Guard

Smart contracts security assessment

Final report

Tariff: Standard

XRP20

August 2023

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Contents

Introduction

The report has been prepared for **XRP20**.

Audited token is an ERC-20 standard token. XRP20 token doesn't have mint functionality and all transfers are subjected to 0.1% burn without exceptions. Tax is not applied for transferring amounts below 1000 wei threshold.

The code in the @XRP20Dev/XRP20TokenContract Github repo was audited in the 839b985 commit.

Name	XRP20
Audit date	2023-08-03 - 2023-08-05
Language	Solidity
Platform	Ethereum

Contracts checked

Name	Address
XRP20Token	

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	not 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Outdated Compiler Version	passed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. Unused import (XRP20Token)

Status: Open

XPR20Token contract is derived from the Ownable contract from OPenZeppelin library, but it's functionality never used.

Team response: The Ownable contract is used to transfer or renounce ownership of the token, but is never used in the token itself.

Conclusion

XRP20 XRP20Token contract was audited. 1 low severity issue was found. It should be also note that the low severity issue is a gas optimization issue during the deployment process and does not anyhow affect the token security.

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Slither output

```
INFO:Detectors:
Context._msgData() (contracts/Token.sol#116-118) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code
INFO:Detectors:
Pragma version0.8.9 (contracts/Token.sol#3) allows old versions
solc-0.8.9 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity
INFO:Detectors:
Constant XRP20Token._decimals (contracts/Token.sol#207) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Slither:. analyzed (5 contracts with 88 detectors), 4 result(s) found
```

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