

Blockchain Security | Smart Contract Audits | KYC

MADE IN GERMANY

Audit

Security Assessment 21. July, 2021

For



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SolidProof.io Reports represent an extensive auditing 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. Blockchain technology and cryptographic assets present a high level of ongoing risk. SolidProof's position is that each company and individual are responsible for their own due diligence and continuous security. SolidProof in no way claims any guarantee of security or functionality of the technology we agree to analyze.

Overview

Network

Binance Smart Chain (BEP20)

Website

https://www.lildogecoin.dog/

Telegram

https://t.me/lildoge_coin

Twitter

https://twitter.com/lildoge_coin

Youtube

https://www.youtube.com/results?search_query=lil+doge

Github

https://github.com/lildogecoin

Medium

https://medium.com/@lildogecoin

Reddit

https://www.reddit.com/r/lildogecoin/

Instagram

https://www.instagram.com/lildoge_coin/

Discord

https://discord.gg/27t6Bxgz69

Description

Lil Doge is very giving and is designed to reward long term holders. Community is first and foremost. Lil Doge is proud to run with DOGE and provide transparency and fairness to the community.

Project Engagement

During the 19th of July 2021, **LilDoge Team** engaged Solid proof. io to audit smart contracts that they created. The engagement was technical in nature and focused on identifying security flaws in the design and implementation of the contracts. **LilDoge Team** provided Solid proof. io with access to their code repository and white paper.





Contract Link

https://bscscan.com/address/ 0xa638e525abb8aa42d0aeadd9b17f497c702902b0#code

Vulnerability & Risk Level

Risk represents the probability that a certain source-threat will exploit vulnerability, and the impact of that event on the organization or system. Risk Level is computed based on CVSS version 3.0.

Level	Value	Vulnerability	Risk (Required Action)
Critical	9 - 10	A vulnerability that can disrupt the contract functioning in a number of scenarios, or creates a risk that the contract may be broken.	Immediate action to reduce risk level.
High	7 – 8.9	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.	Implementation of corrective actions as soon aspossible.
Medium	4 – 6.9	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.	Implementation of corrective actions in a certain period.
Low	2 – 3.9	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.	Implementation of certain corrective actions or accepting the risk.
Informational	0 – 1.9	A vulnerability that have informational character but is not effecting any of the code.	An observation that does not determine a level of risk

Auditing Strategy and Techniques Applied

Throughout the review process, care was taken to evaluate the repository for security-related issues, code quality, and adherence to specification and best practices. To do so, reviewed line-by-line by our team of expert pentesters and smart contract developers, documenting any issues as there were discovered.

Methodology

The auditing process follows a routine series of steps:

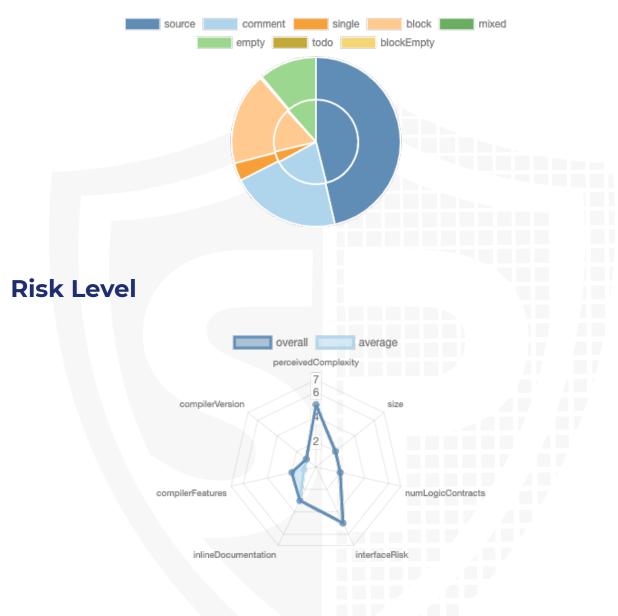
- 1. Code review that includes the following:
 - i) Review of the specifications, sources, and instructions provided to SolidProof to make sure we understand the size, scope, and functionality of the smart contract.
 - ii) Manual review of code, which is the process of reading source code line-byline in an attempt to identify potential vulnerabilities.
 - iii) Comparison to specification, which is the process of checking whether the code does what the specifications, sources, and instructions provided to SolidProof describe.
- 2. Testing and automated analysis that includes the following:
 - i) Test coverage analysis, which is the process of determining whether the test cases are actually covering the code and how much code is exercised when we run those test cases.
 - ii) Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
- 3. Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.
- 4. Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts.

