

BEST EFFORT REVIEW REPORT

Axelar mvx-multisig-prover Axelar smart contract

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on February 19, 2025



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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, safety and bugfree status of the code, or any other statements.

This report does not constitute legal or investment advice. It is for informational purposes only and is provided on an "as-is" basis. You acknowledge that any use of this report and the information contained herein is at your own risk. The authors of this report shall not be liable to you or any third parties for any acts or omissions undertaken by you or any third parties based on the information contained herein.

Due to its time-constrained nature, a best effort review might not go in the same security depth as an audit. In particular, it does not include a re-assessment on whether all reported issues are correctly fixed at a frozen, subsequent version of the codebase. Further, issues might not be disclosed even if still open, and inherent risks might not have been investigated.

Terminology

Code: The code with which users interact.

Inherent risk: A risk for users that comes from a behavior inherent to the code's design.

Inherent risks only represent the risks inherent to the code's 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 code's 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 upgradability of the code might 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.

Objective

Our objective is to share everything we have found that would help assessing and improving the safety of the code:

1. The **inherent risks** of the code, labelled R1, R2, etc.
2. The **issues** in the **code**, labelled C1, C2, etc.
3. The **issues** in the **testing** of the code, labelled T1, T2, etc.
4. The **issues** in the **other** parts related to the code, labelled O1, O2, etc.
5. The **recommendations** to address each issue.

Summary

Blockchain: Axelar

Initial scope

- **Repository:** <https://github.com/multiversx/axelar-mvx-amplifier>
- **Commit:** 41a9022088bf1a7cc39e90a810404a876f19625e
- **Path(s):**
 - ./contracts/multisig-prover/src/test/test_data.rs#L100-L122
 - ./contracts/multisig-prover/src/contract.rs
 - ./contracts/multisig-prover/src/encoding/mvx/execute_data.rs
 - ./contracts/multisig-prover/src/encoding/mvx/mod.rs
 - ./contracts/multisig-prover/src/encoding/mod.rs#L38,L53

Inherent risks not investigated in this review

0 issue reported

Severity	Reported		
	Code	Test	Other
Critical	0	0	0
Major	0	0	0
Medium	1	0	0
Minor	1	0	0

Code Issues & Recommendations

We do not disclose the resolved issues of this report, only the remaining ones.

