Cyberscope

Audit Report

OVENCOIN

April 2023

Network	BSC
Address	0x0d5556E58862A21db65B4Aa180da231cfE6140fE
Audited by	© cyberscope

Table of Contents

Review

Contract Name	Ovencoin
Compiler Version	v0.8.7+commit.e28d00a7
Optimization	200 runs
Explorer	https://bscscan.com/address/0x0d5556e58862a21db65b4aa180da231cfe6140fe
Address	0x0d5556e58862a21db65b4aa180da231cfe6140fe
Network	BSC
Symbol	OVE
Decimals	18
Total Supply	777,700,000,000

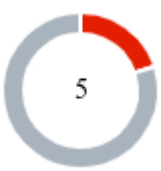
Audit Updates

Initial Audit	17 Apr 2023

Source Files

Filename	SHA256
Ovencoin.sol	c6d3d0e1b8441f377e49640a1cdcf54921202c3f605461d051b4a7cb64608081

Findings Breakdown



Critical	1
Medium	0
Minor / Informative	4

Severity	Unresolved	Acknowledged	Resolved	Other
Critical	0	0	1	0
Medium	0	0	0	0
Minor / Informative	4	0	0	0

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	Renounced
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

MT - Mints Tokens

Criticality	Critical
Location	Ovencoin.sol#L601
Status	Renounced

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 {
    _mint(msg.sender, amount);
}
```

Recommendation

The team should carefully manage the private keys of the owner's account.

Team Update

The owner has renounced ownership at the following transaction: https://bscscan.com/tx/0x7723d2d8e49d8e3cedfd1fd6e53e27337000db61d1100c9f17f40615eb33bb2f.

Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
●	L02	State Variables could be Declared Constant	Unresolved
●	L09	Dead Code Elimination	Unresolved
●	L18	Multiple Pragma Directives	Unresolved
●	L19	Stable Compiler Version	Unresolved

L02 - State Variables could be Declared Constant

Criticality	Minor / Informative
Location	Ovencoin.sol#L81
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.

```
address private _recover
```

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.

L09 - Dead Code Elimination

Criticality	Minor / Informative
Location	Ovencoin.sol#L511
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 virtual {
        require(account != address(0), "BEP20: burn from the zero
address");

        _beforeTokenTransfer(account, address(0), amount);

        uint256 accountBalance = _balances[account];
...
        }
        _totalSupply -= amount;

        emit Transfer(account, address(0), amount);

        _afterTokenTransfer(account, address(0), amount);
    }
```

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.

L18 - Multiple Pragma Directives

Criticality	Minor / Informative
Location	Ovencoin.sol#L2,65,140,220,244
Status	Unresolved

Description

If the contract includes multiple conflicting pragma directives, it may produce unexpected errors. To avoid this, it's important to include the correct pragma directive at the top of the contract and to ensure that it is the only pragma directive included in the contract.

```
pragma solidity ^0.8.7;
pragma solidity ^0.8.0;
```

Recommendation

It is important to include only one pragma directive at the top of the contract and to ensure that it accurately reflects the version of Solidity that the contract is written in.

By including all required compiler options and flags in a single pragma directive, the potential conflicts could be avoided and ensure that the contract can be compiled correctly.

