



Security Assessment STERLING

Vital Block Verified on Feb 27th, 2023

@Vital-Block

@VB_Audit

info@vitalblock.org



www.vitalblock.org



PREPARED FOR:
STERLING



INTRODUCTION

Auditing Firm	 VITAL BLOCK SECURITY
Client Firm	 STERLING FINANCE
Methodology	Automated Analysis, Manual Code Review
Language	Solidity
Contract	<p>TOKEN: 0x5DB7b150c5F38c5F5db11dCBDB885028fcC51D68</p> <p>factory: 0xF7A23B9A9dCB8d0aff67012565C5844C20C11AFC</p> <p>router: 0x0cBD3aEa90538a1Cf3C60B05582b691f6d2b2B01</p> <p>controller: 0x4d01714A025b4308F01b0f0E1FEb560673f863Ef</p> <p>gaugesFactory: 0xe4032AB13c189ac58f745DEb57B0b23868B50DCd</p> <p>bribesFactory: 0x03ed94D06f6E290b372cB7D72A5f885718abEf6f</p> <p>ve: 0x450330Df68E1ed6e0683373D684064bDa9115fEe</p> <p>voter: 0x474E967717B7A12352e1Cb731492bcc01d7816e2</p> <p>minter: 0xF329eD282354DD6ea88e7149C1A169EB467908c6</p>
Blockchain	ARBITRUM
Centralization	Active ownership
Website	https://www.sterling.finance/
Discord	http://discord.gg/x5XVzBU8Ub
Twitter	https://twitter.com/Sterling_Fi
GitHub	https://github.com/Sterl-o/sterligfinancecontracts
Prelim Report Date	February 24, 2023
Final Report Date	February 28, 2023

 Verify the authenticity of this report on our GitHub Repo: <https://www.github.com/vital-block>

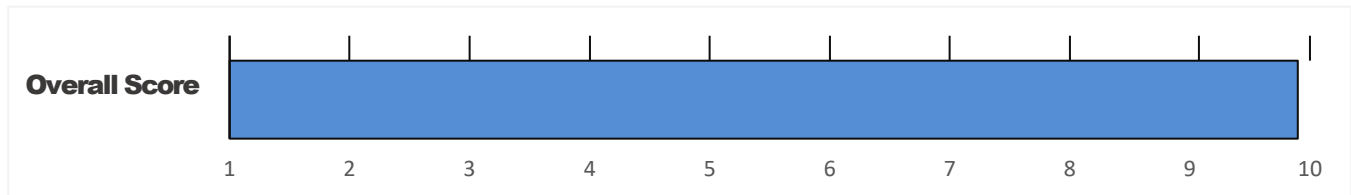


EXECUTIVE SUMMARY

STERLING has performed the automated and manual analysis of the Sol code. The code was reviewed for common contract vulnerabilities and centralized exploits. Here's a quick audit summary:

Status	Critical ! 🔴	Major " 🟡	Medium # 🟡	Minor \$ 🟢	Unknown % 🟤
Open	0	1	0	2	0
Acknowledged	0	0	1	7	0
Resolved	0	0	0	0	0
Noteworthy onlyOwner Privileges	Set Taxes and Ratios, Airdrop, Set Protection Settings, Set Reward Properties, Set Reflector Settings, Set Swap Settings, Set Pair and Router				

STERLING Smart contract has achieved the following score: **98.8**



i Please note that smart contracts deployed on blockchains aren't resistant to exploits, vulnerabilities and/or hacks. Blockchain and cryptography assets utilize new and emerging technologies. These technologies present a high level of ongoing risks. For a detailed understanding of risk severity, source code vulnerability, and audit limitations, kindly review the audit report thoroughly.

i Please note that centralization privileges regardless of their inherited risk status - constitute an elevated impact on smart contract safety and security.



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SCOPE OF WORK

Vital Block was consulted by **STERLING** to conduct the smart contract audit of its. Sol source code. The audit scope of work is strictly limited to mentioned .SOL file only:

- **STERLING.Sol**

 External contracts and/or interfaces dependencies are not checked due to being out of scope.

