SOLIDProof

Bring trust into your projects

Blockchain Security | Smart Contract Audits | KYC Development | Marketing

MADE IN GERMANY

HoloNex

AUDIT

SECURITY ASSESSMENT

22 April, 2024

for

HoloNEX

CONTENTS

Introduction

SolidProof.io is a brand of the officially registered company MAKE Network GmbH, based in Germany. We're mainly focused on Block-chain Security such as Smart Contract Audits and KYC verification for project teams. Solidproof.io assess potential security issues in the smart contracts implementations, review for potential inconsistencies between the code base and the whitepaper/documentation, and provide suggestions for improvement.

Disclaimer

SolidProof.io reports are not, nor should be considered, an "endorsement" or "disapproval" of any particular project or team. These reports are not, nor should be considered, an indication of the economics or value of any "product" or "asset" created by any team. SolidProof.io do not cover testing or auditing the integration with external contract or services (such as Unicrypt, Uniswap, Pancake-Swap etc'...)

SolidProof.io Audits do not provide any warranty or guarantee regarding the absolute bug- free nature of the technology analyzed, nor do they provide any indication of the technology proprietors. SolidProof Audits should not be used in any way to make decisions around investment or involvement with any particular project. These reports in no way provide investment advice, nor should be leveraged as investment advice of any sort.

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.

Project Overview

Summary

Project Name	HoloNex
Website	https://hololoot.io
About the Project	HoloNex, a pioneering platform (https://hololoot.io/) at the intersection of augmented reality and blockchain technology built upon the successes of our previous venture, Hololoot. HoloNex offers an AR NFT creation and trading ecosystem enhanced by cloud solutions that ensure scalability, flexibility, and security.
Chain	Polygon
Language	Solidity
Codebase	https://github.com/Hololoot-DevTeam/holonex-token 0x08fd9b7da9Cbe84e23749bfA5c58D89460D612C6
Commit	c6597fe6bf0fd07a2468e9d216bbb5d3c24a1439
Unit Tests	N/A

Social Medias

Telegram	https://t.me/hololoot
Twitter	https://twitter.com/hololoot
Facebook	N/A
Instagram	N/A
GitHub	N/A
Reddit	https://www.reddit.com/r/Hololoot/
Medium	https://hololoot.medium.com/
Discord	https://discord.com/invite/YzvN4pEcrT
YouTube	N/A
TikTok	N/A
LinkedIn	https://www.linkedin.com/company/hololoot?originalSubdomain=gm

Audit Summary

Version	Delivery Date	Change Log
v1.0	22 April, 2024	• Layout Project • Automated/Manual-Security Review • Summary

Note - The following audit report presents a comprehensive security analysis of the smart contract utilized in the project. This analysis did not include functional testing (or unit testing) of the contract's logic. We cannot guarantee 100% logical correctness of the contract as it was not functionally tested by us.

File Overview

The Team provided us with the files that should be tested in the security assessment. This audit covered the following files listed below with a SHA-1 Hash.

1. see codebase

Please note: Files with a different hash value than in this table have been modified after the security check, either intentionally or unintentionally. A different hash value may (but need not) be an indication of a changed state or potential vulnerability that was not the subject of this scan.

Imported packages

Used code from other Frameworks/Smart Contracts (direct imports).

1. see codebase

Please note: Files with a different hash value than in this table have been modified after the security check, either intentionally or unintentionally. A different hash value may (but need not) be an indication of a changed state or potential vulnerability that was not the subject of this scan.

Audit Information

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 as possible.
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 check the repository for security- related issues, code quality, and compliance with specifications and best practices. To this end, our team of experienced pen-testers and smart contract developers reviewed the code line by line and documented any issues discovered. We check every file manually. We use automated tools only so that they help us achieve faster and better results.

Methodolgy

The auditing process follows a routine series of steps:

1. Code review that includes the following:
    a. Reviewing the specifications, sources, and instructions provided to SolidProof to ensure we understand the size, scope, and functionality of the smart contract.
    b. Manual review of the code, i.e., reading the source code line by line to identify potential vulnerabilities.
    c. Comparison to the specification, i.e., verifying that the code does what is described in the specifications, sources, and instructions provided to SolidProof.
2. Testing and automated analysis that includes the following:
    a. Test coverage analysis, which determines whether test cases actually cover code and how much code is executed when those test cases are executed.
    b. Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
3. Review best practices, i.e., review smart contracts to improve efficiency, effectiveness, clarity, maintainability, security, and control based on best practices, recommendations, and research from industry and academia.
4. Concrete, itemized and actionable recommendations to help you secure your smart contracts.

Overall Security

Medium or higher issues

Upgradeability

Contract is not upgradeable	✅ Deployer cannot add new functionalites
Description	The contract is not an upgradeable contract. The deployer is not able to change or add any functionalities to the contract after deploying.
Comment	N/A

Ownership

The Ownership is renounced	✅ Ownership renounced
Description	The owner renounced the ownership that means the contract's owner will no longer have any control or authority over the contract's operations.
Comment	No ownership implemented.

Note - If the contract is not deployed then we would consider the ownership to be not renounced. Moreover, if there are no ownership functionalities then the ownership is automatically considered renounced. In case of Solana SPL-Tokens a fully renounced ownership contains revoked mintAuthority, freezeAuthority and updateAuthority, or isMutable set to false.

Ownership Privileges

These functions can be dangerous. Please note that abuse can lead to financial loss. We have a guide where you can learn more about these Functions.

