



Cyberscope

Audit Report

Treboltoken

February 2024

Network BSC

Address 0x6f5C228d4Ac47ebDcAD7EE02B591A562d577EB16

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Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Unresolved
●	ELFM	Exceeds Fees Limit	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Diagnostics

● Critical ● Medium ● Minor / Informative

Severity	Code	Description	Status
●	MEE	Missing Events Emission	Unresolved
●	L02	State Variables could be Declared Constant	Unresolved
●	L19	Stable Compiler Version	Unresolved

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Review

Contract Name	TrebolToken
Compiler Version	v0.8.19+commit.7dd6d404
Optimization	200 runs
Explorer	https://bscscan.com/address/0x6f5c228d4ac47ebdcad7ee02b591a562d577eb16
Address	0x6f5c228d4ac47ebdcad7ee02b591a562d577eb16
Network	BSC
Symbol	TT
Decimals	18
Total Supply	23,000,000,000
Badge Eligibility	Must Fix Criticals

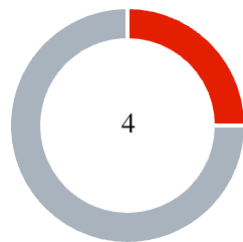
Audit Updates

Initial Audit	07 Feb 2024
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Source Files

Filename	SHA256
TrebolToken.sol	5f5a6a23663b2a9484333b7b9b6ccc8a57760e36d8977e1ba701b6d49cbca2ec

Findings Breakdown



Critical	1
Medium	0
Minor / Informative	3

Severity	Unresolved	Acknowledged	Resolved	Other
Critical	1	0	0	0
Medium	0	0	0	0
Minor / Informative	3	0	0	0

OTUT - Transfers User's Tokens

Criticality	Critical
Location	TrebolToken.sol#L36
Status	Unresolved

Description

Any user has the authority to transfer the balance of a user's address if the user has granted allowance. The contract does not subtract the allowance in the `transferFrom()` method, as a result, the transfer can be repeated until the user's balance goes to zero.

```
function transferFrom(address from, address to, uint value)
public returns(bool) {
    require(balanceOf(from) >= value, 'balance too low');
    require(allowance[from][msg.sender] >= value, 'allowance
too low');
    balances[to] += value;
    balances[from] -= value;
    emit Transfer(from, to, value);
    return true;
}
```

Recommendation

The team is advised to subtract the allowance in the `transferFrom()` method and migrate to a new contract.

MEE - Missing Events Emission

Criticality	Minor / Informative
Location	TrebolToken.sol#L20
Status	Unresolved

Description

The contract set the owner's balance without event emission. Emitting events for significant actions is important as it allows external parties, such as wallets or dApps, to track and monitor the activity on the contract. Without these events, it may be difficult for external parties to accurately determine the current state of the contract.

```
constructor() {  
    balances[msg.sender] = totalSupply;  
}
```

Recommendation

It is recommended to include events in the code that are triggered each time a significant action is taking place within the contract. These events should include relevant details such as the user's address and the nature of the action taken. By doing so, the contract will be more transparent and easily auditable by external parties. It will also help prevent potential issues or disputes that may arise in the future.

L02 - State Variables could be Declared Constant

Criticality	Minor / Informative
Location	TrebolToken.sol#L12,13,14,15
Status	Unresolved

Description

State variables can be declared as constant using the constant keyword. This means that the value of the state variable cannot be changed after it has been set. Additionally, the constant variables decrease gas consumption of the corresponding transaction.

```
uint public totalSupply = 23000000000 * 10 ** 18
string public name = "TrebolToken"
string public symbol = "TT"
uint public decimals = 18
```

Recommendation

Constant state variables can be useful when the contract wants to ensure that the value of a state variable cannot be changed by any function in the contract. This can be useful for storing values that are important to the contract's behavior, such as the contract's address or the maximum number of times a certain function can be called. The team is advised to add the constant keyword to state variables that never change.

L19 - Stable Compiler Version

Criticality	Minor / Informative
Location	TrebolToken.sol#L5
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 ^0.8.19;
```

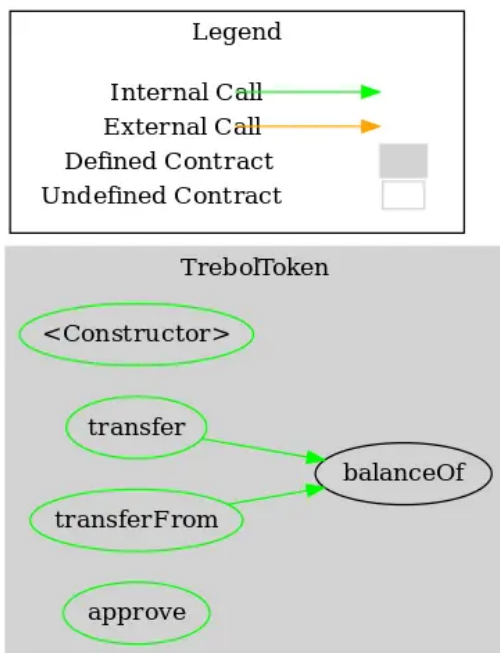
Recommendation

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	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
TrebolToken	Implementation			
		Public	✓	-
	balanceOf	Public		-
	transfer	Public	✓	-
	transferFrom	Public	✓	-
	approve	Public	✓	-

Flow Graph



Summary

Treboltoken contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. The contract exhibits a critical issue regarding the handling of allowance. Read more in the [OTUI](#) finding.

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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

<https://www.cyberscope.io>