Verify audited contract's contract address and deployed link below:

Public Contract Link

0x5DB7b150c5F38c5F5db11dCBDB885028fcC51D68

Contract Name	STERLING
Token Symbol	STR
Decimals	18
Total Supply	1,005,000

AUDIT METHODOLOGY

Smart contract audits are conducted using a set of standards and procedures. Mutual collaboration is essential to performing an effective smart contract audit. Here's a brief overview of Vital Block auditing process and methodology:

CONNECT

- The onboarding team gathers source codes, and specifications to make sure we understand the size, and scope of the smart contract audit.

AUDIT

- Automated analysis is performed to identify common contract vulnerabilities. We may use the following third-party frameworks and dependencies to perform the automated analysis:
 - Remix IDE Developer Tool
 - Open Zeppelin Code Analyzer
 - SWC Vulnerabilities Registry
 - DEX Dependencies, e.g., Pancakeswap, Uniswap
- Simulations are performed to identify centralized exploits causing contract and/or trade locks.
- A manual line-by-line analysis is performed to identify contract issues and centralized privileges.

We may inspect below mentioned common contract vulnerabilities, and centralized exploits:

Centralized Exploits	<ul style="list-style-type: none">○ Token Supply Manipulation○ Access Control and Authorization○ Assets Manipulation○ Ownership Control○ Liquidity Access○ Stop and Pause Trading○ Ownable Library Verification
----------------------	---



Common Contract Vulnerabilities

- Integer Overflow
- Lack of Arbitrary limits
- Incorrect Inheritance Order
- Typographical Errors
- Requirement Violation
- Gas Optimization
- Coding Style Violations
- Re-entrancy
- Third-Party Dependencies
- Potential Sandwich Attacks
- Irrelevant Codes
- Divide before multiply
- Conformance to Solidity Naming Guides
- Compiler Specific Warnings
- Language Specific Warnings

REPORT

- The auditing team provides a preliminary report specifying all the checks which have been performed and the findings thereof.
- The client's development team reviews the report and makes amendments to the codes.
- The auditing team provides the final comprehensive report with open and unresolved issues.

PUBLISH






- The client may use the audit report internally or disclose it publicly.

 It is important to note that there is no pass or fail in the audit, it is recommended to view the audit as an unbiased assessment of the safety of solidity codes.



RISK CATEGORIES

Smart contracts are generally designed to hold, approve, and transfer tokens. This makes them very tempting attack targets. A successful external attack may allow the external attacker to directly exploit. A successful centralization-related exploit may allow the privileged role to directly exploit. All risks which are identified in the audit report are categorized here for the reader to review:

Risk Type	Definition
Critical ! 	These risks could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.
Major " 	These risks are hard to exploit but very important to fix, they carry an elevated risk of smart contract manipulation, which can lead to high-risk severity.
Medium # 	These risks should be fixed, as they carry an inherent risk of future exploits, and hacks which may or may not impact the smart contract execution. Low-risk re-entrancy-related vulnerabilities should be fixed to deter exploits.
Minor \$ 	These risks do not pose a considerable risk to the contract or those who interact with it. They are code-style violations and deviations from standard practices. They should be highlighted and fixed nonetheless.
Unknown % 	These risks pose uncertain severity to the contract or those who interact with it. They should be fixed immediately to mitigate the risk uncertainty.

All statuses which are identified in the audit report are categorized here for the reader to review:

Status Type	Definition
Open	Risks are open.
Acknowledged	Risks are acknowledged, but not fixed.
Resolved	Risks are acknowledged and fixed.



CENTRALIZED PRIVILEGES

Centralization risk is the most common cause of cryptography asset loss. When a smart contract has a privileged role, the risk related to centralization is elevated.

There are some well-intended reasons have privileged roles, such as:

- **Privileged roles can be granted the power to `pause()` the contract in case of an external attack.**
- **Privileged roles can use functions like, `include()`, and `exclude()` to add or remove wallets from fees, swap checks, and transaction limits. This is useful to run a presale and to list on an exchange.**

Authorizing privileged roles to externally-owned-account (EOA) is dangerous. Lately, centralization-related losses are increasing in frequency and magnitude.

