CFG NINJA AUDITS

Security Assessment

Courage Token

June 4, 2023

Audit Status: Pass

Audit Edition: SAFU

POWERED BY BLADE POOL

Risk Analysis

Classifications of Manual Risk Results

Classification	Description
Critical	Danger or Potential Problems.
Major	Be Careful or Fail test.
Minor	Pass, Not-Detected or Safe Item.
Informational	Function Detected

Manual Code Review Risk Results

Contract Priviledge	Description
Buy Tax	0
Sale Tax	0
Cannot Sale	Pass
Cannot Sale	Pass
Max Tax	0
Modify Tax	Not Detected
Fee Check	Pass
Is Honeypot?	Not Detected
Trading Cooldown	Not Detected
Can Pause Trade?	Pass
Pause Transfer?	Safu Dev has to enable trade/launch.

Contract Priviledge	Description
Max Tx?	Pass
Is Anti Whale?	Not Detected
Is Anti Bot?	Not Detected
Is Blacklist?	Not Detected
Blacklist Check	Pass
is Whitelist?	Not Detected
Can Mint?	Pass
Is Proxy?	Not Detected
Can Take Ownership?	Not Detected
Hidden Owner?	Not Detected
Owner	0xad7d9872309138ed51c6eabf218f16b6ffdab2db
Self Destruct?	Not Detected
External Call?	Not Detected
Other?	Not Detected
Holders	1
Auditor Confidence	Low

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.

Project Overview

Token Summary

Parameter	Result
Address	0x57cb95712287B3cf5D5936752DF2556bC65b3560
Name	Courage
Token Tracker	Courage ($COURAGE)
Decimals	18
Supply	666,666,666
Platform	Binance Smart Chain
compiler	v0.8.17+commit.8df45f5f
Contract Name	Courage
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://bscscan.com/address/0x57cb95712287B3cf5D5936752DF2556bC65b3560#code
Payment Tx	0x4fe3d72a6d8a5710d32341398c570a46e31025f45d82eabc592b112366440b1f

Main Contract Assessed Contract Name

Name	Contract	Live
Courage	0x57cb95712287B3cf5D5936752DF2556bC65b3560	Yes

TestNet Contract Assessed Contract Name

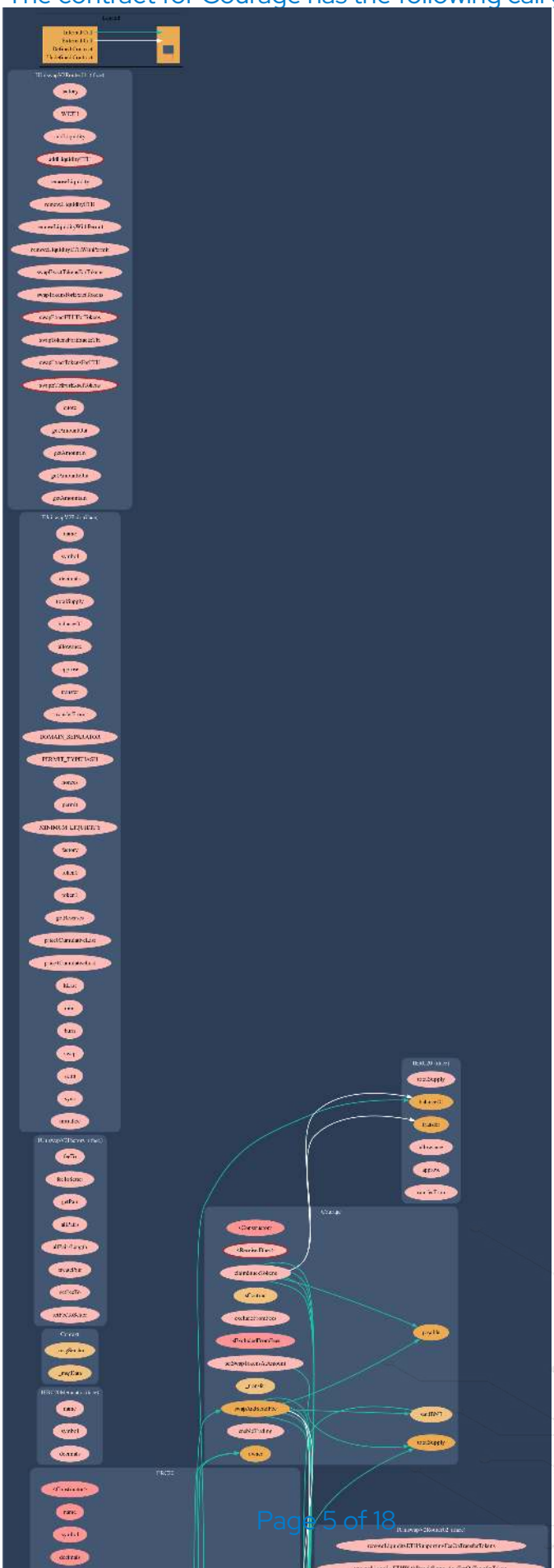
Name	Contract	Live
Courage	0x70228fFb38e490FedB9473d63A5cE357DA21d0a0	Yes

