



Smart Contract Audit

FOR

Ben Coin

DATED : 25 May 23'



AUDIT SUMMARY

Project name – Ben Coin

Date: 25 May, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: **Passed**

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	0	0	0
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0



USED TOOLS

Tools:

1- Manual Review:

a line by line code review has been performed by audit ace team.

2- BSC Test Network:

all tests were done on BSC Test network, each test has its transaction has attached to it.

3- Slither : Static Analysis

Testnet Link: all tests were done using this contract, tests are done on BSC Testnet

<https://testnet.bscscan.com/token/0xc56196ABaE91AeBAf42d9194aB3382F325956E1A>



TOKEN OVERVIEW

Fees:

Buy Fees: upto: 0%

Sell Fees: upto: 0 %

Transfer Fees: 0%

Fees Privilige: none

Ownership: 0x00

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: -



AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
 - Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
 - Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
 - Test coverage analysis determines whether the test cases are covering the code and how much code is exercised when we run the test cases.
 - Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
 - Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.
-

VULNERABILITY CHECKLIST

- | | |
|------------------------------------|-------------------------------|
| ✓ Return values of low-level calls | ✓ Gasless Send |
| ✓ Private modifier | ✓ Using block.timestamp |
| ✓ Multiple Sends | ✓ Re-entrancy |
| ✓ Using Suicide | ✓ Tautology or contradiction |
| ✓ Gas Limitand Loops | ✓ Timestamp Dependence |
| ✓ Address hardcoded | ✓ Revert/require functions |
| ✓ Exception Disorder | ✓ Use of tx.origin |
| ✓ Using inline assembly | ✓ Integer overflow/underflow |
| ✓ Divide before multiply | ✓ Dangerous strict equalities |
| ✓ Missing Zero Address Validation | ✓ Using SHA3 |
| ✓ Compiler version not fixed | ✓ Using throw |
-



CLASSIFICATION OF RISK

Severity

Description

◆ Critical

These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.

◆ High-Risk

A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.

◆ Medium-Risk

A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.

◆ Low-Risk

A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.

◆ Gas Optimization /Suggestion

A vulnerability that has an informational character but is not affecting any of the code.

Findings

Severity

Found

◆ Critical

0

◆ High-Risk

0

◆ Medium-Risk

0

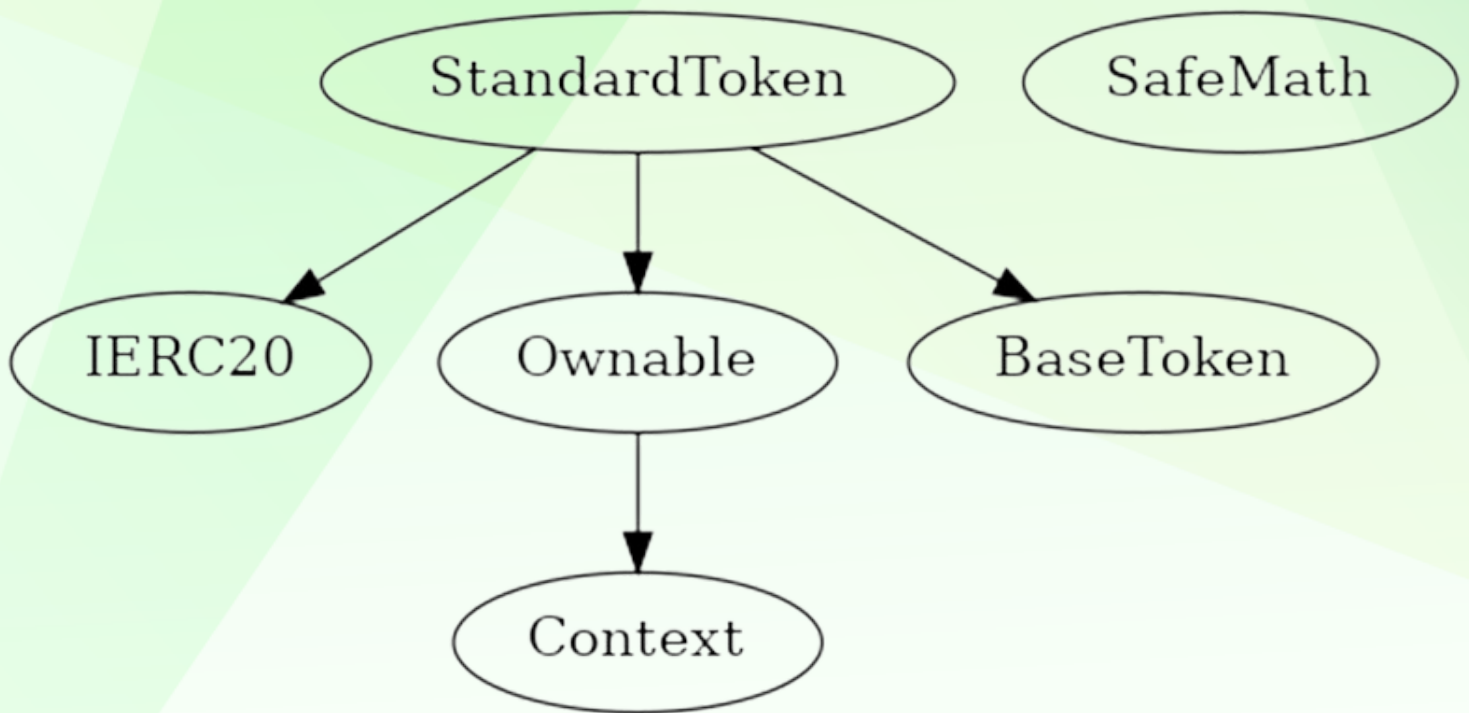
◆ Low-Risk

0

◆ Gas Optimization / Suggestions

0

INHERITANCE TREE



POINTS TO NOTE

- Fees are 0 (static)
 - Owner is not able to blacklist an arbitrary address.
 - Owner is not able to disable trades
 - Owner is not able to limit buy/sell/transfer/wallet amounts
 - Owner is not able to mint new tokens
-




















