SECURITY AUDIT REPORT

Hatom controller (2)
smart contract

by ARDA

on November 24, 2023

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Disclaimer

The report makes no statements or warranties, either expressed or implied, regarding the security of the code, the information herein or its usage. It also cannot be considered as a sufficient assessment regarding the utility and safety of the code, bugfree status or any other statements of the contract.

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Terminology

Inherent risk: A risk for users that comes from a behavior inherent to the smart contract design.

Inherent risks only represent the risks inherent to the smart contract design, which are a subset of all the possible risks. **No inherent risk doesn't mean no risk.** It only means that no risk inherent to the smart contract design has been identified. Other kind of risks could still be present. For example, the issues not fixed incur risks for the users, or the smart contracts deployed as upgradeable also incur risks for the users.

Issue: A behavior unexpected by the users or by the project, or a practice that increases the chances of unexpected behaviors to appear.

Critical issue: An issue intolerable for the users or the project, that must be addressed.

Major issue: An issue undesirable for the users or the project, that we strongly recommend to address.

Medium issue: An issue uncomfortable for the users or the project, that we recommend to address.

Minor issue: An issue imperceptible for the users or the project, that we advise to address for the overall project security.

Audit Summary

Scope of initial audit

- **Repository:** https://github.com/HatomProtocol/hatom-protocol
- **Commit:** `f1388191ae7f17765917f71074fd93ca665f8783`
- **Path to Smart contract:** `./controller/`

Scope of final audit

- **Repository:** https://github.com/HatomProtocol/hatom-protocol
- **Commit:** `5a7edf3a9c41eb9bb0ea98c1cd207fcfadfc9416`
- **Path to Smart contract:** `./controller/`

Report objectives

1. Reporting all **inherent risks** of the smart contract.
2. Reporting all **issues** in the smart contract **code**.
3. Reporting all **issues** in the smart contract **test**.
4. Reporting all **issues** in the **other** parts of the smart contract.
5. Proposing **recommendations** to address all issues reported.

1 inherent risk

0 issue remaining

18 issues reported in the initial audit and 0 remaining in the final audit:

Severity	Reported			Remaining		
	Code	Test	Other	Code	Test	Other
Critical	0	0	0	0	0	0
Major	2	0	0	0	0	0
Medium	10	0	0	0	0	0
Minor	6	0	0	0	0	0

Inherent Risks

R1: Users may not be able to claim rewards as HTM if they claim too late.

This is because the contract has only a limited amount of rewards that can be converted to HTM.

Example: Let's say that if Alice claims now, she would be able to claim rewards as HTM. However, if she rather decides to claim one week later, it is possible that she may not be able to claim rewards as HTM anymore, for instance in the following cases:

- Other users have claimed rewards as HTM during the week, and there are not enough remaining rewards that can be converted to HTM for Alice.

- No other users claimed during the week, but Alice's rewards have increased and may have now exceeded the contract's amount of rewards that can be converted to HTM.

Code Issues & Recommendations

Since the smart contract code is not open-source, only the remaining issues are published.