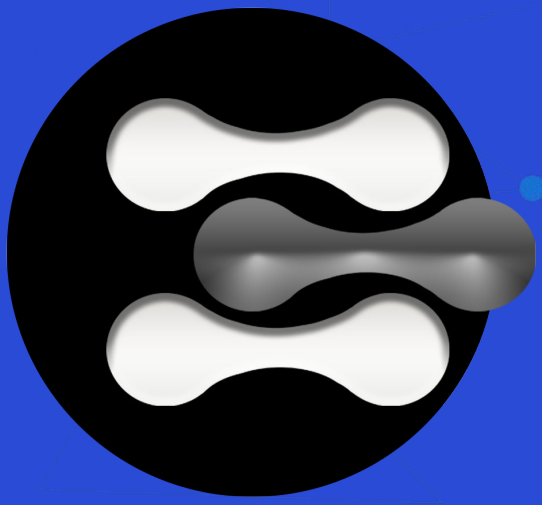
SMART CONTRACT SECURITY AUDIT
for



Genolix DNA Innovation Staking

Token Overview

0xSafe received the application for a smart contract security audit of **Genolix DNA Innovation's Staking Contract** on December 16, 2022.

Details

Client: Genolix DNA Innovation [$GENO] - **Staking Contract**

Blockchain: Polygon

Contract: 0x96883D7817c249cc140c5bf3fac947F6DEA7E873

Compiler: v0.8.15+commit.e14f2714

Optimization: Yes with 200 runs

Table of Contents

Methodology

Audit Details

This comprehensive audit report provides an overview of the **Genolix DNA Innovation's Staking Contract**. 0xSafe utilizes a combination of static, automated, and manual analysis tools to check for any potential vulnerabilities or hacks in the system.

Code Quality

This includes a full review of the smart contract code. The prime areas of focus are

- Accuracy
- Exploits
- Functionality
- Readability
- Security
- Vulnerabilities

Scope of work

Genolix DNA Innovation's team provided us with the files that need to be tested (BSCscan, Etherscan, Github, etc.). The focus of the security audit is the main token smart contract.

Tools

Ganache, Mithril, MythX, Open Zeppelin Code Analyzer, Proprietary tests, Remix IDE, Solidity Compiler, SWC Registry.

Risk Classification

!Critical	This signifies vulnerabilities with the smart contract's functionality or performance. Issues should be resolved immediately.
!Medium	This signifies vulnerabilities that can potentially cause problems and should eventually be fixed.
!Minor	Minor vulnerabilities may or may not impact smart contract functionality.
!Informational	This is there to offer suggestions for improvement

Audit Findings

Critical Issues

-no critical issues found-

Medium Issues

-no medium issues found-

Minor Issues

Issue	Type	Line #(s)	Description
#1	A floating pragma is set.	7	Current pragma directive is: "^v0.8.15"

SWC Attacks

SWC ID	Description	Status
SWC-100	Function Default Visibility	PASSED
SWC-101	Integer Overflow and Underflow	PASSED
SWC-102	Outdated Compiler Version	PASSED
SWC-103	Floating Pragma	MINOR
SWC-104	Unchecked Call Return Value	PASSED
SWC-105	Unprotected Ether Withdrawal	PASSED
SWC-106	Unprotected SELFDESTRUCT Instruction	PASSED
SWC-107	Reentrancy	PASSED
SWC-108	State Variable Default Visibility	PASSED
SWC-109	Uninitialized Storage Pointer	PASSED
SWC-110	Assert Violation	PASSED
SWC-111	Use of Deprecated Solidity Functions	PASSED
SWC-112	Delegatecall to Untrusted Callee	PASSED
SWC-113	DoS with Failed Call	PASSED
SWC-114	Transaction Order Dependence	PASSED
SWC-115	Authorization through tx.origin	PASSED
SWC-116	Block values as a proxy for time	PASSED
SWC-117	Signature Malleability	PASSED
SWC-118	Incorrect Constructor Name	PASSED
SWC-119	Shadowing State Variables	PASSED
SWC-120	Weak Sources of Randomness from Chain Attributes	PASSED
SWC-121	Missing Protection against Signature Replay Attacks	PASSED

