



Froggies Token Smart Contract Audit Report

TABLE OF CONTENTS

Audited Details

- Audited Project
- Blockchain
- Addresses
- Project Website
- Codebase

Summary

- Contract Summary
- Audit Findings Summary
- Vulnerabilities Summary

Conclusion

Audit Results

Smart Contract Analysis

- Detected Vulnerabilities

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Froggies Token	FRGST	Binance Smart Chain

Addresses

Contract address	0x7029994f28fd39ff934a96b25591d250a2183f67
Contract deployer address	0x5dFA97D943ECd7Da3fF537dc6e728800C1ee3c76

Project Website

<https://www.froggiestoken.com/>

Codebase

<https://bscscan.com/address/0x7029994f28fd39ff934a96b25591d250a2183f67#code>

SUMMARY

FROGGIES INTO SPACE We are Froggies, a meme coin launched in November 2021. I Flew passed bulls and bears, hype and fud. We are still here and ready to provide the market with a Second Gen Memecoin. Our ultimate destination is Moon, and to ensure our landing zone in Space, we build on community, utility & usability. Froggies is an open community and drive a free market. Our team is devoted to delivering the best to our holders and securing a long-term projects.

Contract Summary

Documentation Quality

Froggies Token provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by Froggies Token with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 28, 42, 57, 58, 71, 83, 98, 112, 126, 140, 156, 179, 202, 228, 553, 554, 555, 555, 574, 575, 577, 578, 580, 581, 655, 946, 997, 1060, 1452, 1455 and 1455.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 657, 658, 661, 662, 1032, 1033, 1453, 1454 and 1454.

CONCLUSION

We have audited the Froggies Token project released on October 2022 to discover issues and identify potential security vulnerabilities in Froggies Token Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

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

The issues found in the Froggies Token smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues and out-of-bounds array access which the index access expression can cause an exception in case of the 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.	PASS
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.	PASS
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	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 Callee	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
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	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
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	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
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using <code>abi.encodePacked()</code> with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The <code>transfer()</code> and <code>send()</code> functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS

SMART CONTRACT ANALYSIS

Started	Sunday Oct 23 2022 13:02:04 GMT+0000 (Coordinated Universal Time)
Finished	Monday Oct 24 2022 17:48:47 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	Token.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-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-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

LINE 28

low SEVERITY

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

Source File

- Token.sol

Locations

```
27  unchecked {
28  uint256 c = a + b;
29  if (c < a) return (false, 0);
30  return (true, c);
31  }
32
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 42

low SEVERITY

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

Source File

- Token.sol

Locations

```
41  if (b > a) return (false, 0);
42  return (true, a - b);
43  }
44  }
45
46
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 57

low SEVERITY

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

Source File

- Token.sol

Locations

```
56  if (a == 0) return (true, 0);
57  uint256 c = a * b;
58  if (c / a != b) return (false, 0);
59  return (true, c);
60  }
61
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 58

low SEVERITY

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

Source File

- Token.sol

Locations

```
57  uint256 c = a * b;  
58  if (c / a != b) return (false, 0);  
59  return (true, c);  
60  }  
61  }  
62
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 71

low SEVERITY

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

Source File

- Token.sol

Locations

```
70  if (b == 0) return (false, 0);
71  return (true, a / b);
72  }
73  }
74
75
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 83

low SEVERITY

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

Source File

- Token.sol

Locations

```
82  if (b == 0) return (false, 0);
83  return (true, a % b);
84  }
85  }
86
87
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 98

low SEVERITY

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

Source File

- Token.sol

Locations

```
97  function add(uint256 a, uint256 b) internal pure returns (uint256) {
98  return a + b;
99  }
100
101  /**
102
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 112

low SEVERITY

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

Source File

- Token.sol

Locations

```
111     function sub(uint256 a, uint256 b) internal pure returns (uint256) {
112         return a - b;
113     }
114
115     /**
116
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 126

low SEVERITY

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

Source File

- Token.sol

Locations

```
125     function mul(uint256 a, uint256 b) internal pure returns (uint256) {
126         return a * b;
127     }
128
129     /**
130
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 140

low SEVERITY

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

Source File

- Token.sol

Locations

```
139     function div(uint256 a, uint256 b) internal pure returns (uint256) {
140         return a / b;
141     }
142
143     /**
144
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 156

low SEVERITY

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

Source File

- Token.sol

Locations

```
155     function mod(uint256 a, uint256 b) internal pure returns (uint256) {
156         return a % b;
157     }
158
159     /**
160
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 179

low SEVERITY

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

Source File

- Token.sol

Locations

