CRYPTO CRAT

SMART CONTRACT AUDIT

MuratiAI ERC20 Bridge

Conclusion

The project team of ***MuratiAI ERC20 Bridge*** has applied for security auditing of the Smart Contract source code.

After detailed test process and examination performed by our expert team, we declare that Smart Contract is successfully PASSED the security audit

Summary

Audit Summary

Audit Result	✓ Passed
KYC Verification	NA
Contract Type	ERC20 contract for Bridge Application
Name	MURATIAI ERC20 Bridge
Contract Address	Not deployed yet
Contract Link	Not deployed yet

✓ In conclusion, the ERC20 bridge smart contract has successfully passed all audits, confirming its robustness and adherence to industry standards. Stakeholders can have confidence in its security and reliability. Ongoing monitoring and periodic audits are advised to address emerging risks in the evolving blockchain landscape.

Summary of Owner's Privileges

Privilege Description	INFO	LOW	MEDIUM	HIGH
renounceOwnership	✓			
transferOwnership	✓			
setBridgeFee		✓		
setBridgeTax		✓		
setFee		✓		
setFeeReceiver	✓			
setOperator	✓			
setExcludeFromRestrictions	✓			
setBridgeActive		✓		
setAllowedToken	✓			
setTokenToBridge	✓			
setBridgeLimits		✓		
addNewToken	✓			
claimStuckBalance		✓		

* Only privileges which can be controlled by owner and might have potential to effect profit/loss of investors are listed

Summary of Operator's Privileges

Privilege Description	INFO	LOW	MEDIUM	HIGH
transfer	✓			

Summary of Manual Analysis

✓ The manual analysis of the smart contract has successfully passed, indicating a robust and secure implementation. No critical issues or vulnerabilities were found, providing confidence in the contract's reliability and adherence to security best practices. Ongoing monitoring is advised to address emerging risks and maintain the contract's security over time.

Summary of SWC Analysis

✓ The provided source code of the smart contract has undergone a successful SWC (Smart Contract Weakness Classification) analysis, verifying that it adheres to recommended security practices and does not contain common vulnerabilities.

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Report Data

This report has been prepared by Cryptocrat experts based on detailed examination of MURATIAI ERC20 Bridge source code on July 08, 2023.

Audit process performed carefully using Static Analysis and Manual review Techniques as well as Automated test procedures.

The auditing process focuses to the following considerations with collaboration of an expert team

- Functionality test of the source code to determine if proper logic has been followed throughout the whole process.
- Manually detailed examination of the code line by line by experts.
- Live test by multiple clients using Testnet.
- Analysing failure preparations to check how the Smart Contract performs in case of any bugs and vulnerabilities.
- Checking whether all the libraries used in the code are on the latest version.
- Analysing the security of the on-chain data.

Project Info

Contract Name	**MuratiAI ERC20 Bridge**
Platform	Multichain
Language	Solidity
Project Web Site	https://muratiai.com/
Twitter	https://twitter.com/MuratiAI
Telegram Group	https://t.me/muratiAI

OVERVIEW

This Audit Report mainly focuses on overall security of the smart contract. Cryptocrat team scanned the contract and assessed overall system architecture and the smart contract codebase against vulnerabilities, exploitations, hacks, and back-doors to ensure its reliability and correctness.

Auditing Approach and Applied Methodologies

Cryptocrat team has performed rigorous test procedures of the project

- Code design patterns analysis in which smart contract architecture is reviewed to ensure it is structured according to industry standards and safe use of third-party smart contracts and libraries.
- Line-by-line inspection of the Smart Contract to find any potential vulnerability like race conditions, transaction-ordering dependence, timestamp dependence, and denial of service attacks.
- Unit testing Phase, we coded/conducted custom unit tests written for each function in the contract to verify that each function works as expected.
- Automated Test performed with our in-house developed tools to identify vulnerabilities and security flaws of the Smart Contract.

The focus of the audit was to verify that the Smart Contract System is secure, resilient, and working according to the specifications. The audit activities can be grouped in the following three categories:

Security

Identifying security related issues within each contract and the system of contract.

Sound Architecture

Evaluation of the architecture of this system through the lens of established smart contract best practices and general software best practices.

Code Correctness and Quality

A full review of the contract source code. The primary areas of focus include:

- Accuracy
- Readability
- Sections of code with high complexity
- Quantity and quality of test coverage

Risk Classification

SEVERITY	EXPLANATION
INFORMATIONAL	Informational risks are classified as low-impact issues that do not pose an immediate threat to the security or functionality of the smart contract. These risks typically include suggestions for code optimization, improvements in documentation, or best practices that can enhance the overall quality and maintainability of the contract. While not critical, addressing these informational risks is recommended to further strengthen the contract's security posture.
LOW	Low-risk vulnerabilities are minor issues that may have limited impact on the contract's security. These risks are typically related to non-critical code flaws or deviations from best practices that could potentially be exploited under certain circumstances. While the impact is relatively low, it is still advisable to address these vulnerabilities to reduce any potential security risks and ensure the contract operates as intended.
MEDIUM	Medium-risk vulnerabilities pose a moderate level of risk to the security and functionality of the smart contract. These risks may include code vulnerabilities that could potentially be exploited, but with certain constraints or prerequisites. Addressing medium-risk vulnerabilities is crucial to prevent potential security breaches or unintended behaviour that could impact the contract or its users.
HIGH	High-risk vulnerabilities are critical issues that pose significant threats to the security and functionality of the smart contract. These risks typically involve severe code vulnerabilities that can be exploited to manipulate or compromise the contract's behavior, resulting in financial loss or unauthorized access. Immediate attention and remediation of high-risk vulnerabilities are necessary to ensure the contract's integrity and protect the funds and assets associated with it.

It is important to note that risk classification may vary based on the specific audit methodology or framework used, and the assigned risk level should be interpreted in the context of the smart contract being audited.

Disclaimer

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Investors are advised to conduct their own thorough analysis and seek independent professional advice before making any investment decisions. The information provided in this report should be considered in the context of the specific smart contract and its associated risks.