SWC-122	Lack of Proper Signature Verification	PASSED
SWC-123	Requirement Violation	PASSED
SWC-124	Write to Arbitrary Storage Location	PASSED
SWC-125	Incorrect Inheritance Order	PASSED
SWC-126	Insufficient Gas Griefing	PASSED
SWC-127	Arbitrary Jump with Function Type Variable	PASSED
SWC-128	DoS With Block Gas Limit	PASSED
SWC-129	Typographical Error	PASSED
SWC-130	Right-To-Left-Override control character (U+202E)	PASSED
SWC-131	Presence of unused variables	PASSED
SWC-132	Unexpected Ether balance	PASSED
SWC-133	Hash Collisions With Multiple Variable Length Arguments	PASSED
SWC-134	Message call with hardcoded gas amount	PASSED
SWC-135	Code With No Effects	PASSED
SWC-136	Unencrypted Private Data On-Chain	PASSED

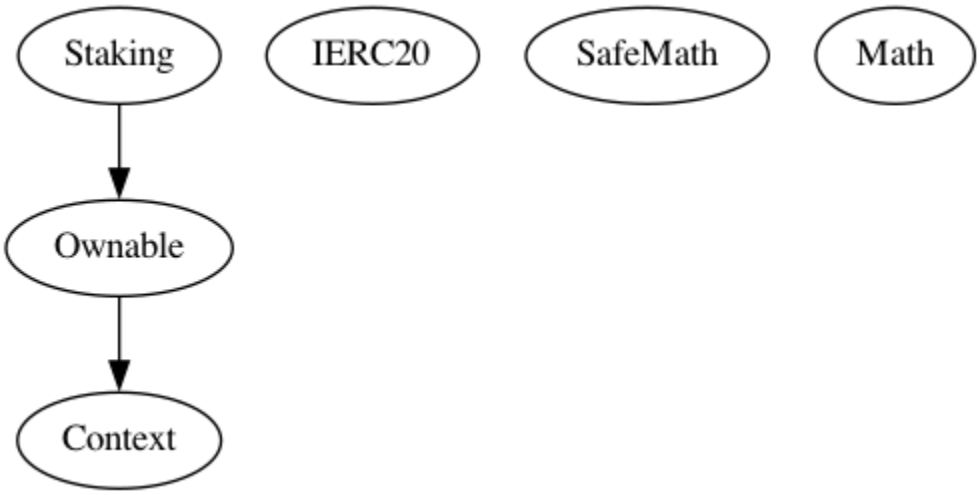
Important Notes

- Owner can change APY percentage
- Owner can remove stuck tokens and MATIC

Good Practices

- The smart contract utilizes “SafeMath” to prevent overflows
- No malicious code

Inheritance Tree



Contract Inspection

Below is a visual description report comprising of information about the system's files, contracts, and their functions.

Legend

Symbol	Meaning
🛑	Function can modify state
💵	Function is payable
🔒	Internal function
NO ❗	Function has no modifier

Table

Contract	Type	Bases		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
Context	Implementation				
└	_msgSender	Internal 🔒		
└	_msgData	Internal 🔒		
Ownable	Implementation	Context			

