



TELEGRAM

https://www.lunacash.finance https://t.me/Luna\_cash



# SMART CONTRACT AUDIT

# **Disclaimer**



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#### What is a Vital Block Audit report?

- A document describing in detail an in-depth analysis of a particular piece(s) of source code provided to Vital Block Solidity by a Client.
- •An organized collection of testing results, analysis and inferences made about the structure, implementation, and overall best practices of a particular piece of source code.
- •Representation that a Client of Vital Block Solidity has indeed completed a round of auditing with the intention to increase the quality of the company/ product's IT infrastructure and or source code.

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# **Overview**



# **Project Summary**

Total Informational

Project Name	LUNA CASH
Description	LUNA CASH is A Unique Protocol Designed For the community. With Sustainable Decentralized Earning Protocol.
Platform	Binance Mainnet
Mainnet Contracts:	0x06e2978044e3e32f11996016397d65f993093242 *Luna Cash (LCASH*
Files:	Luna Cash.sol
Audit Summary	
Delivery Date	July August 3 2022
Method of Audit	Security Static Analysis
Timeline	Story Points 100
Vulnerability Summary	
Total Issues Found	0
Total Issues Resolved	0
Total Critical	0
Total High	1
Total Medium	2
Total Treatain	

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# **Executive Summary**



# **Our Audit Methodology**

#### • STEP 1

A manual line-by-line code review to ensure the logic behind each function is safe and secured against common attack vectors.

#### • STEP 2

Simulation of hundreds of thousands of Smart Contract Interactions on a test and Mainnet blockchain using a combination of automated test tools and manual testing to determine if any security vulnerabilities exist.

#### STEP 3

Consultation with the project team on the audit report pre-publication to implement recommendations and resolve any outstanding issues.

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# **Grading**



The following grading structure is used to assess the level of vulnerability found within all Smart Contracts:

THREAT LEVEL	DEFINITION
Critical	Severe vulnerabilities which compromise the entire protocol and could result in immediate data manipulation or asset loss.
High	Significant vulnerabilities which compromise the functioning of the smart contracts leading to possible data manipulation or asset loss.
Medium	Vulnerabilities which if not fixed within in a set timescale could compromise the functioning of the smart contracts leading to possible data manipulation or asset loss.
Low	Low level vulnerabilities which may or may not have an impact on the optimal performance of the Smart contract.
Informational	Issues related to coding best practice which do not have any impact on the functionality of the Smart Contracts

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# **Description**



**LUNA CASH:** (LCASH) tokenomics are designed with long-term value creation in mind. We believe that great things take time to build properly and that success will require long-term commitment from the team.

**Buy Trading Fees 10**.0% - LP | 3% Reward | 4% Marketing | 1% Staking | 2% LP **Sell Trading Fees 10**.0% - LP | 3% Reward | 4% Marketing | 1% Staking | 2% LP

Initial supply: 50,000,000 LCASH



# **LUNA CASH (S) TOKENOMICS**



# **LUNA CASH REVIEW**



# Vulnerability 0: No important security issue detected.

Threat level: Medium

#### **Description:**

Not a honeypot transaction simulation is success at the moment. Always DYOR before investing.

INFO! There is no liquidity with BNB. Results with non-BNB pair may differ. If the token is not live yet, results may be different once the token is live. It is common for tokens to have 0% taxes before launching on DEX!

```
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         Q
                   function checkTxLimit(address sender, uint256 amount) internal view {
                       require(amount <= maxTxAmount || isTxLimitExempt[sender], "TX Limit Exceeded");</pre>
⋬
a
                   function shouldTakeFee(address sender) internal view returns (bool) {
                       return !isFeeExempt[sender];
.
1
                   function takeFee(address sender, uint256 amount, bool isSell) internal returns (uint256) {
                       uint256 multiplier = isSell ? sellMultiplier : 100;
                       uint256 feeAmount = amount.mul(totalFee).mul(multiplier).div(feeDenominator * 100);
                       _balances[address(this)] = _balances[address(this)].add(feeAmount);
                       emit Transfer(sender, address(this), feeAmount);
                       return amount.sub(feeAmount);
                  function shouldSwapBack() internal view returns (bool) {
                      return msg.sender != pair
                      && !inSwap
                      && swapEnabled
                       && balances[address(this)] >= swapThreshold;
                  function clearStuckBalance(uint256 amountPercentage) external authorized {
```

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# **LUNA CASH REVIEW**



# Vulnerability 1: The owner can change the high fee setting function in the contract.

Threat level: Low

Vulnerability 1: Gas optimisation

Threat level 2: Informational

# Description: this smart-contract can be Modified by Deployer

This can always change! Do your own due diligence.

