



Cyberscope

Audit Report

HowInu

October 2023

Network BSC

Address 0xdaa64420e769fae36ccaa78e26024fe9f583e9d8

Audited by © cyberscope

Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Passed
●	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
●	IDI	Immutable Declaration Improvement	Unresolved
●	L09	Dead Code Elimination	Unresolved

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Review

Contract Name	BEP20Token
Compiler Version	v0.5.16+commit.9c3226ce
Optimization	200 runs
Explorer	https://bscscan.com/address/0xdaa64420e769fae36ccaa78e26024fe9f583e9d8
Address	0xdaa64420e769fae36ccaa78e26024fe9f583e9d8
Network	BSC
Symbol	HOW
Decimals	18
Total Supply	1,000,000,000,000,000

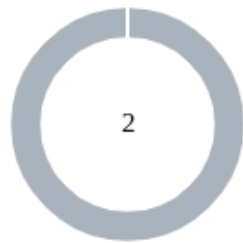
Audit Updates

Initial Audit	19 Oct 2023
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Source Files

Filename	SHA256
BEP20Token.sol	71707943ad313ce67e1786b8e90345b6396fb7c438f47c888d9dfdb2791f0f8d

Findings Breakdown



● Critical	0
● Medium	0
● Minor / Informative	2

Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	0
● Medium	0	0	0	0
● Minor / Informative	2	0	0	0

IDI - Immutable Declaration Improvement

Criticality	Minor / Informative
Location	BEP20Token.sol#L356,357,358
Status	Unresolved

Description

The contract declares state variables that their value is initialized once in the constructor and are not modified afterwards. The `immutable` is a special declaration for this kind of state variables that saves gas when it is defined.

```
_name  
_symbol  
_decimals
```

Recommendation

By declaring a variable as immutable, the Solidity compiler is able to make certain optimizations. This can reduce the amount of storage and computation required by the contract, and make it more gas-efficient.

L09 - Dead Code Elimination

Criticality	Minor / Informative
Location	BEP20Token.sol#L557,592
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 _burn(address account, uint256 amount) internal {
    require(account != address(0), "BEP20: burn from the zero address");

    _balances[account] = _balances[account].sub(amount, "BEP20: burn amount exceeds balance");
    _totalSupply = _totalSupply.sub(amount);
    emit Transfer(account, address(0), amount);
}

function _burnFrom(address account, uint256 amount) internal {
    _burn(account, amount);
    _approve(account, _msgSender(),
    _allowances[account][_msgSender()].sub(amount, "BEP20: burn amount exceeds allowance"));
}
```

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.

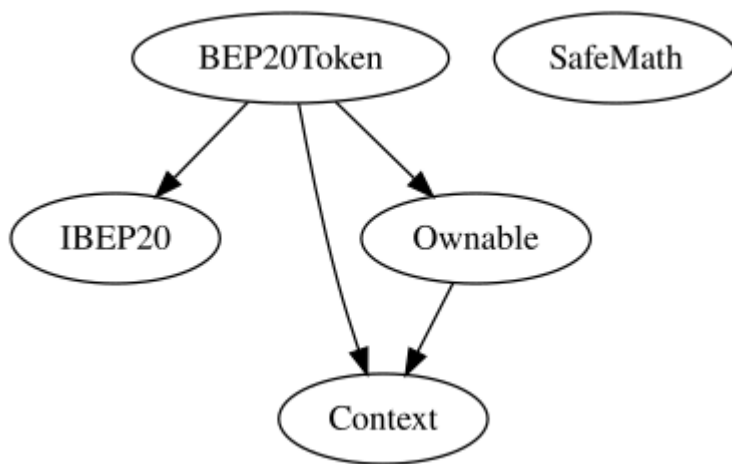
Functions Analysis

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IBEP20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Context	Implementation			
		Internal	✓	
	_msgSender	Internal		
	_msgData	Internal		
SafeMath	Library			

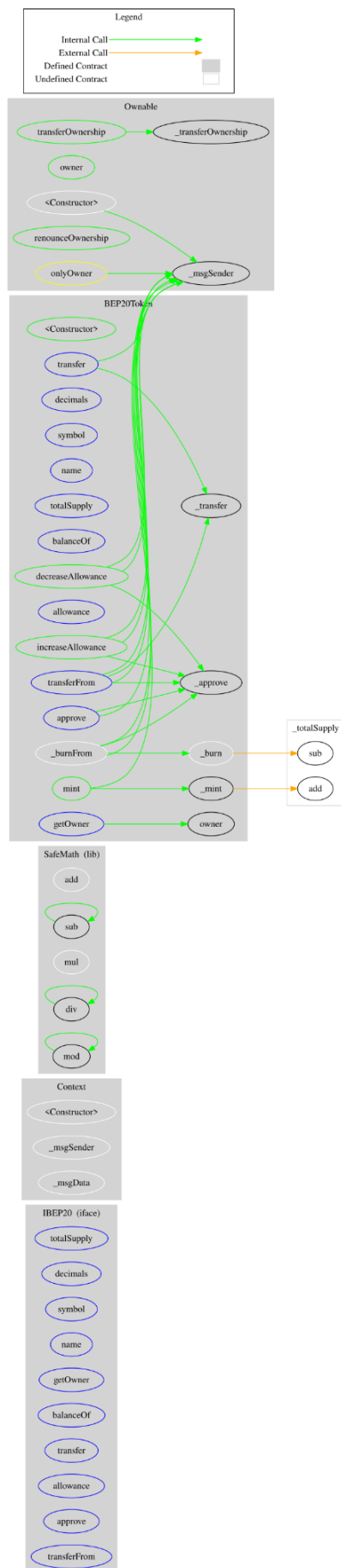
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
Ownable	Implementation	Context		
		Internal	✓	
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
BEP20Token	Implementation	Context, IBEP20, Ownable		
		Public	✓	-
	getOwner	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	totalSupply	External		-

	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	mint	Public	✓	onlyOwner
	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_burnFrom	Internal	✓	

Inheritance Graph



Flow Graph



Summary

HowInu contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. There are some functions that can be abused by the owner like mint tokens. if the contract owner abuses the mint functionality, then the contract will be highly inflated. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

The contract's ownership has been renounced. The information regarding the transaction can be accessed through the following link:

<https://bscscan.com/tx/0xb270f000f6c2bfa31959f487f015795a96648adde73f6974b0edad495bd8c3f2>

Disclaimer

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Blockchain technology and cryptographic assets present a high level of ongoing risk. Cyberscope's position is that each company and individual are responsible for their own due diligence and continuous security. Cyberscope's goal is to help reduce the attack vectors and the high level of variance associated with utilizing new and consistently changing technologies and in no way claims any guarantee of security or functionality of the technology we agree to analyze. The assessment services provided by Cyberscope are subject to dependencies and are under continuing development. You agree that your access and/or use including but not limited to any services reports and materials will be at your sole risk on an as-is where-is and as-available basis. Cryptographic tokens are emergent technologies and carry with them high levels of technical risk and uncertainty. The assessment reports could include false positives, false negatives and other unpredictable results. The services may access and depend upon multiple layers of third parties.

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>