- **The client can lower centralization-related risks by implementing below mentioned practices:**
- **Privileged role's private key must be carefully secured to avoid any potential hack.**
- **Privileged role should be shared by multi-signature (multi-sig) wallets.**
- **Authorized privilege can be locked in a contract, user voting, or community DAO can be introduced to unlock the privilege.**
- **Renouncing the contract ownership, and privileged roles.**
- **Remove functions with elevated centralization risk.**

 **Understand the project's initial asset distribution. Assets in the liquidity pair should be locked. Assets outside the liquidity pair should be locked with a release schedule.**



AUDIT SCOPE

STERLING.FINANCE

ID	Repo	Comment	File	SHM211 Checksum
STM	contracts/base/core	cC51D68	GovernanceTreasury.sol	85f15802c6be0fd50f8632d8433cccc9d b6f4b39f9e566d1fa78de54b84bdd35
SRY	contracts/base/core	cC51D68	PairFees.sol	8oipppkjjk96be0fd50f8632d8433cccc9 db6f4b39f9e566d1yhhg8765ffckuiybb
STV	contracts/base/core	cC51D68	StrFactory.sol	3666778uj908766362fvyga98jdkl8864 8yhfbqt37409owehbgwhuyyyg223738
SML	contracts/base/core	cC51D68	StrPair.sol	98uuyriy399787390uhbiiuhghhdg7guu 30oi7799u9359ydfgdgygeigi3ioueyy78
STR	contracts/base/token	cC51D68	Str.sol	4566efgywqutfeuh87872t1537883798 3639293763hhegetgjfwjk89336668862
SOP	contracts/base/token	cC51D68	StrMinter.sol	546363ttebnve88329973mvvdsaggct47 8153ytdgfdxy792635fgdjgi1900990908
SDP	contracts/base/vote	cC51D68	StrVoter.sol	835656990327hudbinnjnt6729dchjld0 993ytyy3vq63235727879889073
SWY	contracts/base/vote	cC51D68	Ve.sol	cc089692343d1cc36eaf196046d7a528 d153abd55ba20e82f1d57c22fcd92675
SKB	contracts/base/vote	cC51D68	VeDist.sol	8448b3af42497f5f74e53424ee3e6c55 1f51356945108d22a893d608a7990542
SXY	contracts/base/reward	cC51D68	Bribe.sol	5c86aa1dd3889db5fcd17a80214b226f c784f268ab9db82df97c1d2459467831
SCB	contracts/base/reward	cC51D68	BribeFactory.sol	b8244da33db171e5533d77bef4a3570 3df1de2cebea5f35cb38ce6a26c778cf1
SWO	contracts/base/reward	cC51D68	Gauge.sol	3d408b8f2cc56f9699a402b5151de906 71de089c3007afc9e4fc867c04152e7c
SGT	contracts/base/reward	cC51D68	GaugeFactory.sol	9d751621c3501102e4b50005ca3314ec 6e04e6ff8bbb30852d1c7edfff3f8cef
SFF	contracts/base/reward	cC51D68	MultiRewardsPoolBase.s ol	455687gfesadjnlppiiuhg774580vgfxr ki9876dhgvb990lkjhde444566788



AUTOMATED ANALYSIS

Symbol	Definition
	Function modifies state
	Function is payable
	Function is internal
	Function is private
	Function is important

```

**STERLING** | Interface | |||
| L | totalSupply | External | ! | NO |
| L | decimals | External | ! | NO |
| L | symbol | External | ! | NO |
| L | name | External | ! | NO |
| L | getOwner | External | NO |
| L | balanceOf | External | ! | NO |
| L | transfer | External | " ! ! | NO |
| L | allowance | External | ! | NO |
| L | approve | External | " ! ! | NO |
| L | transferFrom | External | " | NO |
|||||
**IFactoryV2** | Interface | |||
| L | getPair | External | NO | |
| L | createPair | External | " | NO |
|||||
**IV2Pair** | Interface | |||
| L | factory | External | NO | |
| L | getReserves | External | NO |
| L | sync | External | " | NO |