Solidity Code Provided

SolID	File Sha-1	FileName
Courage	f7a41d4b22b8a02163f9055afd107bfb13a329ad	courage.sol
Courage		
Courage		
Courage		

Call Graph

The contract for Courage has the following call graph structure.



Smart Contract Vulnerability Checks

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	courage.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	courage.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	courage.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	courage.sol	L: 0 C: 0
SWC-104	Pass	Unchecked Call Return Value.	courage.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	courage.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	courage.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	courage.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	courage.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	courage.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	courage.sol	L: 0 C: 0

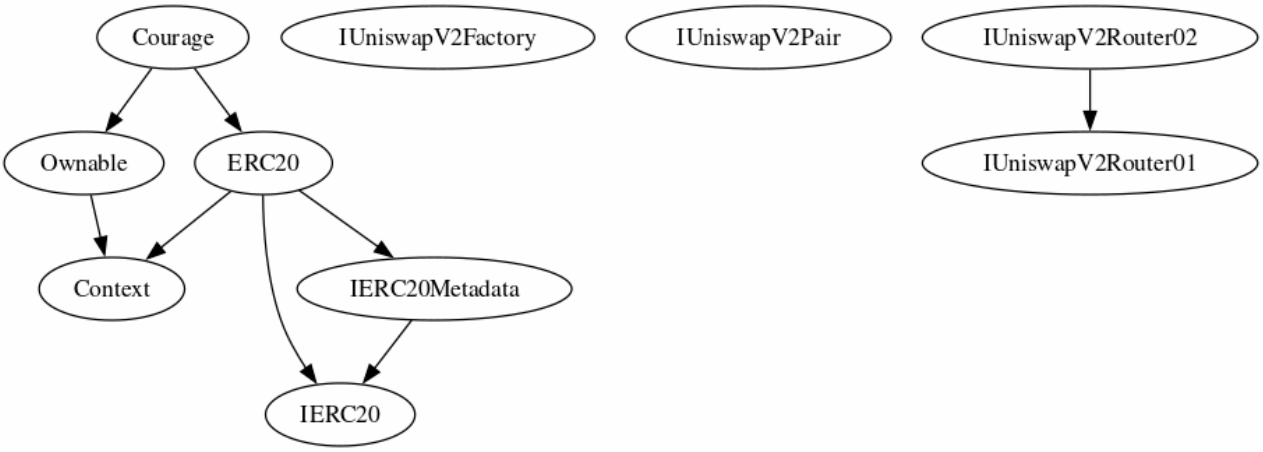
ID	Severity	Name	File	location
SWC-111	Pass	Use of Deprecated Solidity Functions.	courage.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	courage.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	courage.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	courage.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	courage.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	courage.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	courage.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	courage.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	courage.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randonmness.	courage.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	courage.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	courage.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	courage.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	courage.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	courage.sol	L: 0 C: 0

ID	Severity	Name	File	location
SWC-126	Pass	Insufficient Gas Griefing.	courage.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	courage.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	courage.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	courage.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U +202E).	courage.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	courage.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	courage.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	courage.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	courage.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	courage.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	courage.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.

Inheritance

The contract for Courage has the following inheritance structure.



