

**Blockchain Security | Smart Contract Audits** 

MADE IN GERMANY

# Audit Passed

Security Assessment 22. June, 2021

For



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# **Overview**

#### Network

Binance Smart Chain (BEP20)

#### Website

http://dogrichtoken.com/

### **Telegram**

https://t.me/DogrichInu https://t.me/Dogrichinuannouncement

#### **Twitter**

https://twitter.com/DogrichInu?s=09

#### **Discord**

https://discord.gg/AVT8CeXjB5

#### Medium

https://medium.com/@dogrichinu

#### Reddit

https://www.reddit.com/u/DogRichInu? utm\_medium=android\_app&utm\_source=share

## **Description**

Dogrich Inu (DGR) is decentralized community building and another Meme Coin Similar to Dogecoin and ShibaInu

Dogrich Inu allows content creators to connect with the audience,earn and spend digital currency without a middleman. In one giant leap, the Dogrich Inu client can introduce meme token to hundreds of millions of users around the world and empower a new generation of content creators with the tools to distribute their content directly to others on web.

# **Project Engagement**

During the 19th of June, **Dogrich Inu Team** engaged Solidproof.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. **Dogrich Inu Team** provided Solidproof.io with access to their code repository and whitepaper.



### **Contract Link**

https://bscscan.com/address/ 0xadb4f70b215034cc52c42c542b93d94955404e22#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<br>does not determine a<br>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)**

No frameworks used.



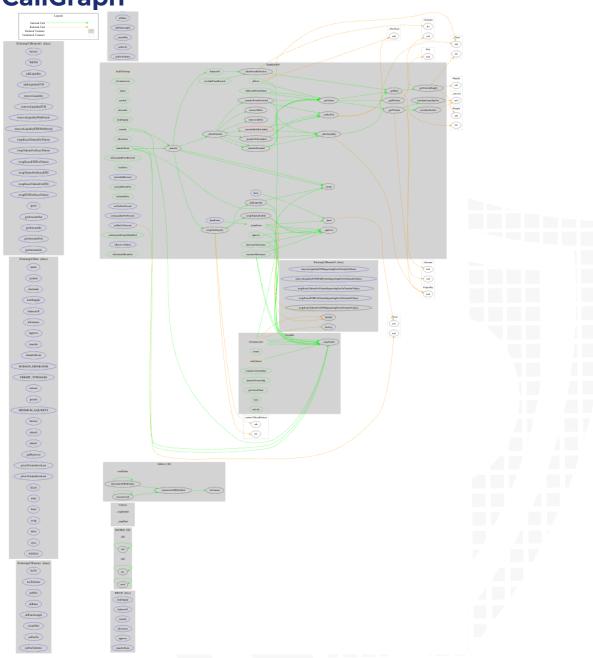
# Metrics Source Lines



# **Capabilities**

| Solidity<br>Versions<br>observed | Experiment al Features | Can Receive Funds | Uses Assembly         | Has Destroyable Contracts |
|----------------------------------|------------------------|-------------------|-----------------------|---------------------------|
| ^0.6.12                          |                        | yes               | yes<br>(2 asm blocks) |                           |

# **CallGraph**



# **Source Units in Scope**

| Туре          | File                     | Logic Contracts | Interfaces | Lines | nLines | nSLOC | Comment Lines | Complex. Score | Capabilities |
|---------------|--------------------------|-----------------|------------|-------|--------|-------|---------------|----------------|--------------|
| <u> </u>      | contracts/dogrichinu.sol | 5               | 5          | 1196  | 916    | 529   | 335           | 544            | <b>■</b> Š.☆ |
| <b>≥</b> €Q\$ | Totals                   | 5               | 5          | 1196  | 916    | 529   | 335           | 544            | <b>■ Š ∵</b> |

