Guard

Smart contracts security assessment

Final report

Tariff: Standard

Crypto Space Fleet

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Contents

Introduction

The report has been prepared for the Crypto Space Fleet team.

The audited code is availabe at @dabitgroup/cryptospacefleet Gitlab repository and was audited after commit c26f748f.

Name	Crypto Space Fleet
Audit date	2022-01-27 - 2022-01-31
Language	Solidity
Platform	Polygon Network

Contracts checked

Name	Address
ERC721TradeableUpgradeable	
Cryptospacefleet.sol	

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 analyse 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	not 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Outdated Compiler Version	passed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 checks for input parameters (ERC721TradeableUpgradeable)

The function `mintTo()` should check that the `_tokenURI` the parameter is not empty.

2. Not optimal access modifiers (ERC721TradeableUpgradeable)

`mintTo(address,string)` and `totalSupply()` should be declared external.

3. Unused libraries (ERC721TradeableUpgradeable)

Imported libraries `@openzeppelin/contracts/utils/Strings.sol` , `@openzeppelin/contracts/utils/math/SafeMath.sol` are not used.

4. Not optimal access modifier (Cryptospacefleet.sol)

The function `setContractURI(), contractURI()` should be declared external to save gas on calling it.

Recommendation: Make the functions external.

Conclusion

Crypto Space Fleet ERC721TradeableUpgradeable, Cryptospacefleet.sol contracts were audited. 4 low severity issues were found.The token is upgradable and it is worth considering the high gas costs during the update, as well as the level of user confidence.

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