```



|||||

| ****IRouter01**** | Interface | |||

| L | factory | External ¶ | |NO¶|

| L | ETH | External ¶ | |NO¶|

| L | addLiquidityETH | External ¶ | # |NO¶|

| L | addLiquidity | External ¶ | " |NO¶|

| L | swapExactAPForTokens | External ¶ | # |NO¶|

| L | getAmountsOut | External ¶ | |NO¶|

| L | getAmountsIn | External ¶ | |NO¶|

|||||

| ****IRouter02**** | Interface | IRouter01 |||

| L | swapExactTokensForETHSupportingFeeOnTransferTokens | External ¶ | " |NO¶|

| L | swapExactETHForTokensSupportingFeeOnTransferTokens | External ¶ | # |NO¶|

| L | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ¶ | " ! 🔴 |NO¶|

| L | swapExactTokensForTokens | External ¶ | " |NO¶|

|||||

| ****Protections**** | Interface | |||

| L | checkUser | External ¶ | " ! 🔴 |NO¶|

| L | setLaunch | External ¶ | " |NO¶|

| L | setLpPair | External ¶ | " |NO¶|

| L | **STR** | External ¶ | " |NO¶|

| L | removeSniper | External ¶ | " |NO¶|

|||||

| ****Cashier**** | Interface | |||

| L | setRewardsProperties | External ¶ | " |NO¶|

| L | tally | External ¶ | " |NO¶|

| L | load | External ¶ | # |NO¶|

| L | cashout | External ¶ | " |NO¶|

| L | giveMeWelfarePlease | External ¶ | " |NO¶|

| L | getTotalDistributed | External ¶ | |NO¶|

| L | getUserInfo | External ¶ | |NO¶|

| L | getUserRealizedRewards | External ¶ | |NO¶|



```

| L | getPendingRewards | External | | | NO |
| L | initialize | External | | " | NO |
| L | getCurrentReward | External | | | NO |
|||||
| **SOL** | Implementation | SafeMath | |||
| L | <Constructor> | Public | | # | NO |
| L | transferOwner | External | | " | onlyOwner |
| L | renounceOwnership | External | | " | NO |
| L | setOperator | Public | | " | NO |
| L | renounceOriginalDeployer | External | | " | NO |
| L | <Receive Ether> | External | | # | NO |
| L | totalSupply | External | | | NO |
| L | decimals | External | | | NO |
| L | symbol | External | | | NO |
| L | name | External | | | NO |
| L | getOwner | External | | ! | NO |
| L | balanceOf | Public | | ! | NO |
| L | allowance | External | | ! | NO |
| L | approve | External | | " ! | NO |
| L | _approve | Internal | $ | " | NO |
| L | approveContractContingency | Public | | " ! | onlyOwner |
| L | transfer | External | | " | NO |
| L | transferFrom | External | | " | NO |
| L | setNewRouter | External | | " | onlyOwner |
| L | setLpPair | External | | " | onlyOwner |
| L | setInitializers | External | | " | onlyOwner |
| L | isExcludedFromFees | External | | | NO |
| L | isExcludedFromDividends | External | | | NO |
| L | isExcludedFromProtection | External | | | NO |
| L | setDividendExcluded | Public | | " | onlyOwner |
| L | setExcludedFromFees | Public | | " | onlyOwner |

```



STV-03 POSSIBLE OVERFLOW

Category	Severity ●	Location	Status
StatusMathematical Operations	Minor	contracts/base/core/StrFactory.sol	Acknowledged

Description

In `updateForTaker`, the following equation is used inside an unchecked block

```
mapping(address => mapping(address => mapping(bool => address))) public override getPair;  
address[] public allPairs;
```

Where `parameters.amountOutUsed` is a `mapping` and `override` `In` is a `mapping`. As these two are multiplied together in an unchecked block, they may overflow.