CONTRACT ASSESMENT

Contract	Type	Bases			
:-----: :-----: :-----: :-----: :-----:					
L	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
IERC20 Interface					
L	totalSupply	External !	NO !		
L	balanceOf	External !	NO !		
L	transfer	External !	NO !		
L	allowance	External !	NO !		
L	approve	External !	NO !		
L	transferFrom	External !	NO !		
Context Implementation					
L	_msgSender	Internal			
L	_msgData	Internal			
Ownable Implementation Context					
L	<Constructor>	Public !	NO !		
L	owner	Public !	NO !		
L	renounceOwnership	Public !	onlyOwner		
L	transferOwnership	Public !	onlyOwner		
L	_setOwner	Private			
SafeMath Library					
L	tryAdd	Internal			
L	trySub	Internal			
L	tryMul	Internal			
L	tryDiv	Internal			
L	tryMod	Internal			
L	add	Internal			
L	sub	Internal			
L	mul	Internal			
L	div	Internal			
L	mod	Internal			
L	sub	Internal			
L	div	Internal			
L	mod	Internal			
BaseToken Implementation					
StandardToken Implementation IERC20, Ownable, BaseToken					
L	<Constructor>	Public !	NO !		

CONTRACT ASSESMENT



```

|  | name | Public ! | | NO! |
|  | symbol | Public ! | | NO! |
|  | decimals | Public ! | | NO! |
|  | totalSupply | Public ! | | NO! |
|  | balanceOf | Public ! | | NO! |
|  | transfer | Public ! |  | NO! |
|  | allowance | Public ! | | NO! |
|  | approve | Public ! |  | NO! |
|  | transferFrom | Public ! |  | NO! |
|  | increaseAllowance | Public ! |  | NO! |
|  | decreaseAllowance | Public ! |  | NO! |
|  | _transfer | Internal  |  | |
|  | _mint | Internal  |  | |
|  | _burn | Internal  |  | |
|  | _approve | Internal  |  | |
|  | _setupDecimals | Internal  |  | |
|  | _beforeTokenTransfer | Internal  |  | |

```

Legend

```

| Symbol | Meaning |
|:-----:|-----|
|  | Function can modify state |
|  | Function is payable |

```



STATIC ANALYSIS

```
StandardToken.allowance(address,address).owner (contracts/Token.sol#571) shadows:
- Ownable.owner() (contracts/Token.sol#159-161) (function)
StandardToken._approve(address,address,uint256).owner (contracts/Token.sol#765) shadows:
- Ownable.owner() (contracts/Token.sol#159-161) (function)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#local-variable-shadowing

Context._msgData() (contracts/Token.sol#118-120) is never used and should be removed
SafeMath.div(uint256,uint256) (contracts/Token.sol#349-351) is never used and should be removed
SafeMath.div(uint256,uint256,string) (contracts/Token.sol#405-414) is never used and should be removed
SafeMath.mod(uint256,uint256) (contracts/Token.sol#365-367) is never used and should be removed
SafeMath.mod(uint256,uint256,string) (contracts/Token.sol#431-440) is never used and should be removed
SafeMath.mul(uint256,uint256) (contracts/Token.sol#335-337) is never used and should be removed
SafeMath.sub(uint256,uint256) (contracts/Token.sol#321-323) is never used and should be removed
SafeMath.tryAdd(uint256,uint256) (contracts/Token.sol#221-230) is never used and should be removed
SafeMath.tryDiv(uint256,uint256) (contracts/Token.sol#272-280) is never used and should be removed
SafeMath.tryMod(uint256,uint256) (contracts/Token.sol#287-295) is never used and should be removed
SafeMath.tryMul(uint256,uint256) (contracts/Token.sol#252-265) is never used and should be removed
SafeMath.trySub(uint256,uint256) (contracts/Token.sol#237-245) is never used and should be removed
StandardToken._burn(address,uint256) (contracts/Token.sol#737-749) is never used and should be removed
StandardToken._setupDecimals(uint8) (contracts/Token.sol#783-785) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version^0.8.17 (contracts/Token.sol#469) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.19 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Variable StandardToken._totalSupply (contracts/Token.sol#487) is too similar to StandardToken.constructor(string,string,uint8,uint256).totalSupply_ (contracts/Token.sol#493)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

StandardToken._name (contracts/Token.sol#484) should be immutable
StandardToken._symbol (contracts/Token.sol#485) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
(contracts/Token.sol analyzed (6 contracts with 84 detectors): 22 results found)
```

Result => A static analysis of contract's source code has been performed using slither,

No major issues were found in the output



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):

<https://testnet.bscscan.com/tx/0x089f435dd182649661faec35016ed4815cbf67106fb29fec2d4208804500e990>

2- Buying (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xdc67b21e11de3f9125f14141c6241b9b30a1f3dae85af7237bfb55b0c5a7ebdb>

3- Selling (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x65e64962565ceef3b67fb98e721388f1c6baae61f758aacb2f191eb73ac55f71>

4- Transferring (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x8ff90ea4452f19884cb2e0ce211a085acbfb95cb6117dc0ce4b651d9bd369e09>



FUNCTIONAL TESTING

No issues Found



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