Sinso Token

Smart Contract Audit Report

SYSFIXED

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
Sinso Token	SINSO	Binance Smart Chain

Addresses

Contract address	0xc7be6c0f9b80dd269f650514dc9b897f3452e5ac
Contract deployer address	0x2E2dBC2eB9809b10291fe2Dcc254D2B0e87E35C5

Project Website

https://www.sinso.io/

Codebase

https://bscscan.com/address/0xc7be6c0f9b80dd269f650514dc9b897f3452e5ac#code

SUMMARY

Sinso Token is a decentralized financial payment network that rebuilds the traditional payment stack on the blockchain. It utilizes a basket of fiat-pegged stablecoins, algorithmically stabilized by its reserve currency SINSO, to facilitate programmable payments and open financial infrastructure development.

▌Contract Summary

Documentation Quality

Sinso 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 Sinso 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 239, 258, 280, 313, 315, 336, 337, 362, 364 and 462.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 1.

CONCLUSION

We have audited the Sinso Token project released on October 2021 to discover issues and identify potential security vulnerabilities in Sinso 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 Sinso 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 It is recommended to make a conscious choice on what version of Solidity is used for compilation. Currently, no version is set in the Solidity file.

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.	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.	PASS
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 abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() 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	Thursday Sep 30 2021 02:47:12 GMT+0000 (Coordinated Universal Time)
Finished	Friday Oct 01 2021 23:42:12 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-103	NO PRAGMA IS SET.	low	acknowledged

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED
LINE 239

low SEVERITY

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

Source File

- Token.sol

Locations

```
238    unchecked {
239    _approve(sender, _msgSender(), currentAllowance - amount);
240    }
241
242    return true;
243
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED
LINE 258

low SEVERITY

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

Source File

- Token.sol

Locations

```
257    function increaseAllowance(address spender, uint256 addedValue) public virtual
returns (bool) {
258    _approve(_msgSender(), spender, _allowances[_msgSender()][spender] + addedValue);
259    return true;
260    }
261
262
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED
LINE 280

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

Source File
- Token.sol

Locations

```
279    unchecked {
280    _approve(_msgSender(), spender, currentAllowance - subtractedValue);
281    }
282
283    return true;
284
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED
LINE 313

low SEVERITY

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

Source File

- Token.sol

Locations

```
312    unchecked {
313    _balances[sender] = senderBalance - amount;
314    }
315    _balances[recipient] += amount;
316
317
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED
LINE 315

low SEVERITY

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

Source File

- Token.sol

Locations

```
314    }
315    _balances[recipient] += amount;
316
317    emit Transfer(sender, recipient, amount);
318
319
```

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SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED
LINE 336

low SEVERITY

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

Source File

- Token.sol

Locations

```
335
336    _totalSupply += amount;
337    _balances[account] += amount;
338    emit Transfer(address(0), account, amount);
339
340
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED
LINE 337

low SEVERITY

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

Source File

- Token.sol

Locations

```
336    _totalSupply += amount;
337    _balances[account] += amount;
338    emit Transfer(address(0), account, amount);
339
340    _afterTokenTransfer(address(0), account, amount);
341
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED
LINE 362

low SEVERITY

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

Source File

- Token.sol

Locations

```
361    unchecked {
362    _balances[account] = accountBalance - amount;
363    }
364    _totalSupply -= amount;
365
366
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED
LINE 364

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

Source File
- Token.sol

Locations

```
363    }
364    _totalSupply -= amount;
365
366    emit Transfer(account, address(0), amount);
367
368
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED
LINE 462

low SEVERITY

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

Source File

- Token.sol

Locations

```
461    unchecked {
462    _approve(account, _msgSender(), currentAllowance - amount);
463    }
464    _burn(account, amount);
465    }
466
```

SWC-103 | NO PRAGMA IS SET.
LINE 1

low SEVERITY

It is recommended to make a conscious choice on what version of Solidity is used for compilation. Currently no version is set in the Solidity file.

Source File

- Token.sol

Locations

```
0
1   /**
2   *Submitted for verification at BscScan.com on 2021-10-26
3   */
4
5
```

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