Recommendation

We recommend either checking for overflow in this case, or ensuring that the `PairsIn` is close enough it will never cause an overflow

SRY-02 MISSING OVERRIDE SPECIFIER

Category	Severity ●	Location	Status
Inconsistency	Informational	contracts/base/core/PairFees.sol	Acknowledged

```
function claimFeesFor(address recipient, uint amount0, uint amount1) external {
    require(msg.sender == pair, "Not pair");
    if (amount0 > 0) {
        IERC20(token0).safeTransfer(recipient, amount0)
    }
}
```






Description

The function `amount0 ()` does not have the override specifier. It should be noted that since `amount0 >` a function that overrides only a single interface function does not require the override specifier (see doc). However, all other instances of this in the codebase contain the override specifier

Recommendation

We recommend adding the override specifier to `amount()` or removing the override specifier from all other functions this applies to for consistency

OPTIMIZATIONS | STERLING

ID	Title	Category	Status
STV	Logarithm Refinement Optimization	Gas Optimization	Acknowledged 
SOP	Checks Can Be Performed Earlier	Gas Optimization	Acknowledged 
SDP	Unnecessary Use Of SafeMath	Gas Optimization	Acknowledged 
SWY	Struct Optimization	Gas Optimization	Acknowledged 
SGT	Unused State Variable	Gas Optimization	Acknowledged 

General Detectors

Missing Zero Address Validation

Some functions in this contract may not appropriately check for zero addresses being used.









































Attention
Required

Incorrect Solidity Version

This contract uses an unconventional or very old version of Solidity



Attention
Required

- | | |
|--|--|
|  No compiler version inconsistencies found |  No tautologies or contradictions found |
|  No unchecked call responses found |  No faulty true/false values found |
|  No vulnerable self-destruct functions found |  No innacurate divisions found |
|  No assertion vulnerabilities found |  No redundant constructor calls found |
|  No old solidity code found |  No vulnerable transfers found |
|  No external delegated calls found |  No vulnerable return values found |
|  No external call dependency found |  No uninitialized local variables found |
|  No vulnerable authentication calls found |  No default function responses found |
|  No invalid character typos found |  No missing arithmetic events found |
|  No RTL characters found |  No missing access control events found |
|  No dead code found |  No redundant true/false comparisons found |
|  No risky data allocation found |  No state variables vulnerable through function calls found |
|  No uninitialized state variables found |  No buggy low-level calls found |
|  No uninitialized storage variables found |  No expensive loops found |
|  No vulnerable initialization functions found |  No bad numeric notation practices found |
|  No risky data handling found |  No missing constant declarations found |
|  No number accuracy bug found |  No missing external function declarations found |
|  No out-of-range number vulnerability found |  No vulnerable payable functions found |
|  No map data deletion vulnerabilities found |  No vulnerable message values found |



Vulnerability Scan

REENTRANCY

✓ No reentrancy risk found

Severity Major

Confidence Parameter Certain

✗ **Mintable**: A large amount of this token can be minted by a private wallet or contract.

```
function initialize(
    address[] memory claimants,
    uint[] memory amounts,
    uint totalAmount
) external {
    require(initializer == msg.sender, "Not initializer");
    token.mint(address(this), totalAmount);
    token.approve(address(ve), type(uint).max);
    uint sum;
    for (uint i = 0; i < claimants.length; i++) {
        ve.createLockForPartner(amounts[i], _LOCK_PARTNER, claimants[i]); // CREATE LOCK FOR PARTNER 4 YEARS
        sum += amounts[i];
    }
    require(sum == totalAmount, "Wrong totalAmount");
    initializer = address(0);
    activePeriod = (block.timestamp + _WEEK) / _WEEK * _WEEK;
}

function setTeam(address _newTeam) external {
    require(msg.sender == team, "Not team");
    team = _newTeam;
}
```

Vulnerability Description

Scanning Line:

Repository:

<https://github.com/Sterl-o/sterligfinancecontracts>

All Audited Files

Factory.sol
Router.sol
Controller.sol
Token.sol
gaugesFactory.sol
bribesFactory.sol
Ve.sol
Voter.sol
Minter.sol