INFO! Owner can change trading tax fee. which is Really a normal function for most Smart Contract. Removal fee is private and calculate function

# **LUNA CASH (LCASH)**

No trading data available: either trading is disabled, or no Liquidity for the token Yet.

#### **Recommendation:**

The contract can be modified so that it can be done via a single call to save gas.

```
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                      uint256 amountReceived = shouldTakeFee(sender) ? takeFee(sender, amount,(recipient == pair)) : amount;
4
                       _balances[recipient] = _balances[recipient].add(amountReceived);
Q
                      if(!isDividendExempt[sender]) {
                           try distributor.setShare(sender, _balances[sender]) {} catch {}
                      if(!isDividendExempt[recipient]) {
                           try distributor.setShare(recipient, _balances[recipient]) {} catch {}
                      try distributor.process(distributorGas) {} catch {}
                      emit Transfer(sender, recipient, amountReceived);
                  function _basicTransfer(address sender, address recipient, uint256 amount) internal returns (bool) {
                      _balances[sender] = _balances[sender].sub(amount, "Insufficient Balance");
                       _balances[recipient] = _balances[recipient].add(amount);
                      emit Transfer(sender, recipient, amount);
                   function checkTxLimit(address sender, uint256 amount) internal view {
                      require(amount <= _maxTxAmount || isTxLimitExempt[sender], "TX Limit Exceeded");</pre>
```

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# **LUNA CASH SECURITY REVIEW**



Issues Checking	g Status
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	Issue description	Checking status
1.	Compiler errors.	Passed
2.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
3.	Possible delays in data delivery.	Passed
4.	Oracle calls.	Passed
5.	Front running.	Passed
6.	Timestamp dependence.	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 the exchange rate on the logic.	Passed
13.	Private user 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.	Safe Open Zeppelin contracts implementation and usage.	Passed
21.	Fallback function security.	Passed

# **Audit Result**



# **Conclusion**



During the Vital block Audit process, the LUNA CASH contract was analysed by manual review and automated testing. All issues identified was after deployment to mainnet. By submitting the contract for audit after Deployment, the team have displayed a strong commitment to security.

Whilst there are no obvious vulnerabilities or security risks identified within the main net contract, it is beyond the scope of this Vital Block Audit to comment upon any risks associated with tokenomics, adoption or platform longevity. Before placing funds in any defi protocol Vital Block encourages potential investors to exercise due diligence and research all projects thoroughly to assess plans for ongoing development and financial sustainability.

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# **Appendix**



# **Finding Categories**

#### **Gas Optimization**

Gas Optimization findings refer to exhibits that do not affect the functionality of the code but generate different, more optimal EVM opcodes resulting in a reduction on the total gas cost of a transaction.

#### **Mathematical Operations**

Mathematical Operation exhibits entail findings that relate to mishandling of math formulas, such as overflows, incorrect operations etc.

#### Logical Issue

Logical Issue findings are exhibits that detail a fault in the logic of the linked code, such as an incorrect notion on how block.timestamp works.

#### **Control Flow**

Control Flow findings concern the access control imposed on functions, such as owner-only functions being invoke-able by anyone under certain circumstances.

#### **Volatile Code**

Volatile Code findings refer to segments of code that behave unexpectely on certain edge cases that may result in avulnerability.

#### **Data Flow**

Data Flow findings describe faults in the way data is handled at rest and in memory, such as the result of a structassignment operation affecting an in-memory struct rather than an instorage one.

# Language Specific

Language Specific findings are issues that would only arise within Solidity, i.e. incorrect usage of private or delete.

#### **Coding Style**

Coding Style findings usually do not affect the generated byte-code and comment on how to make the codebase more legible and as a result easily maintainable.

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# **Appendix**



# **Inconsistency**

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code, such as a constructor assignment imposing different require statements on the input variables than a setter function.

# **Magic Numbers**

Magic Number findings refer to numeric literals that are expressed in the codebase in their raw format and should otherwise be specified as constant contract variables aiding in their legibility and maintainability.

# **Compiler Error**

Compiler Error findings refer to an error in the structure of the code that renders it impossible to compile using the specified version of the project.

# **Dead Code**

Code that otherwise does not affect the functionality of the codebase and can be safely omitted.

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# Vita Block Making Defi And Web3 a Safer place