Smart Contract Advance Checks

ID	Severity	Name	Result	Status
$COURAGE-01	Minor	Potential Sandwich Attacks.	Pass	Not-Found
$COURAGE-02	Minor	Function Visibility Optimization	Pass	Not Detected
$COURAGE-03	Minor	Lack of Input Validation.	Pass	Pending
$COURAGE-04	Major	Centralized Risk In addLiquidity.	Pass	Not Detected
$COURAGE-05	Minor	Missing Event Emission.	Pass	Pending
$COURAGE-06	Minor	Conformance with Solidity Naming Conventions.	Pass	Detected
$COURAGE-07	Minor	State Variables could be Declared Constant.	Pass	Not-Found
$COURAGE-08	Minor	Dead Code Elimination.	Pass	Not-Found
$COURAGE-09	Major	Third Party Dependencies.	Pass	Not Detected
$COURAGE-10	Major	Initial Token Distribution.	Pass	Not-Found
$COURAGE-11	Minor	AntiBot is present on the transfer.	Pass	Not Detected
$COURAGE-12	Major	Centralization Risks In The X Role	Pass	Not-Found
$COURAGE-13	Informational	Extra Gas Cost For User..	Pass	Not Detected

ID	Severity	Name	Result	Status
$COURAGE-14	Medium	Unnecessary Use Of SafeMath	Pass	Not Detected
$COURAGE-15	Medium	Symbol Length Limitation due to Solidity Naming Standards.	Pass	Not-Found
$COURAGE-16	Medium	Invalid collection of Taxes during Transfer.	Pass	Not-Found
$COURAGE-17	Informational	Conformance to numeric notation best practice.	Pass	Not-Found
$COURAGE-18	Medium	Stop Transactions by using Enable Trade.	Fail	Detected

$COURAGE-18 | Stop Transactions by using Enable Trade.

Category	Severity	Location	Status
Logical Issue	Medium	courage.sol: 565, 13	Detected

Description

Enable Trade is presend on the following contract and when combined with Exclude from fees it can be considered a whitelist process, this will allow anyone to trade before others and can represent and issue for the holders.

Remediation

We recommend the project owner to carefully review this function and avoid problems when performing both actions.

Project Action

Technical Findings Summary

Classification of Risk

Severity	Description
Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
Major	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
Minor	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

Findings

Severity	Found	Pending	Resolved
Critical	1	0	0
Major	0	0	0
Medium	0	0	0
Minor	0	0	0
Informational	0	0	0
Total	1	0	0

Social Media Checks

Social Media	URL	Result
Twitter	https://twitter.com/CourageDogBSC	Pass
Other		Fail
Website	https://couragecoin.io/	Pass
Telegram	https://t.me/Courage_Dog_BSC	Pass

We recommend to have 3 or more social media sources including a completed working websites.

Social Media Information Notes:

Auditor Notes: undefined

Project Owner Notes:

Assessment Results

Score Results

Review	Score
Overall Score	81/100
Auditor Score	80/100
Review by Section	**Score**
Manual Scan Score	35/53
SWC Scan Score	37 /37
Advance Check Score	9 /19

The Following Score System Has been Added to this page to help understand the value of the audit, the maximun score is 100, however to attain that value the project most pass and provide all the data needed for the assessment. Our Passing Score has been changed to 80 Points, if a project does not attain 80% is an automatic failure. Read our notes and final assessment below.

Audit Passed

Assessment Results

Important Notes:

- No issues or vulnerabilities were found.
- The contract is developed by Roman.

Auditor Score =80
Audit Passed

Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that actagainst the nature of decentralization, such as explicit ownership or specialized access roles incombination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimalEVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on howblock.timestamp works.

Control Flow

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

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that mayresult in a vulnerability.

Coding Style

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

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 setterfunction.

Coding Best Practices

ERC 20 Conding Standards are a set of rules that each developer should follow to ensure the code meet a set of creterias and is readable by all the developers.

Disclaimer

CFGNINJA has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocation for the Project, and users relying on this report should not consider this as having any merit for financial advice in any shape, form, or nature. The contracts audited do not account for any economic developments that the Project in question may pursue, and the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude, and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are entirely free of exploits, bugs, vulnerabilities or deprecation of technologies.

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