Minting tokens

Minting tokens refers to the process of creating new tokens in a cryptocurrency or blockchain network. This process is typically performed by the project's owner or a designated authority, who has the ability to add new tokens to the network's total supply.

Contract owner cannot mint new tokens	✅	**The owner cannot mint new Tokens**
Description	The owner is not able to mint new tokens once the contract is deployed.	
Comment	N/A	

Burning tokens

Burning tokens is the process of permanently destroying a certain number of tokens, reducing the total supply of a cryptocurrency or token. This is usually done to increase the value of the remaining tokens, as the reduced supply can create scarcity and potentially drive up demand.

Contract owner cannot burn tokens	✅ **The owner cannot burn tokens**
Description	The owner is not able burn tokens without any allowances.
Comment	N/A

Blacklist addresses

Blacklisting addresses in smart contracts is the process of adding a certain address to a blacklist, effectively preventing them from accessing or participating in certain functionalities or transactions within the contract. This can be useful in preventing fraudulent or malicious activities, such as hacking attempts or money laundering.

Contract Owner cannot blacklist addresses	✅ **The owner cannot blacklist addresses**
Description	The owner is not able blacklist addresses to lock funds.
Comment	N/A

Fees and Tax

In some smart contracts, the owner or creator of the contract can set fees for certain actions or operations within the contract. These fees can be used to cover the cost of running the contract, such as paying for gas fees or compensating the contract's owner for their time and effort in developing and maintaining the contract.

Contract owner cannot set fees more than 25%	✅ **The owner cannot set fees more than 25%**
Description	The owner cannot set fees of more then 25%
Comment	No fees or taxes implemented.

Lock User Funds

In a smart contract, locking refers to the process of restricting access to certain tokens or assets for a specified period of time. When tokens or assets are locked in a smart contract, they cannot be transferred or used until the lock-up period has expired or certain conditions have been met.

Contract owner cannot lock the contract	✅ **The owner cannot lock the contract**
Description	The owner is not able to lock the contract by any functions or updating any variables.
Comment	N/A

Components

Contracts	Libraries	Interfaces	Abstract
1	0	0	3

Exposed Functions

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.

Public	Payable
6	0

External	Internal	Private	Pure	View
0	0	0	0	0

External/public functions are functions that can be called from outside of a contract, i.e., they can be accessed by other contracts or externally owned accounts on the blockchain. These functions are specified using the function declaration's external or public visivbility modifier.

State Variables

Total	Public
6	0

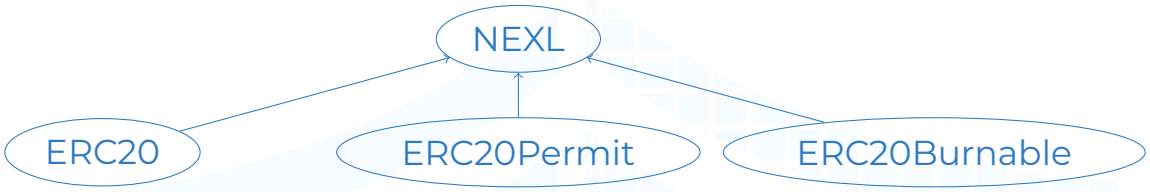
State variables are variables that are stored on the blockchain as part of the contract's state. They are declared at the contract level and can be accessed and modified by any function within the contract. State variables can be defined with a visibility modifier such as public private or internal, which determines the access level of the variable.

Capabilities

Solidity Versions Observed	Transfers ETH	Can receive funds	Uses Assembly	Has destroyable Contracts
0.8.24	0	0	0	0

Inheritance Graph

An inheritance graph is a graphical representation of the inheritance hierarchy among contracts. In object-oriented programming, inheritance is a mechanism that allows one class (or contract, in the case of solidity) to inherit properties and methods from another class. It shows the relationships between different contracts and how they are related to each other through inheritance.



Centralization Privileges

Centralization can arise when one or more parties have privileged access or control over the contract's functionality, data, or decision-making. This can occur, for example, if the contract is controlled by a single entity or if certain participants have special permissions or abilities that others do not.

In the project there are authorities that has the authority over the following functions:

File/Role	Privileges
Main {Owner}	None

Recommendations

To avoid potential hacking risks, it is advisable for the client to manage the private key of the privileged account with care. Additionally, we recommend enhancing the security practices of centralized privileges or roles in the protocol through a decentralized mechanism or smart- contract-based accounts, such as multi-signature wallets.

Here are some suggestions what the client can do.

- Consider using multi-signature wallets: Multi-signature wallets require multiple parties to sign off on a transaction before it can be executed, providing an extra layer of security e.g. Gnosis Safe
- Use of a timelock at least with a latency of e.g. 48-72 hours for awareness on privileged operations
- Introduce a DAO/Governance/Voting module to increase transperancy and user involvement

- Consider Renouncing the ownership so that the owner cannot modify any state variables of the contract anymore. Make sure to set up everything before renouncing.

Audit Results

Critical issues

No critical issues

High issues

No high issues

Medium issues

No medium issues

Low issues

No low issues

Informational issues

No informational issues

Legend for the Issue Status

Attribute or Symbol	Meaning
Open	The issue is not fixed by the project team.
Fixed	The issue is fixed by the project team.
Acknowledged(ACK)	The issue has been acknowledged or declared as part of business logic.

Blockchain Security | Smart Contract Audits | KYC Development | Marketing

MADE IN GERMANY