Cyberscope

Audit Report

Immortl

January 2023

Network MATIC

Address 0x217F7dEad406C360b2fF676Bacd2C73db5a24089

Audited by © cyberscope

Table of Contents

Review

Contract Name	OneImmortl_ERC20_IMRTL
Testing Deploy	https://testnet.bscscan.com/address/0x89f5b722d372cfc484f335747c56497fed01c3b3
Symbol	IMRTL
Decimals	18
Total Supply	400,000,000

Audit Updates

Initial Audit	25 Jan 2023 https://github.com/cyberscope-io/audits/blob/main/1-imrtl/v1/audit.pdf
Corrected Phase 2	28 Jan 2023 https://github.com/cyberscope-io/audits/blob/main/1-imrtl/v2/audit.pdf
Corrected Phase 3	30 Jan 2023

Source Files

Filename	SHA256
@openzeppelin/contracts/access/Ownable.sol	9353af89436556f7ba8abb3f37a6677249aa4df6024fbfaa94f79ab2f44f3231
@openzeppelin/contracts/utils/Context.sol	1458c260d010a08e4c20a4a517882259a23a4baa0b5bd9add9fb6d6a1549814a
contracts/OneImmortl_ERC20_IMRTL_optimized_V2.sol	fbf99c1613e669a453012383c127d4ad27c51719d05bca545e659d8b652a25ee

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	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
●	L04	Conformance to Solidity Naming Conventions	Unresolved

L04 - Conformance to Solidity Naming Conventions

Criticality	Minor / Informative
Location	contracts/OneImmortl_ERC20_IMRTL_optimized_V2.sol#L8,156,163,199,211,218,225,236,241,271,281,291,314,321,322,323,434,443,463,491,515
Status	Unresolved

Description

The Solidity style guide is a set of guidelines for writing clean and consistent Solidity code. Adhering to a style guide can help improve the readability and maintainability of the Solidity code, making it easier for others to understand and work with.

The followings are a few key points from the Solidity style guide:

1. Use camelCase for function and variable names, with the first letter in lowercase (e.g., myVariable, updateCounter).
2. Use PascalCase for contract, struct, and enum names, with the first letter in uppercase (e.g., MyContract, UserStruct, ErrorEnum).
3. Use uppercase for constant variables and enums (e.g., MAX_VALUE, ERROR_CODE).
4. Use indentation to improve readability and structure.
5. Use spaces between operators and after commas.
6. Use comments to explain the purpose and behavior of the code.
7. Keep lines short (around 120 characters) to improve readability.

```
contract OneImmortl_ERC20_IMRTL is
    Ownable
{
    //=======================
    // STRUCTS
    //=======================
...
        else if (_type == -1)
        {
            return maxTax.sell;
        }
        return maxTax.p2p;
    }
}

...
```

Recommendation

By following the Solidity naming convention guidelines, the codebase increased the readability, maintainability, and makes it easier to work with.

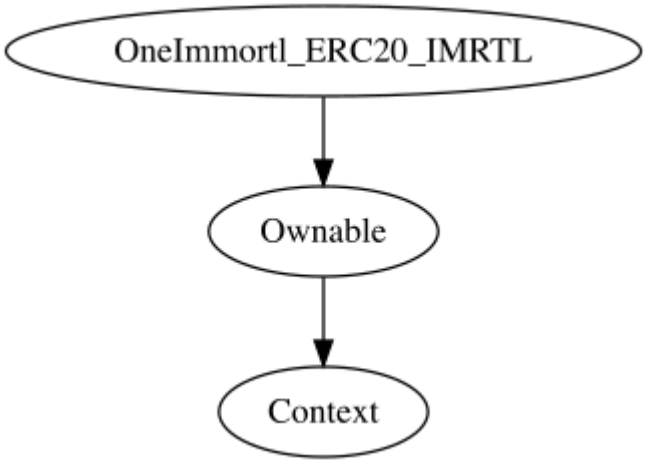
Find more information on the Solidity documentation https://docs.soliditylang.org/en/v0.8.17/style-guide.html#naming-convention.

