

SALUS SECURITY

MAY 2024



CODE SECURITY ASSESSMENT

BAC GAMES

Overview

Project Summary

- Name: BAC Token
- Platform: Blast
- Language: Solidity
- Repository:
 - <https://github.com/bacgames/BACToken>
- Audit Range: See [Appendix - 1](#)

Project Dashboard

Application Summary

Name	BACToken
Version	v2
Type	Solidity
Dates	May 21 2024
Logs	May 10 2024; May 21 2024

Vulnerability Summary

Total High-Severity issues	0
Total Medium-Severity issues	0
Total Low-Severity issues	1
Total informational issues	0
Total	1

Contact

E-mail: support@salusec.io

Risk Level Description

High Risk	The issue puts a large number of users' sensitive information at risk, or is reasonably likely to lead to catastrophic impact for clients' reputations or serious financial implications for clients and users.
Medium Risk	The issue puts a subset of users' sensitive information at risk, would be detrimental to the client's reputation if exploited, or is reasonably likely to lead to a moderate financial impact.
Low Risk	The risk is relatively small and could not be exploited on a recurring basis, or is a risk that the client has indicated is low impact in view of the client's business circumstances.
Informational	The issue does not pose an immediate risk, but is relevant to security best practices or defense in depth.

Content

Introduction	4
1.1 About SALUS	4
1.2 Audit Breakdown	4
1.3 Disclaimer	4
Findings	5
2.1 Summary of Findings	5
2.2 Notable Findings	6
1. Centralization risk	6
2.3 Informational Findings	7
Appendix	8
Appendix 1 - Files in Scope	8

Introduction

1.1 About SALUS

At Salus Security, we are in the business of trust.

We are dedicated to tackling the toughest security challenges facing the industry today. By building foundational trust in technology and infrastructure through security, we help clients to lead their respective industries and unlock their full Web3 potential.

Our team of security experts employ industry-leading proof-of-concept (PoC) methodology for demonstrating smart contract vulnerabilities, coupled with advanced red teaming capabilities and a stereoscopic vulnerability detection service, to deliver comprehensive security assessments that allow clients to stay ahead of the curve.

In addition to smart contract audits and red teaming, our Rapid Detection Service for smart contracts aims to make security accessible to all. This high calibre, yet cost-efficient, security tool has been designed to support a wide range of business needs including investment due diligence, security and code quality assessments, and code optimisation.

We are reachable on Telegram (<https://t.me/salusec>), Twitter (https://twitter.com/salus_sec), or Email (support@salusec.io).

1.2 Audit Breakdown

The objective was to evaluate the repository for security-related issues, code quality, and adherence to specifications and best practices. Possible issues we looked for included (but are not limited to):

- Risky external calls
- Integer overflow/underflow
- Transaction-ordering dependence
- Timestamp dependence
- Access control
- Call stack limits and mishandled exceptions
- Number rounding errors
- Centralization of power
- Logical oversights and denial of service
- Business logic specification
- Code clones, functionality duplication

1.3 Disclaimer

Note that this security audit is not designed to replace functional tests required before any software release and does not give any warranties on finding all possible security issues with the given smart contract(s) or blockchain software, i.e., the evaluation result does not guarantee the nonexistence of any further findings of security issues.

Findings

2.1 Summary of Findings

ID	Title	Severity	Category	Status
1	Centralization risk	Low	Centralization	Acknowledged

2.2 Notable Findings

Significant flaws that impact system confidentiality, integrity, or availability are listed below.

1. Centralization risk	
Severity: Low	Category: Centralization
Target: <ul style="list-style-type: none">- src/BACToken.sol	

Description

In the BACToken contract, there is a privileged owner role. The owner role has the ability to:

- Minting tokens arbitrarily under the limit of the mint cap.

If the privileged account is a plain EOA account, this can be worrisome and pose a risk to the other users.

Recommendation

We recommend transferring the owner role to a multisig account with a timelock feature for enhanced security. This ensures that no single person has full control over the account and that any changes must be authorized by multiple parties.

Status

This issue has been acknowledged by the team.

2.3 Informational Findings

No informational issues are found.

Appendix

Appendix 1 - Files in Scope

This audit covered the following files in commit [000b9e3](#):

File	SHA-1 hash
src/BACToken.sol	be6265735f06abef8ac638d19734eff6c0681d2c
src/BlastGovernor.sol	d44db51fd87db39095a861256965473ed21c1c5c