

SECURITY AUDIT REPORT

Ta-da proxy-staking smart contract

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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://git.vivoka.com/vivoka/ta-da/staking/smart-contract>
- Commit: 8f515ab173443e3d3e7d0bc544bbd93d6c88cf9a
- Path to Smart contract: ./proxy-contract/

Scope of final audit

- Repository: <https://git.vivoka.com/vivoka/ta-da/staking/smart-contract>
- Commit: dbd1fd575a83a7e98bd89ab721d3bb5ba432e7df
- Path to Smart contract: ./proxy-contract/

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 in the final commit

0 issue in the final commit

16 issues reported from the initial commit and 0 remaining in the final commit:

| Severity | Reported | | | Remaining | | |
|----------|----------|------|-------|-----------|------|-------|
| | Code | Test | Other | Code | Test | Other |
| Critical | 1 | 0 | 0 | 0 | 0 | 0 |
| Major | 0 | 0 | 0 | 0 | 0 | 0 |
| Medium | 5 | 0 | 0 | 0 | 0 | 0 |
| Minor | 10 | 0 | 0 | 0 | 0 | 0 |

Inherent Risks

R1: Users would earn less than they expect if admins don't deposit the expected rewards in staking pools.

This is because:

- Users must trust that the team admins will regularly deposit rewards with the expected amount.
- The owner can change anytime the relative weight of a staking pool compared to others. Indeed, if a weight is reduced, then the users in that pool will earn less rewards than before.

Code Issues & Recommendations

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