# **Audit Results**

# **AUDIT PASSED**

### **Critical issues**

- no critical issues found -

# **High issues**

- no high issues found -

## **Medium issues**

- no medium issues found -

#### Low issues

- no low issues found -

## Informational issues

- no informational issues found -

# **SWC Attacks**

| ID                                   | Title  | Relationships  | Status |
|--------------------------------------|--|--|--------|
| <u>SW</u><br><u>C-13</u><br>1        | Presence of unused variables                                   | CWE-1164: Irrelevant Code  | PASSED |
| <u>SW</u><br><u>C-13</u><br><u>O</u> | Right-To-Left-<br>Override<br>control<br>character<br>(U+202E) | CWE-451: User Interface (UI) Misrepresentation of Critical Information | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>9</u> | Typographical<br>Error   | CWE-480: Use of Incorrect Operator                                     | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>8</u> | DoS With Block<br>Gas Limit                                    | CWE-400: Uncontrolled Resource Consumption                             | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>7</u> | Arbitrary Jump<br>with Function<br>Type Variable               | CWE-695: Use of Low-Level Functionality                                | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>5</u> | Incorrect<br>Inheritance<br>Order                              | CWE-696: Incorrect Behavior Order                                      | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>4</u> | Write to<br>Arbitrary<br>Storage<br>Location                   | CWE-123: Write-what-where Condition                                    | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>3</u> | Requirement<br>Violation                                       | CWE-573: Improper Following of Specification by Caller                 | PASSED |
| <u>SW</u><br><u>C-12</u><br><u>2</u> | Lack of Proper<br>Signature<br>Verification                    | CWE-345: Insufficient Verification of Data Authenticity                | PASSED |

| <u>SW</u><br><u>C-12</u><br><u>1</u> | Missing Protection against Signature Replay Attacks       | CWE-347: Improper Verification of Cryptographic Signature   | PASSED |
|--------------------------------------|---|---|--------|
| <u>SW</u><br><u>C-12</u><br><u>0</u> | Weak Sources<br>of Randomness<br>from Chain<br>Attributes | CWE-330: Use of Insufficiently Random Values  | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>9</u> | Shadowing<br>State Variables                              | CWE-710: Improper Adherence<br>to Coding Standards  | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>8</u> | Incorrect<br>Constructor<br>Name                          | CWE-665: Improper Initialization  | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>7</u> | Signature<br>Malleability                                 | CWE-347: Improper Verification of Cryptographic Signature   | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>6</u> | Timestamp<br>Dependence                                   | CWE-829: Inclusion of Functionality from Untrusted Control Sphere                                       | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>5</u> | Authorization<br>through<br>tx.origin                     | CWE-477: Use of Obsolete Function   | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>4</u> | Transaction<br>Order<br>Dependence                        | CWE-362: Concurrent  Execution using Shared  Resource with Improper  Synchronization ('Race Condition') | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>3</u> | DoS with Failed<br>Call                                   | CWE-703: Improper Check or Handling of Exceptional Conditions   | PASSED |
| <u>SW</u><br><u>C-11</u><br><u>2</u> | Delegatecall to<br>Untrusted<br>Callee                    | CWE-829: Inclusion of Functionality from Untrusted Control Sphere                                       | PASSED |

| <u>SW</u><br><u>C-111</u>            | Use of<br>Deprecated<br>Solidity<br>Functions | CWE-477: Use of Obsolete<br>Function                               | PASSED |
|--------------------------------------|---|--|--------|
| <u>SW</u><br><u>C-11</u><br><u>0</u> | Assert Violation                              | CWE-670: Always-Incorrect Control Flow Implementation              | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>9</u> | Uninitialized<br>Storage Pointer              | CWE-824: Access of Uninitialized Pointer                           | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>8</u> | State Variable<br>Default<br>Visibility       | CWE-710: Improper Adherence<br>to Coding Standards                 | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>7</u> | Reentrancy                                    | CWE-841: Improper Enforcement of Behavioral Workflow               | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>6</u> | Unprotected SELFDESTRUC T Instruction         | CWE-284: Improper Access Control                                   | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>5</u> | Unprotected<br>Ether<br>Withdrawal            | CWE-284: Improper Access Control                                   | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>4</u> | Unchecked Call<br>Return Value                | CWE-252: Unchecked Return Value                                    | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>3</u> | Floating<br>Pragma                            | CWE-664: Improper Control of<br>a Resource Through its<br>Lifetime | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>2</u> | Outdated<br>Compiler<br>Version               | CWE-937: Using Components with Known Vulnerabilities               | PASSED |
| <u>SW</u><br><u>C-10</u><br><u>1</u> | Integer<br>Overflow and<br>Underflow          | CWE-682: Incorrect Calculation                                     | PASSED |

| <u>SW</u><br><u>C-10</u><br><u>0</u> | Function<br>Default<br>Visibility | CWE-710: Improper Adherence<br>to Coding Standards | PASSED |
|--------------------------------------|-----------------------------------|--|--------|
|--------------------------------------|-----------------------------------|--|--------|





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