



TrusterCoin
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

Disclaimer

About Us

AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
TrusterCoin	TSC	Binance Smart Chain

Addresses

Contract address	0xa2a26349448ddafae34949a6cc2cecf78c0497ac
Contract deployer address	0x177079C15e50D1a880861622B1c0B2Fbe30F78AD

Project Website

<https://trustercoin.finance/>

Codebase

<https://bscscan.com/address/0xa2a26349448ddafae34949a6cc2cecf78c0497ac#code>

SUMMARY

TrusterCoin is a utility token for use on tokenization platforms at a time when business people face one of the greatest challenges in history. The platform will allow the creation of new tokenization of small, medium to large companies through blockchain technology.

Contract Summary

Documentation Quality

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

- The technical description is provided clearly and structured and also don't have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

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

Test Coverage

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

Audit Findings Summary

- SWC-100 SWC-108 | Explicitly define visibility for all state variables on lines 731.
- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 119, 151, 174, 175, 210, 246, 473, 714, 714, 714, 714, 715, 715, 734, 734, 734, 734, 734, 735, 735, 735, 735, 868, 870, 907, 953, 972, 978 and 870.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 20.
- 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 869, 870, 870, 954, 954, 955, 956, 1081 and 1082.

CONCLUSION

We have audited the TrusterCoin project released on July 2021 to discover issues and identify potential security vulnerabilities in TrusterCoin 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 TrusterCoin 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, 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 the use of an invalid array index value. The current pragma Solidity directive is `^0.6.12`. 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. 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.

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
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	Saturday Jul 10 2021 04:45:25 GMT+0000 (Coordinated Universal Time)
Finished	Sunday Jul 11 2021 10:17:20 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	TrusterCoin.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	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 119

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
118 function add(uint256 a, uint256 b) internal pure returns (uint256) {
119     uint256 c = a + b;
120     require(c >= a, "SafeMath: addition overflow");
121
122     return c;
123 }
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 151

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
150   require(b <= a, errorMessage);
151   uint256 c = a - b;
152
153   return c;
154   }
155
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 174

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
173
174  uint256 c = a * b;
175  require(c / a == b, "SafeMath: multiplication overflow");
176
177  return c;
178
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 175

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
174  uint256 c = a * b;
175  require(c / a == b, "SafeMath: multiplication overflow");
176
177  return c;
178  }
179
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 210

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
209   require(b > 0, errorMessage);
210   uint256 c = a / b;
211   // assert(a == b * c + a % b); // There is no case in which this doesn't hold
212
213   return c;
214
```


SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 246

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
245     require(b != 0, errorMessage);
246     return a % b;
247   }
248 }
249
250
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 473

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
472  _owner = address(0);
473  _lockTime = now + time;
474  emit OwnershipTransferred(_owner, address(0));
475  }
476
477
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 714

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
713 uint256 private constant MAX = ~uint256(0);
714 uint256 private _tTotal = 3000 * 10**6 * 10**9;
715 uint256 private _rTotal = (MAX - (MAX % _tTotal));
716 uint256 private _tFeeTotal;
717
718
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 714

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
713 uint256 private constant MAX = ~uint256(0);
714 uint256 private _tTotal = 3000 * 10**6 * 10**9;
715 uint256 private _rTotal = (MAX - (MAX % _tTotal));
716 uint256 private _tFeeTotal;
717
718
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 714

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
713 uint256 private constant MAX = ~uint256(0);
714 uint256 private _tTotal = 3000 * 10**6 * 10**9;
715 uint256 private _rTotal = (MAX - (MAX % _tTotal));
716 uint256 private _tFeeTotal;
717
718
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 714

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
713 uint256 private constant MAX = ~uint256(0);
714 uint256 private _tTotal = 3000 * 10**6 * 10**9;
715 uint256 private _rTotal = (MAX - (MAX % _tTotal));
716 uint256 private _tFeeTotal;
717
718
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 715

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
714 uint256 private _tTotal = 3000 * 10**6 * 10**9;
715 uint256 private _rTotal = (MAX - (MAX % _tTotal));
716 uint256 private _tFeeTotal;
717
718 string private _name = "TrusterCoin";
719
```

SWC-101 | ARITHMETIC OPERATION "%" DISCOVERED

LINE 715

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
714 uint256 private _tTotal = 3000 * 10**6 * 10**9;
715 uint256 private _rTotal = (MAX - (MAX % _tTotal));
716 uint256 private _tFeeTotal;
717
718 string private _name = "TrusterCoin";
719
```


SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 734

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
733
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 734

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
733
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 734

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
733
734  uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735  uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 734

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
733
734  uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735  uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 734

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
733
734  uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735  uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737  event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 735

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;  
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;  
736  
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);  
738 event SwapAndLiquifyEnabledUpdated(bool enabled);  
739
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 735

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738 event SwapAndLiquifyEnabledUpdated(bool enabled);
739
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 735

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;
736
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);
738 event SwapAndLiquifyEnabledUpdated(bool enabled);
739
```


SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 735

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;  
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;  
736  
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);  
738 event SwapAndLiquifyEnabledUpdated(bool enabled);  
739
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 735

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
734 uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;  
735 uint256 private numTokensSellToAddToLiquidity = (3000 / 2000) * 10**6 * 10**9;  
736  
737 event MinTokensBeforeSwapUpdated(uint256 minTokensBeforeSwap);  
738 event SwapAndLiquifyEnabledUpdated(bool enabled);  
739
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 868