Functions Analysis

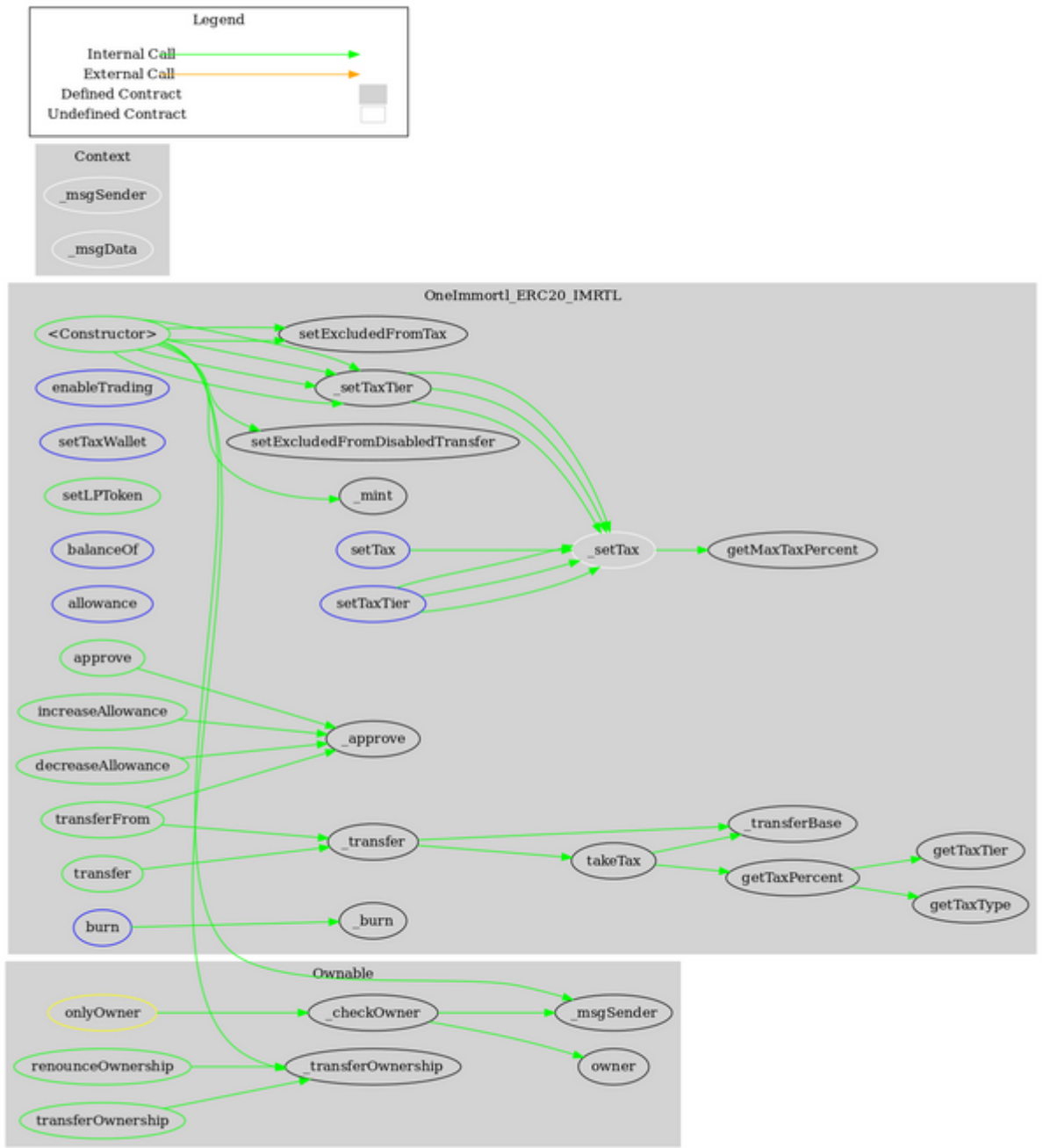
Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
Ownable	Implementation	Context		
		Public	✓	-
	owner	Public		-
	_checkOwner	Internal		
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_transferOwnership	Internal	✓	
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
OneImmortl_ERC20_IMRTL	Implementation	Ownable		
		Public	✓	-
	enableTrading	External	✓	onlyOwner
	setExcludedFromDisabledTransfer	Public	✓	onlyOwner
	setTaxWallet	External	✓	onlyOwner
	_setTax	Internal	✓	onlyOwner
	setTax	External	✓	-
	_setTaxTier	Internal	✓	
	setTaxTier	External	✓	-
	setExcludedFromTax	Public	✓	onlyOwner
	setLPToken	Public	✓	onlyOwner

	balanceOf	External		-
	allowance	External		-
	_approve	Internal	✓	
	approve	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	transfer	Public	✓	-
	transferFrom	Public	✓	-
	_transfer	Internal	✓	
	_transferBase	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	burn	External	✓	-
	takeTax	Internal	✓	
	getTaxType	Internal		
	getTaxTier	Internal		
	getTaxPercent	Public		-
	getMaxTaxPercent	Internal		

Inheritance Graph



Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
Context
_msgSender
_msgData
OneImmortl_ERC20_IMRTL
<Constructor>
setExcludedFromTax
enableTrading
_setTaxTier
setTaxWallet
setExcludedFromDisabledTransfer
setLPToken
_mint
balanceOf
setTax
_setTax
getMaxTaxPercent
allowance
setTaxTier
approve
increaseAllowance
_approve
decreaseAllowance
transferFrom
_transfer
_transferBase
takeTax
transfer
getTaxPercent
getTaxTier
getTaxType
burn
_burn
Ownable
onlyOwner
checkOwner
_msgSender
renounceOwnership
transferOwnership
owner
transferOwnership

Summary

Immortl is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler errors or critical issues. The Contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. There is also a limit of max 20% fee.

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The Cyberscope team

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