Rabbit 23

Smart Contract Audit Report

SYSFIXED

19 Jan 2023

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Rabbit 23	Rabbit 23	BSC

Addresses

Contract address	0xfbfb86682EE8CBA2bd40359b8C687940B6DfFc53
Contract deployer address	0x13ee684FcBd200Aba1CE08a3a04dE01fb106f8F9

Project Website

https://rabbit23.com/

Codebase

https://bscscan.com/address/0xfbfb86682EE8CBA2bd40359b8C687940B6DfFc53#contracts

SUMMARY

Rabbit 23 is the last rabbit meme coin to be produced for the 2023 Chinese new year. Buy&Sel tax 4% (1%Liquidity, 1% Development and 2% Marketing). No Unlock Token and Renounced Ownership.

Contract Summary

Documentation Quality

This project has a standard of documentation.

- Technical description provided.

Code Quality

The quality of the code in this project is up to standard.

- The official Solidity style guide is followed.

Test Scope

Project test coverage is 100% (Via Codebase).

Audit Findings Summary

Issues Found

- SWC-101 | Arithmetic operation issues discovered on lines 35, 47, 57, 58, 69, 81, 419, 420, 421, and 422.
- SWC-103 | A floating pragma is set on line 6, the current pragma Solidity directive is ""^0.8.4"".
- SWC-108 | State variable visibility is not set on lines 395 and 427. It is best practice to set the visibility of state variables explicitly to public or private.
- SWC-110 | Out of bounds array access issues discovered on lines 725 and 726.

CONCLUSION

We have audited the Rabbit 23 project which has released on January 2023 to discover issues and identify potential security vulnerabilities in Rabbit 23 Project. This process is used to find technical issues and security loopholes that find some common issues in the code.

The security audit report produced satisfactory results with low-risk issues.

The most common issue found in writing code on contracts that do not pose a big risk, writing on contracts is close to the standard of writing contracts in general. The low-level issues found are some arithmetic operation issues, a floating pragma is set, a state variable visibility is not set, and out of bounds array access which the index access expression can cause an exception in case of use of an invalid array index value.

AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	ISSUE FOUND
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Check-Effect Interaction	SWC-107	Check-Effect-Interaction pattern should be followed if the code performs ANY external call.	PASS
Assert Violation	SWC-110	Properly functioning code should never reach a failing assert statement.	ISSUE FOUND
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Caller	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS
DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS

Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique Id	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS

SMART CONTRACT ANALYSIS

Started	Wed Jan 18 2023 23:17:57 GMT+0000 (Coordinated Universal Time)
Finished	Tue Jan 19 2023 03:21:47 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	Rabbit.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "%" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-108	STATE VARIABLE VISIBILITY IS NOT SET.	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged

SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 35

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
34   function add(uint256 a, uint256 b) internal pure returns (uint256) {
35   uint256 c = a + b;
36   require(c >= a, "SafeMath: addition overflow");
37
38   return c;
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 47

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
46   require(b <= a, errorMessage);
47   uint256 c = a - b;
48
49   return c;
50   }
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 57

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
56
57   uint256 c = a * b;
58   require(c / a == b, "SafeMath: multiplication overflow");
59
60   return c;
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 58

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
57   uint256 c = a * b;
58   require(c / a == b, "SafeMath: multiplication overflow");
59
60   return c;
61   }
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 69

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
68   require(b > 0, errorMessage);
69   uint256 c = a / b;
70   // assert(a == b * c + a % b); // There is no case in which this doesn't hold
71
72   return c;
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 81

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
80   require(b != 0, errorMessage);
81   return a % b;
82   }
83   }
84
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 419

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
418
419   uint256 private _totalSupply =  1000000000000 * 10**_decimals;
420   uint256 public _maxTxAmount =   1000000000000 * 10**_decimals;
421   uint256 public _walletMax =     1000000000000 * 10**_decimals;
422   uint256 private minimumTokensBeforeSwap = 100 * 10**_decimals;
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 420

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
419   uint256 private _totalSupply =  1000000000000 * 10**_decimals;
420   uint256 public _maxTxAmount =   1000000000000 * 10**_decimals;
421   uint256 public _walletMax =     1000000000000 * 10**_decimals;
422   uint256 private minimumTokensBeforeSwap = 100 * 10**_decimals;
423
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 421

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
420   uint256 public _maxTxAmount =   1000000000000 * 10**_decimals;
421   uint256 public _walletMax =     1000000000000 * 10**_decimals;
422   uint256 private minimumTokensBeforeSwap = 100 * 10**_decimals;
423
424   IUniswapV2Router02 public uniswapV2Router;
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 422

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- Rabbit.sol

Locations

```
421   uint256 public _walletMax =     1000000000000 * 10**_decimals;
422   uint256 private minimumTokensBeforeSwap = 100 * 10**_decimals;
423
424   IUniswapV2Router02 public uniswapV2Router;
425   address public uniswapPair;
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 6

low SEVERITY

The current pragma Solidity directive is ""^0.8.4"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- Rabbit.sol

Locations

```
5   // SPDX-License-Identifier: Unlicensed
6   pragma solidity ^0.8.4;
7
8   abstract contract Context {
9
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 395

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "_balances" is internal. Other possible visibility settings are public and private.

Source File

- Rabbit.sol

Locations

```
394
395   mapping (address => uint256) _balances;
396   mapping (address => mapping (address => uint256)) private _allowances;
397
398   mapping (address => bool) public isExcludedFromFee;
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 427

low SEVERITY

It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwapAndLiquify" is internal. Other possible visibility settings are public and private.

Source File

- Rabbit.sol

Locations

```
426
427   bool inSwapAndLiquify;
428   bool public swapAndLiquifyEnabled = true;
429   bool public swapAndLiquifyByLimitOnly = false;
430   bool public checkWalletLimit = true;
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 725

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Rabbit.sol

Locations

```
724   address[] memory path = new address[](2);
725   path[0] = address(this);
726   path[1] = uniswapV2Router.WETH();
727
728   _approve(address(this), address(uniswapV2Router), tokenAmount);
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 726

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- Rabbit.sol

Locations

```
725   path[0] = address(this);
726   path[1] = uniswapV2Router.WETH();
727
728   _approve(address(this), address(uniswapV2Router), tokenAmount);
729
```

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