project was selected and subjected to an audit. The Memtember campaign, designed to foster innovation and community engagement within the blockchain ecosystem, sought to identify promising projects that align with the initiative's core values.

The MUNCAT is standard ERC20 token implemented with OpenZeppelin library which is considered as a best practice. After deployment transfers are blocked. The owner of the contract may allow transfers to and from owner account and open transfers for all token holders. Once transfers are open for all holders, transfer restrictions can't be set back.

Name	MUNCAT
Audit date	2024-09-06 - 2024-09-06
Language	Solidity
Platform	TRON

Contracts checked

Name	Address
Token	TE2T2vLnEQT1XW647EAQAHWqd6NZL1hweR

Procedure

We perform our audit according to the following procedure:

Automated analysis

- Scanning the project's smart contracts with several publicly available automated Solidity analysis tools
- Manual verification (reject or confirm) all the issues found by the tools

Manual audit

- Manually analyze smart contracts for security vulnerabilities
- Smart contracts' logic check

Known vulnerabilities checked

Title	Check result
Unencrypted Private Data On-Chain	passed
Code With No Effects	passed
Message call with hardcoded gas amount	passed
Typographical Error	passed
DoS With Block Gas Limit	passed
Presence of unused variables	passed
Incorrect Inheritance Order	passed
Requirement Violation	passed
Weak Sources of Randomness from Chain Attributes	passed
Shadowing State Variables	passed
Incorrect Constructor Name	passed
Block values as a proxy for time	passed
Authorization through tx.origin	passed
DoS with Failed Call	passed
Delegatecall to Untrusted Callee	passed
Use of Deprecated Solidity Functions	passed
Assert Violation	passed
State Variable Default Visibility	passed

Reentrancy	passed
Unprotected SELFDESTRUCT Instruction	passed
Unprotected Ether Withdrawal	passed
Unchecked Call Return Value	passed
Floating Pragma	passed
Outdated Compiler Version	passed
Integer Overflow and Underflow	passed
Function Default Visibility	passed

Classification of issue severity

High severity	High severity issues can cause a significant or full loss of funds, change of contract ownership, major interference with contract logic. Such issues require immediate attention.
Medium severity	Medium severity issues do not pose an immediate risk, but can be detrimental to the client's reputation if exploited. Medium severity issues may lead to a contract failure and can be fixed by modifying the contract state or redeployment. Such issues require attention.
Low severity	Low severity issues do not cause significant destruction to the contract's functionality. Such issues are recommended to be taken into consideration.

Issues

High severity issues

No issues were found

Medium severity issues

No issues were found

Low severity issues

1. Lack of events (Token)

Status: Open

The function `setMode()` changes token transfer restrictions but does not emit any events.

```
    function setMode(uint v) public onlyOwner {
        if (_mode != MODE_NORMAL) {
            _mode = v;
        }
    }
```

Recommendation: Create and emit event `SetMode(uint mode)` in the function.

Conclusion

MUNCAT Token contract was audited. 1 low severity issue was found.

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