Contract Creator

0x156d8fac8cd3deb51ab194d906abfc81cf323c11

Creator Txn Hash

0xdcdd24e13a19306d8db32e59aba6ca20551858910091536934d303b866413051

Contracts:

Contract:

factory: 0xF7A23B9A9dCB8d0aff67012565C5844C20C11AFC
router: 0x0cBD3aEa90538a1Cf3C60B05582b691f6d2b2B01
controller: 0x4d01714A025b4308F01b0f0E1FEb560673f863Ef
token: 0x5DB7b150c5F38c5F5db11dCBDB885028fcC51D68
gaugesFactory: 0xe4032AB13c189ac58f745DEb57B0b23868B50DCd
bribesFactory: 0x03ed94D06f6E290b372cB7D72A5f885718abEf6f
ve: 0x450330Df68E1ed6e0683373D684064bDa9115fEe
voter: 0x474E967717B7A12352e1Cb731492bcc01d7816e2
minter: 0xF329eD282354DD6ea88e7149C1A169EB467908c6



Vulnerability Run check

Contract Info

Total supply	1005000
Transaction Tax	Buy 0.00% / Sell 0.00%
Dex 1	UniswapV3

Risk Analysis

✔ Contract source code verified

This token contract is open source. You can check the contract code for details. Unsourced token contracts are likely to have malicious functions to defraud their users of their assets.

✔ No Proxy

There is no proxy in the contract. The proxy contract means contract owner can modify the function of the token and possibly effect the price.

⚠ Mint function

The contract may contain additional issuance functions, which could maybe generate a large number of tokens, resulting in significant fluctuations in token prices. It is recommended to confirm with the project team whether it complies with the token issuance instructions.

✔ No function to retrieve ownership

If this function exists, it is possible for the project owner to regain ownership even after relinquishing it.

✔ Owner cant change balance

The contract owner does not have the authority to modify the balance of tokens at other addresses.

Honeypot Risk

✔ This does not appear to be a honeypot

We are not aware of any code that prevents the sale of tokens.

✔ No trading cooldown

The token contract has no trading cooldown function. If there is a trading cooldown function, the user will not be able to sell the token within a certain time or block after buying.

✔ No Anti Whale

There is no limit to the number of token transactions. The number of scam token transactions may be limited (honeypot risk).

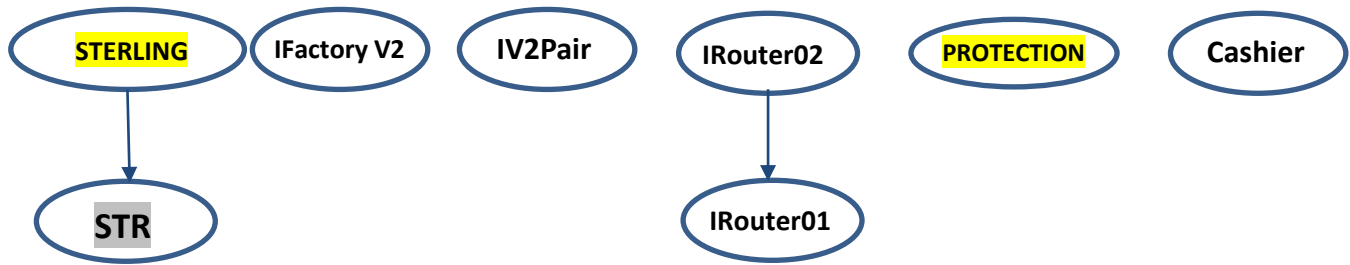
✔ No blacklist function

No blacklist function is included.

✔ No whitelist function

Whitelist function found

INHERITANCE GRAPH



Identifier	Definition	Severity
CEN-12	Centralization privileges of STERLING	Medium # 🟡

Vulnerability 0 : No important security issue detected.

