#HashEx
BLOCKCHAIN SECURITY

A Hunters Dream

smart contracts final audit report

May 2022


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Contents

1. Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice 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 disclaimer below – please make sure to read it in full.

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2. Overview

HashEx performed an audit of the CAW (A Hunters Dream) token contract. The audit was conducted between 2022-05-04 and 2022-05-07.

The purpose of this audit was to achieve the following:

- Identify potential security issues with smart contracts
- Formally check the logic behind given smart contracts.

Information in this report should be used for understanding the risk exposure of smart contracts, and as a guide to improving the security posture of smart contracts by remediating the issues that were identified.

The token is deployed on Ethereum network at address 0xf3b9569F82B18aEf890De263B84189bd33EBe452.

2.1 Summary

Project name	A Hunters Dream
URL	https://coinmarketcap.com/ru/currencies/caw/
Platform	Ethereum
Language	Solidity

2.2 Contracts

Name	Address
StandardERC20	`0xf3b9569F82B18aEf890De263B84189bd33EBe452`

3. Found issues

Low	1 (50%)
Info	1 (50%)

C1. StandardERC20

ID	Severity	Title	Status
C1-01	Low	Gas optimisations	Acknowledged
C1-02	Info	Pragma version not fixed	Acknowledged

4. Contracts

C1. StandardERC20

Overview

An implementation of the ERC20 standard without burning or minting mechanisms. The code uses OpenZeppelin's libraries which is considered as best practice.

Issues

C1-01 Gas optimisations

Low Acknowledged

Functions `name()`, `symbol()`, `totalSupply()`, `balanceOf()`, `transfer()`, `allowance()`, `approve()`, `transferFrom()`, `increaseAllowance()`, `decreaseAllowance()` could be declared external to save gas on calling them.

Recommendations

Declare these functions as `external` instead of `public`.

C1-02 Pragma version not fixed

Info Acknowledged

The pragma version is not fixed and allows the contract to be compiled with different versions of the Solidity compiler.

```
pragma solidity ^0.8.0;
```

Recommendation

We recommend fixing the version of the compiler to ensure that the contract is compiled and deployed with the same Solidity version it was tested with.

5. Conclusion

1 low and 1 informational severity issues were found. The token fully conforms to the ERC20 standard.

This audit includes recommendations on improving the code.

Appendix A. Issues severity classification

- **Critical.** Issues that may cause an unlimited loss of funds or entirely break the contract workflow. Malicious code (including malicious modification of libraries) is also treated as a critical severity issue. These issues must be fixed before deployments or fixed in already running projects as soon as possible.
- **High.** Issues that may lead to a limited loss of funds, break interaction with users, or other contracts under specific conditions. Also, issues in a smart contract, that allow a privileged account the ability to steal or block other users' funds.
- **Medium.** Issues that do not lead to a loss of funds directly, but break the contract logic. May lead to failures in contracts operation.
- **Low.** Issues that are of a non-optimal code character, for instance, gas optimization tips, unused variables, errors in messages.
- **Info.** Issues that do not impact the contract operation. Usually, info severity issues are related to code best practices, e.g. style guide.

Appendix B. List of examined issue types

- Business logic overview
- Functionality checks
- Following best practices
- Access control and authorization
- Reentrancy attacks
- Front-run attacks
- DoS with (unexpected) revert
- DoS with block gas limit
- Transaction-ordering dependence
- ERC/BEP and other standards violation
- Unchecked math
- Implicit visibility levels
- Excessive gas usage
- Timestamp dependence
- Forcibly sending ether to a contract
- Weak sources of randomness
- Shadowing state variables
- Usage of deprecated code

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