```
178     require(b <= a, errorMessage);
179     return a - b;
180   }
181 }
182
183
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 202

low SEVERITY

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

Source File

- Token.sol

Locations

```
201     require(b > 0, errorMessage);
202     return a / b;
203   }
204 }
205
206
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 228

low SEVERITY

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

Source File

- Token.sol

Locations

```
227     require(b > 0, errorMessage);
228     return a % b;
229   }
230 }
231 }
232
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 553

low SEVERITY

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

Source File

- Token.sol

Locations

```
552 state._tTotal =
553 100_000_000_000_000_000 *
554 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
555 state._rTotal = (state.MAX - (state.MAX % state._tTotal));
556 state._rOwned[admin] = state._rTotal;
557
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 554

low SEVERITY

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

Source File

- Token.sol

Locations

```
553 100_000_000_000_000_000 *
554 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
555 state._rTotal = (state.MAX - (state.MAX % state._tTotal));
556 state._rOwned[admin] = state._rTotal;
557
558
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 555

low SEVERITY

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

Source File

- Token.sol

Locations

```
554 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
555 state._rTotal = (state.MAX - (state.MAX % state._tTotal));
556 state._rOwned[admin] = state._rTotal;
557
558 state.marketingPercent = 200;
559
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 555

low SEVERITY

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

Source File

- Token.sol

Locations

```
554 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
555 state._rTotal = (state.MAX - (state.MAX % state._tTotal));
556 state._rOwned[admin] = state._rTotal;
557
558 state.marketingPercent = 200;
559
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 574

low SEVERITY

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

Source File

- Token.sol

Locations

```
573 state.MAXTxAmount =
574 1_000_000_000_000_000 *
575 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
576 state.numTokensSellToAddToLiquidity =
577 10_000_000_000_000 *
578
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 575

low SEVERITY

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

Source File

- Token.sol

Locations

```
574 1_000_000_000_000_000 *
575 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
576 state.numTokensSellToAddToLiquidity =
577 10_000_000_000_000 *
578 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
579
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 577

low SEVERITY

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

Source File

- Token.sol

Locations

```
576 state.numTokensSellToAddToLiquidity =  
577 10_000_000_000_000 *  
578 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];  
579 state.numTokensToSendCollectedFee =  
580 20_000_000_000_000 *  
581
```


SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 578

low SEVERITY

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

Source File

- Token.sol

Locations

```
577 10_000_000_000_000 *
578 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
579 state.numTokensToSendCollectedFee =
580 20_000_000_000_000 *
581 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
582
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 580

low SEVERITY

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

Source File

- Token.sol

Locations

```
579 state.numTokensToSendCollectedFee =  
580 20_000_000_000_000 *  
581 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];  
582  
583 state._isExcludedFromFee[admin] = true;  
584
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 581

low SEVERITY

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

Source File

- Token.sol

Locations

```
580 20_000_000_000_000 *
581 10**state.config.uints[Types.UintConfig.TOKEN_DECIMALS];
582
583 state._isExcludedFromFee[admin] = true;
584 state._isExcludedFromFee[address(this)] = true;
585
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 655

low SEVERITY

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

Source File

- Token.sol

Locations

```
654
655   for (uint256 i = 0; i < state._excludedFromReward.length; i++) {
656     if (
657       state._rOwned[state._excludedFromReward[i]] > rSupply ||
658       state._tOwned[state._excludedFromReward[i]] > tSupply
659     )
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 946

low SEVERITY

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

Source File

- Token.sol

Locations

```
945  {
946  return _amount.mul(state._taxToDeduct).div(10**4);
947  }
948
949  function _getRValues(
950
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 997

low SEVERITY

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

Source File

- Token.sol

Locations

```
996 uint256 shibbaFee = OneFull.mul(state.shibbaPercent).div(1e2);
997 uint256 totalFeeToSwapForBNB = marketingFee + shibbaFee;
998 _transferInternal(
999 state,
1000 sender,
1001
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 1060

low SEVERITY

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

Source File

- Token.sol

Locations

```
1059     state.collectedFee.mul(100).div(  
1060     state.shibbaPercent + state.marketingPercent  
1061     )  
1062     );  
1063     uint256 marketingFee = OneFull.mul(state.marketingPercent).div(1e2);  
1064
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 1452

low SEVERITY

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

Source File

- Token.sol

Locations