Threat level: Low

```

14 mapping(address => uint) public override balanceOf;
15 mapping(address => mapping(address => uint)) public override allowance;
16
17 address public minter;
18 bool public initialMinted;
19
20 constructor() {
21     minter = msg.sender;
22     _mint(msg.sender, 0);
23 }
24
25 // Initial mint: total 755k
26 // 100k for "Genesis" pools
27 // 650k for treasury
28 function initialMint(address _recipient) external {
29     require(msg.sender == minter && !initialMinted);
30     initialMinted = true;
31     _mint(_recipient, 755 * 1e3 * 1e18);
32 }
33
34 // No checks as its meant to be once off to set minting rights to Minter
35 function setMinter(address _minter) external {
36     require(msg.sender == minter, "STR: Not minter");
37     minter = _minter;
38 }
  
```

MANUAL REVIEW

STARLING: Sterling Finance aims to act as a solution for protocols on Arbitrum to properly incentivize liquidity for their own use cases. Building on top of the groundwork laid out by Solidly, our team has addressed that first iteration's core issues to realize its full potential.

TOKEN NAME: STERLING

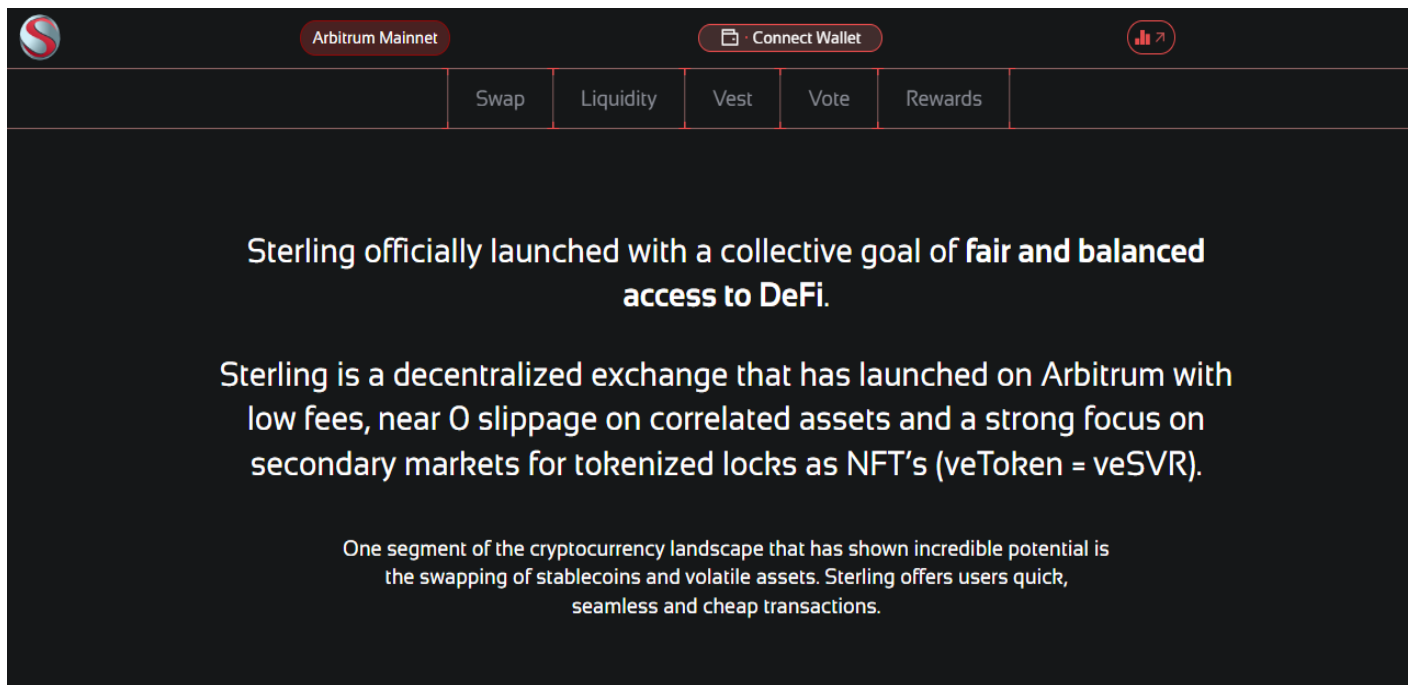
Ticker: STR

Chain/Standard: ARBITRUM

Total Supply: 1,005,000



The STERLING Platform Is Launched On Arbitrum





ISSUES CHECKING STATUS

Issue Description

Checking Status

1.	Compiler errors.	PASSED
2.	Race Conditions and reentrancy. Cross-Function Race Conditions.	PASSED
3.	Possible Delay In Data Delivery.	PASSED
4.	Oracle calls.	PASSED
5.	Front Running.	PASSED
6.	Sol Dependency.	PASSED
7.	Integer Overflow And Underflow.	PASSED
8.	DoS with Revert.	PASSED
9.	Dos With Block Gas Limit.	PASSED
10.	Methods execution permissions.	PASSED
11.	Economy Model of the contract.	PASSED
12.	The Impact Of Exchange Rate On the solidity Logic.	PASSED
13.	Private use data leaks.	PASSED
14.	Malicious Event log.	PASSED
15.	Scoping and Declarations.	PASSED
16.	Uninitialized storage pointers.	PASSED
17.	Arithmetic accuracy.	PASSED
18.	Design Logic.	PASSED
19.	Cross-Function race Conditions	PASSED
20.	Save Upon solidity contract Implementation and Usage.	PASSED
21.	Fallback Function Security	PASSED



AUDIT RESULT

PASSED

SMART CONTRACT AUDIT OF STERLING

Identifier	Definition	Severity
CEN-02	Initial asset distribution	Minor 

All of the initially minted assets are sent to the contract deployer when deploying the contract. This can be an issue as the deployer and/or contract owner can distribute tokens without consulting the community.

