Cyberscope

Audit Report

Wheely

December 2022

Type	BEP20
Network	BSC
Address	0xC76E7938C648aE71E4f4016ba7C38dC8B7557869
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	Wheely
Compiler Version	v0.8.7+commit.e28d00a7
Optimization	200 runs
Licence	Unlicense
Explorer	https://bscscan.com/token/0xC76E7938C648aE71E4f4016ba7C38dC8B7557869
Symbol	WHEELY
Decimals	18
Total Supply	1,000,000
Domain	wheely.world

Source Files

Filename	**SHA256**
contract.sol	140ee848ed99b00756c13114bdb5e75389f9f61f76c0c3f9e10de5d4bd0994e0

Audit Updates

Initial Audit	1st December 2022
Corrected	

Contract 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	Unresolved
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

MT - Mints Tokens

Criticality	critical
Location	contract.sol#L619
Status	Unresolved

Description

The contract owner has the authority to mint tokens. The owner may take advantage of it by calling the `mint` function. As a result the contract tokens will be highly inflated.

```
function mint(uint256 amount) public onlyOwner returns (bool) {
    _mint(_msgSender(), amount);
    return true;
}
```

Recommendation

The owner should carefully manage the credentials of the owner's account. We advised considering an extra-strong security mechanism that the actions may be quarantined by many users instead of one. The owner could also renounce the contract ownership for a period of time or pass the access to the zero address.

Contract Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
●	RSML	Redundant SafeMath Library	Unresolved
●	CO	Code Optimization	Unresolved
●	L09	Dead Code Elimination	Unresolved
●	L13	Divide before Multiply Operation	Unresolved

RSML - Redundant SafeMath Library

Criticality	minor / informative
Location	contract.sol#L18
Status	Unresolved

Description

The Solidity versions that are greater than or equal to 0.8.0 do not need the use of SafeMath Library. The usage of the SafeMath library produces unnecessary additional gas.

```
library SafeMath {
...
}
```

Recommendation

The team is advised to remove the SafeMath library as it is safe to do math operations without it.

CO - Code Optimization

Criticality	minor / informative
Location	contract.sol#L643
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. Multiplication by 1 is redundant.

```
uint256 fee = amount/10000*1;
```

Recommendation

The authors are advised to remove the multiplication by 1 as it is redundant.

L09 - Dead Code Elimination

Criticality	minor / informative
Location	contract.sol#L719,684
Status	Unresolved

Description

Functions that are not used in the contract, and make the code's size bigger.

```
_burnFrom
_burn
```

Recommendation

Remove unused functions.

L13 - Divide before Multiply Operation

Criticality	minor / informative
Location	contract.sol#L638
Status	Unresolved

Description

Performing divisions before multiplications may cause lose of prediction.

```
fee = amount / 10000 * 1
```

Recommendation

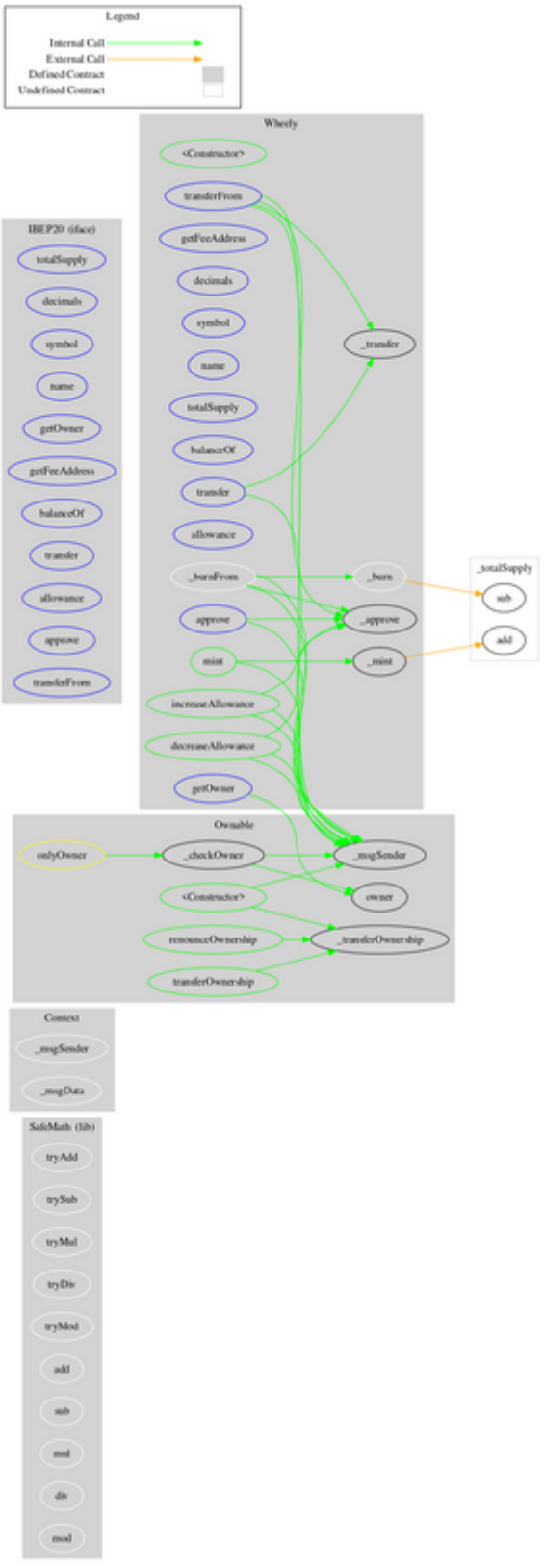
The multiplications should be prior to the divisions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
SafeMath	Library			
	tryAdd	Internal		
	trySub	Internal		
	tryMul	Internal		
	tryDiv	Internal		
	tryMod	Internal		
	add	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	mod	Internal		
	sub	Internal		
	div	Internal		
	mod	Internal		
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	_checkOwner	Internal		
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
IBEP20	Interface			
	totalSupply	External		-

	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	getFeeAddress	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Wheely	Implementation	Context, IBEP20, Ownable		
	<Constructor>	Public	✓	-
	getOwner	External		-
	getFeeAddress	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	✓	

Contract Flow



Domain Info

Domain Name	wheely.world
Registry Domain ID	902a9453b81c4bed80cef6e26985c334-DONUTS
Creation Date	2022-10-24T21:24:55Z
Updated Date	2022-11-24T09:48:33Z
Registry Expiry Date	2023-10-24T21:24:55Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://www.namecheap.com/
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

The domain was created about 1 month before the creation of the audit. It will expire in 11 months.

There is no public billing information, the creator is protected by the privacy settings.

Summary

The Smart Contract analysis reported one critical severity issue. The contract owner has the authority to 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.

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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

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