L19 - Stable Compiler Version

Criticality	Minor / Informative
Location	Ovencoin.sol#L2,65,140,220,244
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 ^0.8.7;
pragma solidity ^0.8.0;
```

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.

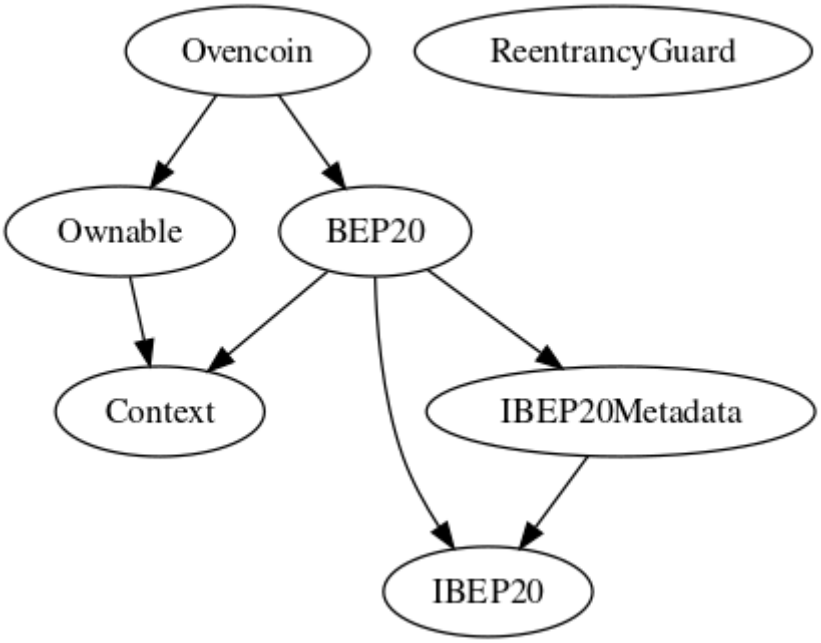
Functions Analysis

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
ReentrancyGuard	Implementation			
Ownable	Implementation	Context		
		Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
IBEP20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-

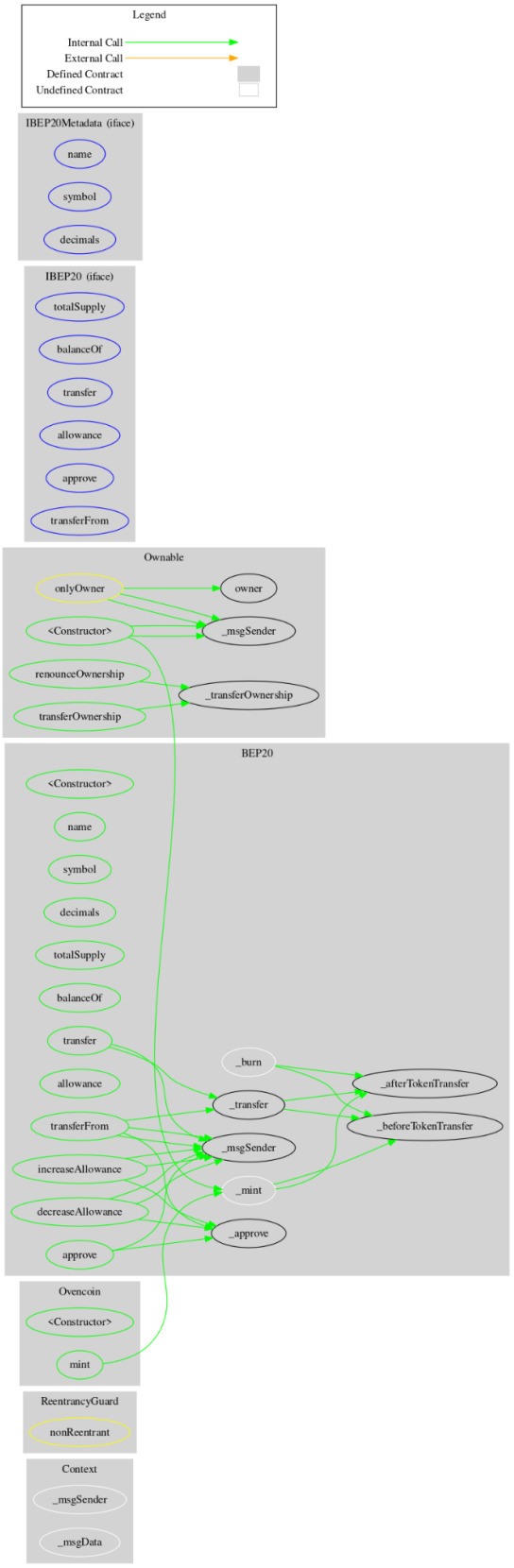
	approve	External	✓	-
	transferFrom	External	✓	-
IBEP20Metadata	Interface	IBEP20		
	name	External		-
	symbol	External		-
	decimals	External		-
BEP20	Implementation	Context, IBEP20, IBEP20Metadata		
		Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	_transfer	Internal	✓	

	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
Ovencoin	Implementation	BEP20, Ownable		
		Public	✓	BEP20
	mint	Public	✓	onlyOwner

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
IBEP20Metadata (iface)
name
symbol
decimals
IBEP20 (iface)
totalSupply
balanceOf
transfer
allowance
approve
transferFrom
Ownable
onlyOwner
owner
<Constructor>
_msgSender
renounceOwnership
_transferOwnership
transferOwnership
BEP20
<Constructor>
name
symbol
decimals
totalSupply
balanceOf
transfer
allowance
transferFrom
increaseAllowance
decreaseAllowance
approve
_burn
_transfer
_msgSender
_mint
_approve
_afterTokenTransfer
_beforeTokenTransfer
Ovencoin
<Constructor>
mint
ReentrancyGuard
nonReentrant
Context
_msgSender
_msgData

Summary

OVENCOIN 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 minting tokens. If the contract owner abuses the mint functionality, then the contract will be highly inflated.

The owner has renounced ownership at the following transaction: https://bscscan.com/tx/0x7723d2d8e49d8e3cedfd1fd6e53e27337000db61d1100c9f17f40615eb33bb2f.

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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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