

Audit Report ROMB GAME TOKEN

September 2024

Network ETH

Address 0x1A8D6Cb8504f48341E229aC30243bF64B07a2e26

Audited by © cyberscope



Analysis

CriticalMediumMinor / InformativePass

| Severity | Code | Description | Status |
|----------|------|-------------------------|--------|
| • | ST | Stops Transactions | Passed |
| • | OTUT | Transfers User's Tokens | Passed |
| • | ELFM | Exceeds Fees Limit | Passed |
| • | MT | Mints Tokens | Passed |
| • | ВТ | Burns Tokens | Passed |
| • | ВС | Blacklists Addresses | Passed |



Diagnostics

CriticalMediumMinor / Informative

| Severity | Code | Description | Status |
|----------|------|----------------------------|------------|
| • | L09 | Dead Code Elimination | Unresolved |
| • | L18 | Multiple Pragma Directives | Unresolved |
| • | L19 | Stable Compiler Version | Unresolved |



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Risk Classification

The criticality of findings in Cyberscope's smart contract audits is determined by evaluating multiple variables. The two primary variables are:

- 1. Likelihood of Exploitation: This considers how easily an attack can be executed, including the economic feasibility for an attacker.
- 2. Impact of Exploitation: This assesses the potential consequences of an attack, particularly in terms of the loss of funds or disruption to the contract's functionality.

Based on these variables, findings are categorized into the following severity levels:

- 1. Critical: Indicates a vulnerability that is both highly likely to be exploited and can result in significant fund loss or severe disruption. Immediate action is required to address these issues.
- 2. Medium: Refers to vulnerabilities that are either less likely to be exploited or would have a moderate impact if exploited. These issues should be addressed in due course to ensure overall contract security.
- 3. Minor: Involves vulnerabilities that are unlikely to be exploited and would have a minor impact. These findings should still be considered for resolution to maintain best practices in security.
- 4. Informative: Points out potential improvements or informational notes that do not pose an immediate risk. Addressing these can enhance the overall quality and robustness of the contract.

| Severity | Likelihood / Impact of Exploitation |
|------------------------------|--|
| Critical | Highly Likely / High Impact |
| Medium | Less Likely / High Impact or Highly Likely/ Lower Impact |
| Minor / Informative | Unlikely / Low to no Impact |



Review

| Contract Name | ROMBGAMETOKEN |
|-------------------|---|
| Compiler Version | v0.8.26+commit.8a97fa7a |
| Optimization | 200 runs |
| Explorer | https://etherscan.io/address/0x1a8d6cb8504f48341e229ac3024 3bf64b07a2e26 |
| Address | 0x1a8d6cb8504f48341e229ac30243bf64b07a2e26 |
| Network | ETH |
| Symbol | RMB |
| Decimals | 18 |
| Total Supply | 1,000,000,000 |
| Badge Eligibility | Yes |

Audit Updates

| Initial Audit | 24 Sep 2024 |
|---------------|-------------|
| | |

Source Files

| Filename | SHA256 | |
|-------------------|--|--|
| ROMBGAMETOKEN.sol | 64fcc1ab4ad47c8b50a49406b4b549eebfba0704444b376d9a58b9f78c 3b0411 | |



Findings Breakdown



| Severity | Unresolved | Acknowledged | Resolved | Other |
|---------------------------------------|------------|--------------|----------|-------|
| Critical | 0 | 0 | 0 | 0 |
| Medium | 0 | 0 | 0 | 0 |
| Minor / Informative | 3 | 0 | 0 | 0 |



L09 - Dead Code Elimination

| Criticality | Minor / Informative |
|-------------|----------------------------|
| Location | ROMBGAMETOKEN.sol#L141,551 |
| Status | Unresolved |

Description

In Solidity, dead code is code that is written in the contract, but is never executed or reached during normal contract execution. Dead code can occur for a variety of reasons, such as:

- Conditional statements that are always false.
- Functions that are never called.
- Unreachable code (e.g., code that follows a return statement).

Dead code can make a contract more difficult to understand and maintain, and can also increase the size of the contract and the cost of deploying and interacting with it.

```
function _contextSuffixLength() internal view virtual returns
(uint256) {
    return 0;
}

function _burn(address account, uint256 value) internal {
    if (account == address(0)) {
        revert ERC20InvalidSender(address(0));
    }
    _update(account, address(0), value);
}
```

Recommendation

To avoid creating dead code, it's important to carefully consider the logic and flow of the contract and to remove any code that is not needed or that is never executed. This can help improve the clarity and efficiency of the contract.



L18 - Multiple Pragma Directives

| Criticality | Minor / Informative |
|-------------|--|
| Location | ROMBGAMETOKEN.sol#L10,92,120,150,315,632 |
| Status | Unresolved |

Description

If the contract includes multiple conflicting pragma directives, it may produce unexpected errors. To avoid this, it's important to include the correct pragma directive at the top of the contract and to ensure that it is the only pragma directive included in the contract.

```
pragma solidity ^0.8.20;
```

Recommendation

It is important to include only one pragma directive at the top of the contract and to ensure that it accurately reflects the version of Solidity that the contract is written in.