Used Code from other Frameworks/Smart Contracts (direct imports)

Imported packages:

- OpenZeppelin
 - Address
 - Ownable
 - SafeMatch
- Uniswap
 - UniswapV2Factory
 - UniswapV2Pair
 - UniswapV2Router01
 - UniswapV2Router02

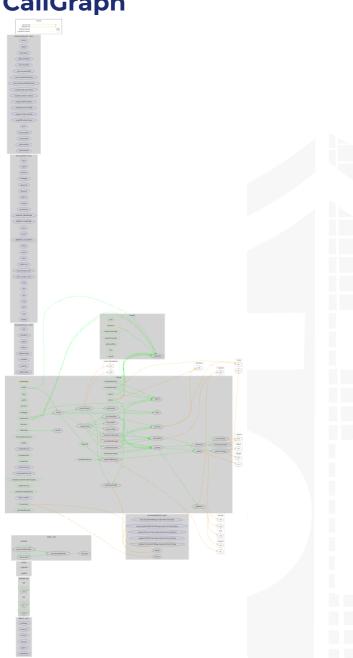
Metrics Source Lines



Capabilities



CallGraph



Source Units in Scope

Туре	File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score	Capabilities
 	contracts/lildoge.sol	5	5	1165	885	522	314	528	■ Š ♣ ☆
∌ ≧ Q %	Totals	5	5	1165	885	522	314	528	■ § ♣ -ÿ-

Audit Results

AUDIT PASSED

Critical issues

- no critical issues found -

High issues

- no high issues found -

Medium issues

- no medium issues found -

Low issues

Issue	File	Type	Line	Description
#1	Main	A floating pragma is set	9	The current pragma Solidity directive is ""^0.6.12""
#2	Main	Call with hardcoded gas amount	968	The highlighted function call forwards a fixed amount of gas. This is discouraged as the gas cost of EVM instructions may change in the future, which could break this contract's assumptions.

Informational issues

- no informational issues found -

SWC Attacks

ID	Title	Relationships	Status
<u>SW</u> <u>C-13</u> <u>6</u>	Unencrypted Private Data On-Chain	CWE-767: Access to Critical Private Variable via Public Method	PASSED
<u>SW</u> <u>C-13</u> <u>5</u>	Code With No Effects	CWE-1164: Irrelevant Code	PASSED
<u>SW</u> <u>C-13</u> <u>4</u>	Message call with hardcoded gas	CWE-655: Improper Initialization	NOT PASSED
<u>SW</u> <u>C-13</u> <u>3</u>	Hash Collisions With Multiple Variable	CWE-294: Authentication Bypass by Capture-replay	PASSED
<u>SW</u> <u>C-13</u> <u>2</u>	Unexpected Ether balance	CWE-667: Improper Locking	PASSED
<u>SW</u> <u>C-13</u> <u>1</u>	Presence of unused variables	CWE-1164: Irrelevant Code	PASSED
<u>SW</u> <u>C-13</u> <u>O</u>	Right-To-Left- Override control	CWE-451: User Interface (UI) Misrepresentation of Critical Information	PASSED
<u>SW</u> <u>C-12</u> <u>9</u>	Typographical Error	CWE-480: Use of Incorrect Operator	PASSED
<u>SW</u> <u>C-12</u> <u>8</u>	DoS With Block Gas Limit	CWE-400: Uncontrolled Resource Consumption	PASSED
<u>SW</u> <u>C-12</u> <u>7</u>	Arbitrary Jump with Function Type Variable	CWE-695: Use of Low-Level Functionality	PASSED

