verichains

SECURITY AUDIT OF

METABOMB TOKEN SMART CONTRACT

Public Report

Apr 01, 2022

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Driving Technology > Forward

ABBREVIATIONS

Name	Description
Ethereum	An open source platform based on blockchain technology to create and distribute smart contracts and decentralized applications.
Ether (ETH)	A cryptocurrency whose blockchain is generated by the Ethereum platform. Ether is used for payment of transactions and computing services in the Ethereum network.
Smart contract	A computer protocol intended to digitally facilitate, verify or enforce the negotiation or performance of a contract.
Solidity	A contract-oriented, high-level language for implementing smart contracts for the Ethereum platform.
Solc	A compiler for Solidity.
ERC20	ERC20 (BEP20 in Binance Smart Chain or *x*RP20 in other chains) tokens are blockchain-based assets that have value and can be sent and received. The primary difference with the primary coin is that instead of running on their own blockchain, ERC20 tokens are issued on a network that supports smart contracts such as Ethereum or Binance Smart Chain.

EXECUTIVE SUMMARY

This Security Audit Report prepared by Verichains Lab on Apr 01, 2022. We would like to thank the MetaBomb for trusting Verichains Lab in auditing smart contracts. Delivering high-quality audits is always our top priority.

This audit focused on identifying security flaws in code and the design of the MetaBomb Token Smart Contract. The scope of the audit is limited to the source code files provided to Verichains. Verichains Lab completed the assessment using manual, static, and dynamic analysis techniques.

During the audit process, the audit team had identified no vulnerable issue in the smart contracts code.

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1. MANAGEMENT SUMMARY

1.1. About MetaBomb Token Smart Contract

Metabomb is a game with simple gameplay, suitable for all different types of players. Metabomb opens up a metaverse world where players can earn real money through it.

1.2. Audit scope

This audit focused on identifying security flaws in code and the design of the smart contracts of MetaBomb Token Smart Contract. It was conducted on commit 2b33eaa7d74144c5d1d8c3f0ff6632e75966bcd1 from git repository *https://github.com/mtb2022/BlockChain*

The latest version of the following files were made available in the course of the review:

SHA256 Sum	File
595e6ab775da173f22460c2570aa8d880ca0ec3bd4ef06e5dc7592df77291698	**MetaBombToken.sol**

1.3. Audit methodology

Our security audit process for smart contract includes two steps:

- Smart contract codes are scanned/tested for commonly known and more specific vulnerabilities using public and RK87, our in-house smart contract security analysis tool.
- Manual audit of the codes for security issues. The contracts are manually analyzed to look for any potential problems.

Following is the list of commonly known vulnerabilities that was considered during the audit of the smart contract:

- Integer Overflow and Underflow
- Timestamp Dependence
- Race Conditions
- Transaction-Ordering Dependence
- DoS with (Unexpected) revert
- DoS with Block Gas Limit
- Gas Usage, Gas Limit and Loops
- Redundant fallback function
- Unsafe type Inference
- Reentrancy
- Explicit visibility of functions state variables (external, internal, private and public)

- Logic Flaws

For vulnerabilities, we categorize the findings into categories as listed in table below, depending on their severity level:

SEVERITY LEVEL	DESCRIPTION
CRITICAL	A vulnerability that can disrupt the contract functioning; creates a critical risk to the contract; required to be fixed immediately.
HIGH	A vulnerability that could affect the desired outcome of executing the contract with high impact; needs to be fixed with high priority.
MEDIUM	A vulnerability that could affect the desired outcome of executing the contract with medium impact in a specific scenario; needs to be fixed.
LOW	An issue that does not have a significant impact, can be considered as less important.

Table 1. Severity levels

1.4. Disclaimer

Please note that security auditing cannot uncover all existing vulnerabilities, and even an audit in which no vulnerabilities are found is not a guarantee for a 100% secure smart contract. However, auditing allows discovering vulnerabilities that were unobserved, overlooked during development and areas where additional security measures are necessary.

2. AUDIT RESULT

2.1. Overview

The MetaBomb Token Smart Contract was written in Solidity language, with the required version to be ^0.8.4.

2.1.1. MetaBomb Token contract

The contract imported the ERC20 and ERC20Burnable contract which was implemented by OpenZeppelin. ERC20Burnable allows token holders to destroy both their own tokens and those that they have an allowance for.

This table lists some properties of the audited MetaBomb Token Smart Contract (as of the report writing time).