By including all required compiler options and flags in a single pragma directive, the potential conflicts could be avoided and ensure that the contract can be compiled correctly.



L19 - Stable Compiler Version

| Criticality | Minor / Informative |
|-------------|--|
| Location | ROMBGAMETOKEN.sol#L10,92,120,150,315,632 |
| Status | Unresolved |

Description

The symbol indicates that any version of Solidity that is compatible with the specified version (i.e., any version that is a higher minor or patch version) can be used to compile the contract. The version lock is a mechanism that allows the author to specify a minimum version of the Solidity compiler that must be used to compile the contract code. This is useful because it ensures that the contract will be compiled using a version of the compiler that is known to be compatible with the code.

```
pragma solidity ^0.8.20;
```

Recommendation

The team is advised to lock the pragma to ensure the stability of the codebase. The locked pragma version ensures that the contract will not be deployed with an unexpected version. An unexpected version may produce vulnerabilities and undiscovered bugs. The compiler should be configured to the lowest version that provides all the required functionality for the codebase. As a result, the project will be compiled in a well-tested LTS (Long Term Support) environment.



Functions Analysis

| Contract | Туре | Bases | | |
|--------------------|----------------------|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| | | | | |
| IERC20 | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | transfer | External | ✓ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| IERC20Metadat a | Interface | IERC20 | | |
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |
| | | | | |
| Context | Implementation | | | |
| | _msgSender | Internal | | |
| | _msgData | Internal | | |
| | _contextSuffixLength | Internal | | |
| | | | | |
| IERC20Errors | Interface | | | |
| | | | | |



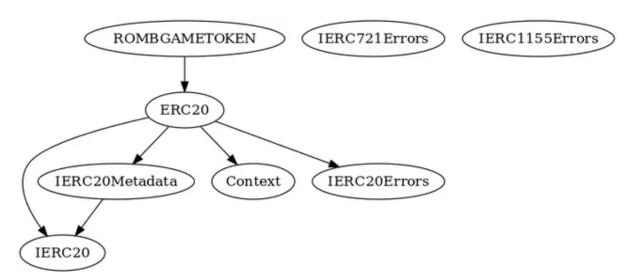
| IERC721Errors | Interface | | | |
|---------------|-----------------|--|---|---|
| | | | | |
| IERC1155Error | Interface | | | |
| | | | | |
| ERC20 | Implementation | Context, IERC20, IERC20Meta data, IERC20Error s | | |
| | | Public | ✓ | - |
| | name | Public | | - |
| | symbol | Public | | - |
| | decimals | Public | | - |
| | totalSupply | Public | | - |
| | balanceOf | Public | | - |
| | transfer | Public | ✓ | - |
| | allowance | Public | | - |
| | approve | Public | ✓ | - |
| | transferFrom | Public | ✓ | - |
| | _transfer | Internal | ✓ | |
| | _update | Internal | ✓ | |
| | _mint | Internal | ✓ | |
| | _burn | Internal | ✓ | |
| | _approve | Internal | ✓ | |
| | _approve | Internal | ✓ | |
| | _spendAllowance | Internal | ✓ | |
| | | | | |



| ROMBGAMETO KEN | Implementation | ERC20 | | |
|-------------------|----------------|--------|---|-------|
| | | Public | ✓ | ERC20 |

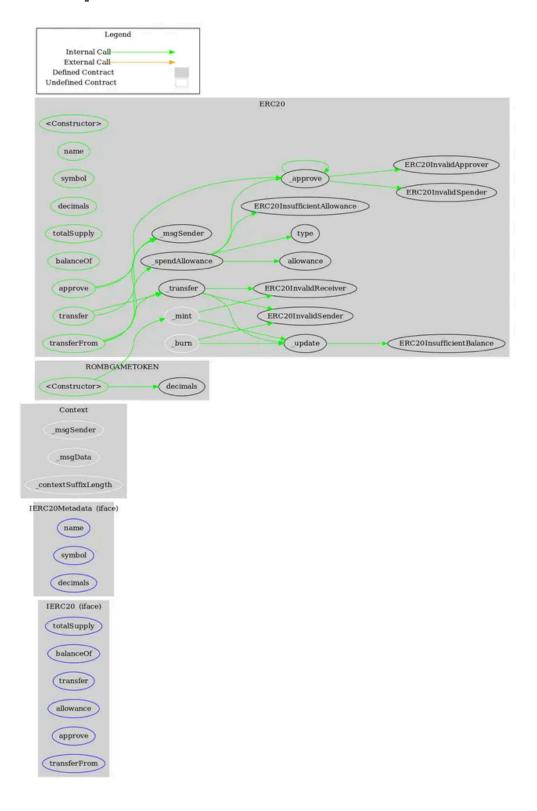


Inheritance Graph





Flow Graph





Summary

ROMB GAME TOKEN contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. ROMB GAME TOKEN is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues.



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About Cyberscope

Cyberscope is a blockchain cybersecurity company that was founded with the vision to make web3.0 a safer place for investors and developers. Since its launch, it has worked with thousands of projects and is estimated to have secured tens of millions of investors' funds.

Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.



The Cyberscope team

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