<u>SW</u> <u>C-12</u> <u>5</u>	Incorrect Inheritance Order	CWE-696: Incorrect Behavior Order	PASSED
<u>SW</u> <u>C-12</u> <u>4</u>	Write to Arbitrary Storage	CWE-123: Write-what-where Condition	PASSED
<u>SW</u> <u>C-12</u> <u>3</u>	Requirement Violation	CWE-573: Improper Following of Specification by Caller	PASSED
<u>SW</u> <u>C-12</u> <u>2</u>	Lack of Proper Signature Verification	CWE-345: Insufficient Verification of Data Authenticity	PASSED
<u>SW</u> <u>C-12</u> <u>1</u>	Missing Protection against	CWE-347: Improper Verification of Cryptographic Signature	PASSED
<u>SW</u> <u>C-12</u> <u>0</u>	Weak Sources of Randomness from Chain	CWE-330: Use of Insufficiently Random Values	PASSED
<u>SW</u> <u>C-11</u> <u>9</u>	Shadowing State Variables	CWE-710: Improper Adherence to Coding Standards	PASSED
<u>SW</u> <u>C-11</u> <u>8</u>	Incorrect Constructor Name	CWE-665: Improper Initialization	PASSED
<u>SW</u> <u>C-11</u> <u>7</u>	Signature Malleability	CWE-347: Improper Verification of Cryptographic Signature	PASSED
<u>SW</u> <u>C-11</u> <u>6</u>	Timestamp Dependence	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
<u>SW</u> <u>C-11</u> <u>5</u>	Authorization through tx.origin	CWE-477: Use of Obsolete Function	PASSED

<u>SW</u> <u>C-11</u> <u>4</u>	Transaction Order Dependence	CWE-362: Concurrent Execution using Shared Resource with Improper Synchronization ('Race Condition')	PASSED
<u>SW</u> <u>C-11</u> <u>3</u>	DoS with Failed Call	CWE-703: Improper Check or Handling of Exceptional Conditions	PASSED
<u>SW</u> <u>C-11</u> <u>2</u>	Delegatecall to Untrusted Callee	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
<u>SW</u> <u>C-111</u>	Use of Deprecated	CWE-477: Use of Obsolete Function	PASSED
<u>SW</u> <u>C-11</u> <u>O</u>	Assert Violation	CWE-670: Always-Incorrect Control Flow Implementation	PASSED
<u>SW</u> <u>C-10</u> <u>9</u>	Uninitialized Storage Pointer	CWE-824: Access of Uninitialized Pointer	PASSED
<u>SW</u> <u>C-10</u> <u>8</u>	State Variable Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED
<u>SW</u> <u>C-10</u> <u>7</u>	Reentrancy	CWE-841: Improper Enforcement of Behavioral Workflow	PASSED
<u>SW</u> <u>C-10</u> <u>6</u>	Unprotected SELFDESTRUC T Instruction	CWE-284: Improper Access Control	PASSED
<u>SW</u> <u>C-10</u> <u>5</u>	Unprotected Ether Withdrawal	CWE-284: Improper Access Control	PASSED
<u>SW</u> <u>C-10</u> <u>4</u>	Unchecked Call Return Value	CWE-252: Unchecked Return Value	PASSED

<u>SW</u> <u>C-10</u> <u>3</u>	Floating Pragma	CWE-664: Improper Control of a Resource Through its <u>Lifetime</u>	NOT PASSED
<u>SW</u> <u>C-10</u> <u>2</u>	Outdated Compiler Version	CWE-937: Using Components with Known Vulnerabilities	PASSED
<u>SW</u> <u>C-10</u> <u>1</u>	Integer Overflow and Underflow	CWE-682: Incorrect Calculation	PASSED
<u>SW</u> <u>C-10</u> <u>0</u>	Function Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED



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