Cyberscope

Audit Report

OpenGames

February 2023

Commit b616559de52b8b9af08c95be4c2384b90b05ba11

Audited by © cyberscope

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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))
    )
```

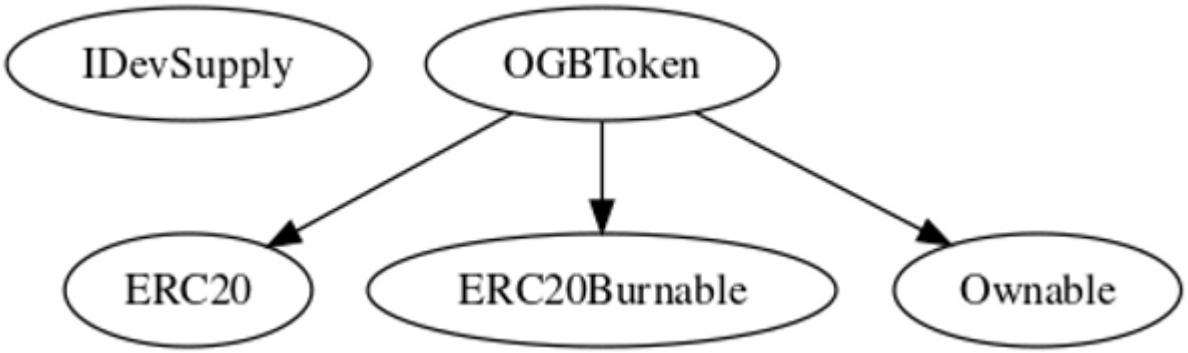
Recommendation

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.

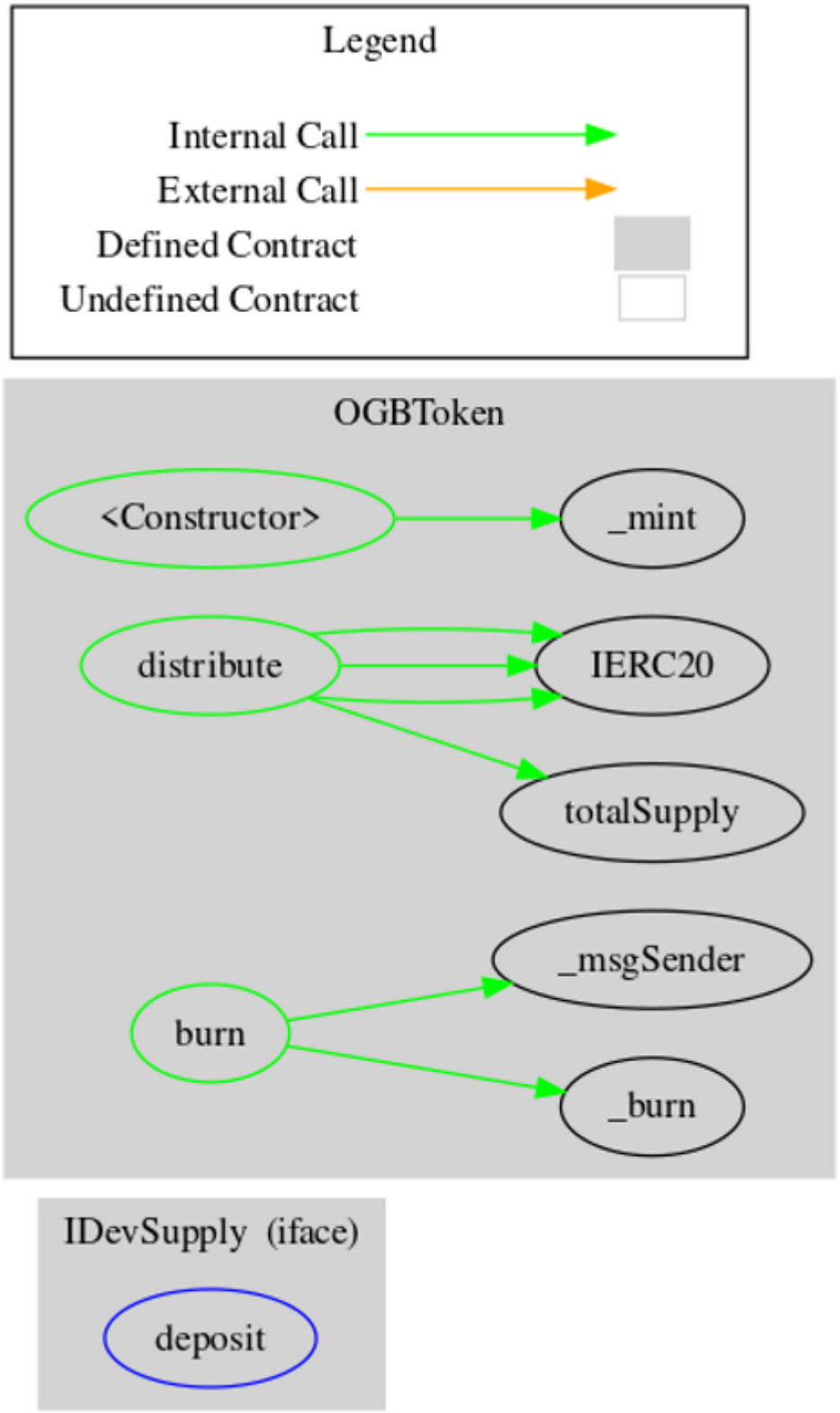
Functions Analysis

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

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
OGBToken
<Constructor>
_mint
distribute
IERC20
totalSupply
_msgSender
burn
_burn
IDevSupply (iface)
deposit

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