February 2023

Commit b616559de52b8b9af08c95be4c2384b90b05ba11

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## Review

| **Repository** | https://github.com/ammagtech/OGB-ICO-SmartContract |
| --- | --- |
| **Commit** | b616559de52b8b9af08c95be4c2384b90b05ba11 |

### Audit Updates

| **Initial Audit** | 10 Feb 2023  <https://github.com/cyberscope-io/audits/tree/main/OpenGames/v1/audit.pdf> |
| --- | --- |
| **Corrected Phase 2** | 13 Feb 2023 |

### Source Files

| **Filename** | SHA256 |
| --- | --- |
| **OGBToken.sol** | 2ef98349146c1e896cdae3ae7e5e694fb62ed3def9d834a9ee9e5310dc0bc324 |

## Analysis

|  | ⬤ | Critical | ⬤ | Medium | ⬤ | Minor / Informative | ⬤ | Pass |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |

| **Severity** | **Code** | **Description** | **Status** |
| --- | --- | --- | --- |
| ⬤ | ST | Stops Transactions | Passed |
| ⬤ | OCTD | Transfers Contract's Tokens | Passed |
| ⬤ | OTUT | Transfers User's Tokens | Passed |
| ⬤ | ELFM | Exceeds Fees Limit | Passed |
| ⬤ | ULTW | Transfers Liquidity to Team Wallet | Passed |
| ⬤ | MT | Mints Tokens | Passed |
| ⬤ | BT | Burns Tokens | Passed |
| ⬤ | BC | Blacklists Addresses | Passed |

## Diagnostics

|  |  |  | ⬤ | Critical | ⬤ | Medium | ⬤ | Minor / Informative |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |

| **Severity** | **Code** | **Description** | **Status** |
| --- | --- | --- | --- |
| ⬤ | CO | Code Optimization | Unresolved |
| ⬤ | L20 | Succeeded Transfer Check | Unresolved |

### 

### CO - Code Optimization

| **Criticality** | Minor / Informative |
| --- | --- |
| **Location** | OGBToken.sol#L30,35 |
| **Status** | Unresolved |

#### Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations. The contract extends the ERC20 contract, so the transfer() and approve() functions are already implemented. That means there is not reason to use IERC20 interface to get access to these function.

| IERC20(address(this)).approve(\_devContract, \_devAmount);  ...  IERC20(address(this)).transfer(  msg.sender,  IERC20(address(this)).balanceOf(address(this))  ); |
| --- |

#### Recommendation

The team is advised to take into consideration these segments and rewrite them so the runtime will be more performant. That way it will improve the efficiency and performance of the source code and reduce the cost of executing it.

### 

### L20 - Succeeded Transfer Check

| **Criticality** | Minor / Informative |
| --- | --- |
| **Location** | OGBToken.sol#L35 |
| **Status** | Unresolved |

#### Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

| IERC20(address(this)).transfer(  msg.sender,  IERC20(address(this)).balanceOf(address(this))  ) |
| --- |

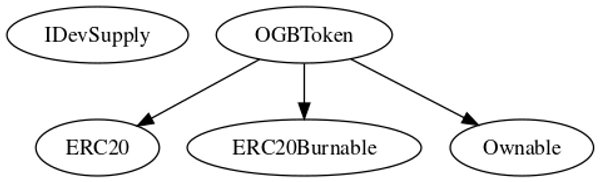
#### Recommendation

The contract should check if the result of the transfer methods is successful. The team is advised to check the SafeERC20 library from the [Openzeppelin library](https://github.com/OpenZeppelin/openzeppelin-contracts/blob/master/contracts/token/ERC20/utils/SafeERC20.sol).

## Functions Analysis

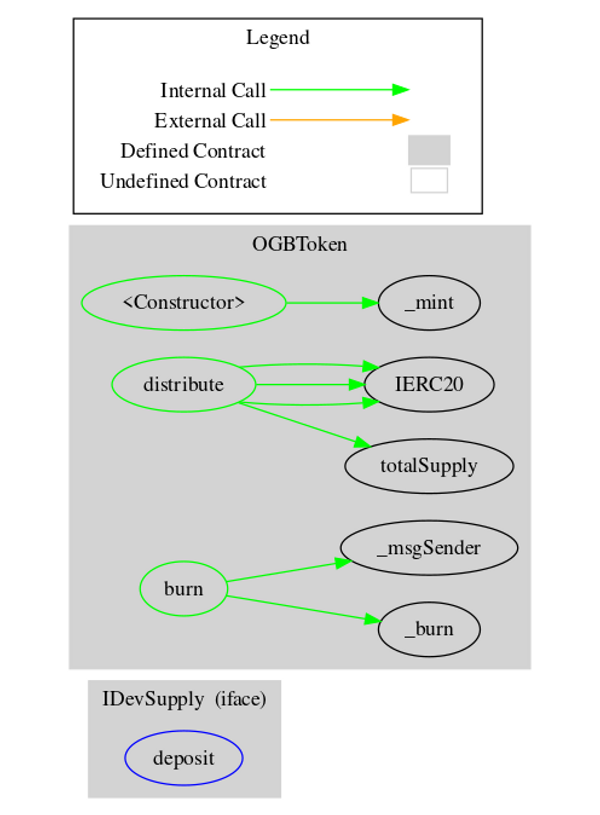
| **Contract** | **Type** | **Bases** |  |  |
| --- | --- | --- | --- | --- |
|  | **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
|  |  |  |  |  |
| **IDevSupply** | Interface |  |  |  |
|  | deposit | External️ | ✓ | -️ |
|  |  |  |  |  |
| **OGBToken** | Implementation | ERC20, ERC20Burnable, Ownable |  |  |
|  |  | Public️ | ✓ | ERC20 |
|  | distribute | Public️ | ✓ | -️ |
|  | burn | Public️ | ✓ | -️ |

## Inheritance Graph



## 

## Flow Graph



## Summary

OpenGames is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler errors or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users’ transactions.

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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

<https://www.cyberscope.io>