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
867   require(!_isExcluded[account], "Account is already excluded");
868   for (uint256 i = 0; i < _excluded.length; i++) {
869     if (_excluded[i] == account) {
870       _excluded[i] = _excluded[_excluded.length - 1];
871       _tOwned[account] = 0;
872     }
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 870

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
869   if (_excluded[i] == account) {  
870     _excluded[i] = _excluded[_excluded.length - 1];  
871     _tOwned[account] = 0;  
872     _isExcluded[account] = false;  
873     _excluded.pop();  
874
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 907

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
906     _maxTxAmount = _tTotal.mul(maxTxPercent).div(  
907     10**2  
908     );  
909 }  
910  
911
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 953

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
952  uint256 tSupply = _tTotal;
953  for (uint256 i = 0; i < _excluded.length; i++) {
954    if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
    (_rTotal, _tTotal);
955    rSupply = rSupply.sub(_rOwned[_excluded[i]]);
956    tSupply = tSupply.sub(_tOwned[_excluded[i]]);
957
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 972

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
971     return _amount.mul(_taxFee).div(  
972         10**2  
973     );  
974 }  
975  
976
```

SWC-101 | ARITHMETIC OPERATION "**" DISCOVERED

LINE 978

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
977     return _amount.mul(_liquidityFee).div(  
978         10**2  
979     );  
980 }  
981  
982
```


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

LINE 870

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
869   if (_excluded[i] == account) {  
870     _excluded[i] = _excluded[_excluded.length - 1];  
871     _tOwned[account] = 0;  
872     _isExcluded[account] = false;  
873     _excluded.pop();  
874
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 20

low SEVERITY

The current pragma Solidity directive is ""^0.6.12"". 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

- TrusterCoin.sol

Locations

```
19
20 pragma solidity ^0.6.12;
21 // SPDX-License-Identifier: Unlicensed
22 interface IERC20 {
23
24
```

SWC-108 | STATE VARIABLE VISIBILITY IS NOT SET.

LINE 731

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

- TrusterCoin.sol

Locations

```
730
731  bool inSwapAndLiquify;
732  bool public swapAndLiquifyEnabled = true;
733
734  uint256 public _maxTxAmount = (3000 / 200) * 10**6 * 10**9;
735
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 869

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
868   for (uint256 i = 0; i < _excluded.length; i++) {
869     if (_excluded[i] == account) {
870       _excluded[i] = _excluded[_excluded.length - 1];
871       _tOwned[account] = 0;
872       _isExcluded[account] = false;
873     }
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 870

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
869   if (_excluded[i] == account) {  
870     _excluded[i] = _excluded[_excluded.length - 1];  
871     _tOwned[account] = 0;  
872     _isExcluded[account] = false;  
873     _excluded.pop();  
874
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 870

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
869   if (_excluded[i] == account) {  
870     _excluded[i] = _excluded[_excluded.length - 1];  
871     _tOwned[account] = 0;  
872     _isExcluded[account] = false;  
873     _excluded.pop();  
874
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 954

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
953   for (uint256 i = 0; i < _excluded.length; i++) {
954     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
        (_rTotal, _tTotal);
955     rSupply = rSupply.sub(_rOwned[_excluded[i]]);
956     tSupply = tSupply.sub(_tOwned[_excluded[i]]);
957   }
958
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 954

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
953   for (uint256 i = 0; i < _excluded.length; i++) {
954     if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
        (_rTotal, _tTotal);
955     rSupply = rSupply.sub(_rOwned[_excluded[i]]);
956     tSupply = tSupply.sub(_tOwned[_excluded[i]]);
957   }
958
```


SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 955

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
954  if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return
    (_rTotal, _tTotal);
955  rSupply = rSupply.sub(_rOwned[_excluded[i]]);
956  tSupply = tSupply.sub(_tOwned[_excluded[i]]);
957  }
958  if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
959
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 956

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
955   rSupply = rSupply.sub(_rOwned[_excluded[i]]);
956   tSupply = tSupply.sub(_tOwned[_excluded[i]]);
957   }
958   if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
959   return (rSupply, tSupply);
960
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1081

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
1080     address[] memory path = new address[](2);
1081     path[0] = address(this);
1082     path[1] = uniswapV2Router.WETH();
1083
1084     _approve(address(this), address(uniswapV2Router), tokenAmount);
1085
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 1082

low SEVERITY

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

Source File

- TrusterCoin.sol

Locations

```
1081 path[0] = address(this);
1082 path[1] = uniswapV2Router.WETH();
1083
1084 _approve(address(this), address(uniswapV2Router), tokenAmount);
1085
1086
```

DISCLAIMER

This report is subject to the terms and conditions (including without limitation, description of services, confidentiality, disclaimer and limitation of liability) set forth in the Services Agreement, or the scope of services, and terms and conditions provided to you (“Customer” or the “Company”) in connection with the Agreement. This report provided in connection with the Services set forth in the Agreement shall be used by the Company only to the extent permitted under the terms and conditions set forth in the Agreement. This report may not be transmitted, disclosed, referred to, or relied upon by any person for any purposes, nor may copies be delivered to any other person other than the Company, without Sysfixed’s prior written consent in each instance.

This report is not, nor should be considered, an “endorsement” or “disapproval” of any particular project or team. This report is not, nor should be considered, an indication of the economics or value of any “product” or “asset” created by any team or project that contracts Sysfixed to perform a security assessment. This report does not provide any warranty or guarantee regarding the absolute bug-free nature of the technology analyzed, nor do they provide any indication of the technologies proprietors, business, business model, or legal compliance.

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.

This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

This report is provided for information purposes only and on a non-reliance basis and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and Sysfixed and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers, and other representatives) (Sysfixed) owe no duty of care.

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.