PROPERTY	VALUE
Name	MetaBomb Token
Symbol	MTB
Decimals	18
Max Supply	1,000,000,000 ($x10^{18}$) Note: the number of decimals is 18, so the total representation token will be 1,000,000,000 or 1 billion.

Table 2. The MetaBomb Token properties

2.2. Findings

During the audit process, the audit team found no vulnerability issues in the given version of MetaBomb Token Smart Contract.

APPENDIX

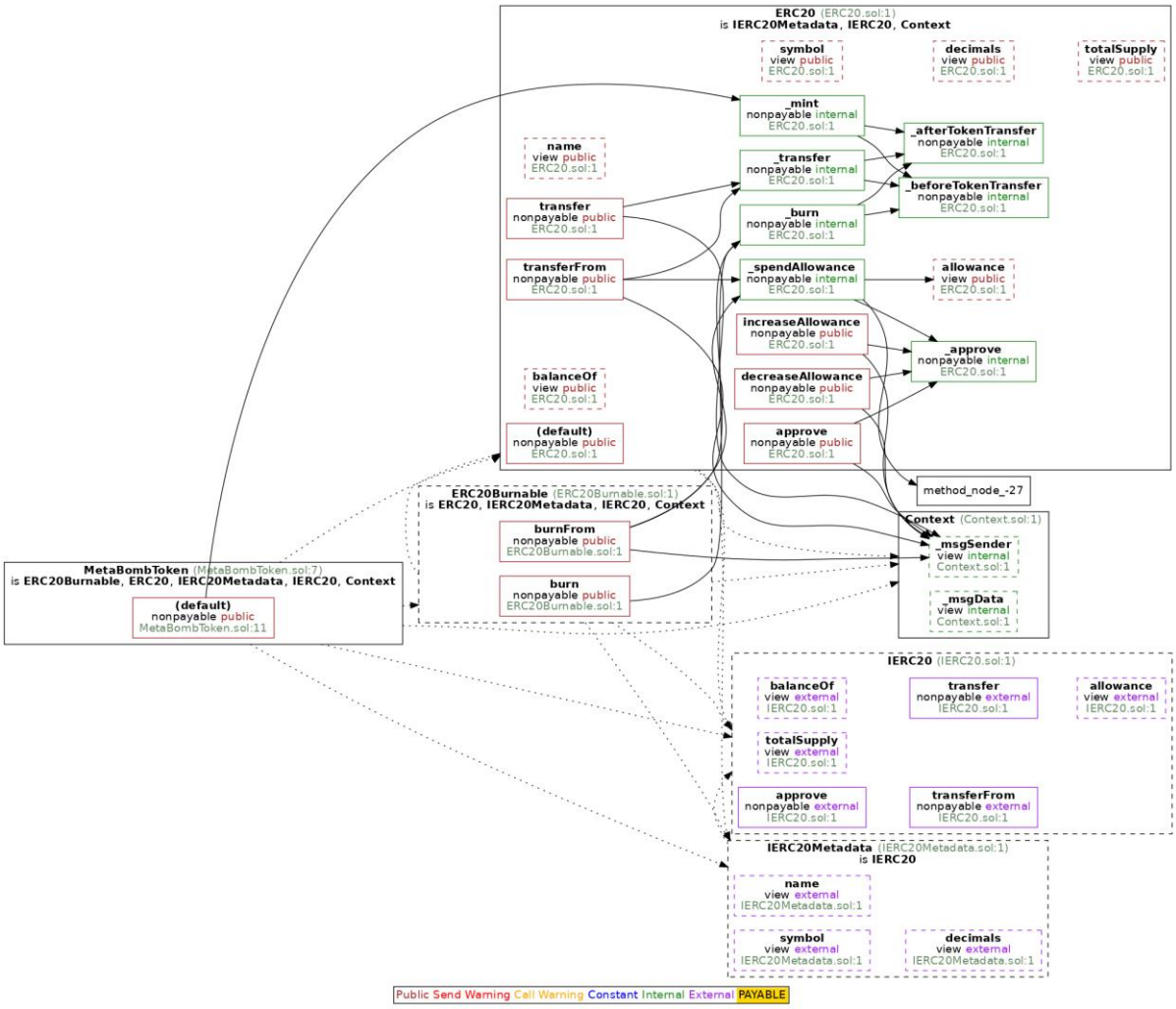

Image 1. MetaBomb Token call graph

3. VERSION HISTORY

Version	Date	Status/Change	Created by
1.0	*Apr 01, 2022*	Public Report	Verichains Lab

Table 3. Report versions history