```
1451 uint256 excludedLength = state._excludedFromReward.length;
1452 for (uint256 i = 0; i < excludedLength; i++) {
1453     if (state._excludedFromReward[i] == _account) {
1454         state._excludedFromReward[i] = state._excludedFromReward[
1455             excludedLength - 1
1456     ]
```


SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 1455

low SEVERITY

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

Source File

- Token.sol

Locations

```
1454 state._excludedFromReward[i] = state._excludedFromReward[
1455 excludedLength - 1
1456 ];
1457
1458 state._tOwned[_account] = 0;
1459
```

SWC-101 | COMPILER-REWRITABLE "<UINT> - 1" DISCOVERED

LINE 1455

low SEVERITY

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

Source File

- Token.sol

Locations

```
1454 state._excludedFromReward[i] = state._excludedFromReward[
1455 excludedLength - 1
1456 ];
1457
1458 state._tOwned[_account] = 0;
1459
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 657

low SEVERITY

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

Source File

- Token.sol

Locations

```
656     if (  
657         state._rOwned[state._excludedFromReward[i]] > rSupply ||  
658         state._tOwned[state._excludedFromReward[i]] > tSupply  
659     ) return (state._rTotal, state._tTotal);  
660  
661
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 658

low SEVERITY

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

Source File

- Token.sol

Locations

```
657 state._rOwned[state._excludedFromReward[i]] > rSupply ||  
658 state._tOwned[state._excludedFromReward[i]] > tSupply  
659 ) return (state._rTotal, state._tTotal);  
660  
661 rSupply = rSupply.sub(state._rOwned[state._excludedFromReward[i]]);  
662
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 661

low SEVERITY

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

Source File

- Token.sol

Locations

```
660
661   rSupply = rSupply.sub(state._rOwned[state._excludedFromReward[i]]);
662   tSupply = tSupply.sub(state._tOwned[state._excludedFromReward[i]]);
663 }
664
665
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 662

low SEVERITY

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

Source File

- Token.sol

Locations

```
661   rSupply = rSupply.sub(state._rOwned[state._excludedFromReward[i]]);
662   tSupply = tSupply.sub(state._tOwned[state._excludedFromReward[i]]);
663   }
664
665   if (rSupply < state._rTotal.div(state._tTotal))
666
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1032

low SEVERITY

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

Source File

- Token.sol

Locations

```
1031     address[] memory path = new address[](2);
1032     path[0] = address(this);
1033     path[1] = state.swapV2Router.WETH();
1034
1035     _approve(
1036
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1033

low SEVERITY

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

Source File

- Token.sol

Locations

```
1032 path[0] = address(this);
1033 path[1] = state.swapV2Router.WETH();
1034
1035 _approve(
1036 state,
1037
```


SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1453

low SEVERITY

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

Source File

- Token.sol

Locations

```
1452 for (uint256 i = 0; i < excludedLength; i++) {
1453   if (state._excludedFromReward[i] == _account) {
1454     state._excludedFromReward[i] = state._excludedFromReward[
1455       excludedLength - 1
1456     ];
1457   }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1454

low SEVERITY

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

Source File

- Token.sol

Locations

```
1453  if (state._excludedFromReward[i] == _account) {  
1454  state._excludedFromReward[i] = state._excludedFromReward[  
1455  excludedLength - 1  
1456  ];  
1457  
1458
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1454

low SEVERITY

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

Source File

- Token.sol

Locations

```
1453  if (state._excludedFromReward[i] == _account) {  
1454  state._excludedFromReward[i] = state._excludedFromReward[  
1455  excludedLength - 1  
1456  ];  
1457  
1458
```

DISCLAIMER

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This is a limited report on our findings based on our analysis, in accordance with good industry practice as of the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn’t say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the below disclaimer below – please make sure to read it in full.

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ABOUT US

Sysfixed is a blockchain security certification organization established in 2021 with the objective to provide smart contract security services and verify their correctness in blockchain-based protocols. Sysfixed automatically scans for security vulnerabilities in Ethereum and other EVM-based blockchain smart contracts. Sysfixed a comprehensive range of analysis techniques—including static analysis, dynamic analysis, and symbolic execution—can accurately detect security vulnerabilities to provide an in-depth analysis report. With a vibrant ecosystem of world-class integration partners that amplify developer productivity, Sysfixed can be utilized in all phases of your project's lifecycle. Our team of security experts is dedicated to the research and improvement of our tools and techniques used to fortify your code.