```
    }  
  
    function approve(address _spender, uint _value) external override returns (bool) {  
        require(_spender != address(0), "STR: Approve to the zero address");  
        allowance[msg.sender][_spender] = _value;  
        emit Approval(msg.sender, _spender, _value);  
        return true;  
    }
```

RECOMMENDATION

Project stakeholders should be consulted during the initial asset distribution process.



RECOMMENDATION

Deployer and/or contract owner private keys are secured carefully.

Please refer to PAGE-09 CENTRALIZED PRIVILEGES for a detailed understanding.

ALLEVIATION

The STERLING project team understands the centralization risk. Some functions are provided privileged access to ensure a good runtime behavior in the project



Identifier	Definition	Severity
COD-10	Third Party Dependencies	Minor 

Smart contract is interacting with third party protocols e.g., Pancakeswap router, cashier contract, protections contract. The scope of the audit treats third party entities as black boxes and assumes their functional correctness. However, in the real world, third parties can be compromised, and exploited. Moreover, upgrades in third parties can create severe impacts, e.g., increased transactional fees, deprecation of previous routers, etc.

RECOMMENDATION

Inspect and validate third party dependencies regularly, and mitigate severe impacts whenever necessary.



CERTIFICATE BY VITAL BLOCK SECURITY



DISCLAIMERS

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ABOUT VITAL BLOCK

Vital Block provides intelligent blockchain Security Solutions. We provide solidity and Raw Code Review, testing, and auditing services. We have Partnered with 15+ Crypto Launchpads, audited 50+ smart contracts, and analyzed 200,000+ code lines. We have worked on major public blockchains e.g., Ethereum, Binance, Cronos, Doge, Polygon, Avalanche, Metis, Fantom, Bitcoin Cash, Aptos, Oasis, etc.

Vital Block is Dedicated to Making Defi & Web3 A Safer Place. We are Powered by Security engineers, developers, UI experts, and blockchain enthusiasts. Our team currently consists of 5 core members, and 4+ casual contributors.

Website: <https://Vitalblock.org>

Email: info@vitalblock.org

GitHub: <https://github.com/vital-block>

Telegram (Engineering): https://t.me/vital_block

Telegram (Onboarding): https://t.me/vitalblock_cmo





vital-block



info@vitalblock.org



www.Vitalblock.org



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