└	<Constructor>	Public ❗	🛑	NO ❗
└	owner	Public ❗		NO ❗
└	_checkOwner	Internal 🔒		
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
└	_transferOwnership	Internal 🔒	🛑		
IERC20	Interface			
└	totalSupply	External ❗		NO ❗
└	balanceOf	External ❗		NO ❗
└	transfer	External ❗	🛑	NO ❗
└	allowance	External ❗		NO ❗
└	approve	External ❗	🛑	NO ❗
└	transferFrom	External ❗	🛑	NO ❗
SafeMath	Library			
└	tryAdd	Internal 🔒		
└	trySub	Internal 🔒		
└	tryMul	Internal 🔒		
└	tryDiv	Internal 🔒		
└	tryMod	Internal 🔒		
└	add	Internal 🔒		
└	sub	Internal 🔒		
└	mul	Internal 🔒		
└	div	Internal 🔒		
└	mod	Internal 🔒		
└	sub	Internal 🔒		
└	div	Internal 🔒		
└	mod	Internal 🔒		
Math	Library			
└	max	Internal 🔒		
└	min	Internal 🔒		
└	average	Internal 🔒		
└	ceilDiv	Internal 🔒		
└	mulDiv	Internal 🔒		
└	mulDiv	Internal 🔒		
└	sqrt	Internal 🔒		
└	sqrt	Internal 🔒		
└	log2	Internal 🔒		

└	log2	Internal 🔒		
└	log10	Internal 🔒		
└	log10	Internal 🔒		
└	log256	Internal 🔒		
└	log256	Internal 🔒		
Staking	Implementation	Ownable		
└	<Constructor>	Public ❗	🛑	NO ❗
└	createStake	Public ❗	🛑	NO ❗
└	unStake	Public ❗	🛑	NO ❗
└	getInvestorRewards	Internal 🔒		
└	validateStakingPeriod	Internal 🔒		
└	getStakingPeriodInNumbers	Internal 🔒		
└	stakeOf	Public ❗		NO ❗
└	stakingPeriodOf	Public ❗		NO ❗
└	getDailyRewards	Public ❗		NO ❗
└	isStakeholder	Internal 🔒		
└	addStakeholder	Internal 🔒	🛑	
└	removeStakeholder	Internal 🔒	🛑	
└	withdrawStuckETh	External ❗	🛑	onlyOwner
└	removeStuckToken	External ❗	🛑	onlyOwner
└	getTotalRewards	Public ❗		NO ❗
└	setApyPercentage	Public ❗	🛑	onlyOwner
└	remainingTokens	Public ❗		NO ❗

Audit Results

Genolix DNA Innovation's Staking Contract does not contain any severe issues or risks. The security of the smart contract was tested by 0xSafe using static, automated, and manual analysis. The

AUDIT PASSED

Note:
Please check the disclaimer below and note the audit makes no statements or warranties on the business model, investment attractiveness, or code sustainability of this project. The security audit report is provided for the only contract mentioned in this report.

Disclaimer

0xSafe.io provides contract auditing, KYC, development, and launch services for blockchain projects. The purpose of the security audit is to analyze the on-chain smart contract source code and to provide an easy-to-understand assessment of the crypto project and the smart contract. **0xSafe.io provides information as is.**

DISCLAIMER: By reading this report or any part of it, you agree to the terms of this disclaimer. If you do not agree to the terms, then please immediately cease reading this report, and delete and destroy any and all copies of this report downloaded and/or printed by you. This report is provided for information purposes only and on a non-reliance basis and does not constitute investment advice. No one shall have any right to rely on the report or its contents, and 0xSafe.io and its affiliates (including holding companies, shareholders, subsidiaries, employees, directors, officers, and other representatives) (0xSafe.io) owes no duty of care towards you or any other person, nor does 0xSafe.io make any warranty or representation to any person on the accuracy or completeness of the report. The report is provided "as is", without any conditions, warranties, or other terms of any kind except as set out in this disclaimer, and 0xSafe.io hereby excludes all representations, warranties, conditions, and other terms (including, without limitation, the warranties implied by law of satisfactory quality, fitness for purpose and the use of reasonable care and skill) which, but for this clause, might have effect in relation to the report. Except and only to the extent that it is prohibited by law, 0xSafe.io hereby excludes all liability and responsibility, and neither you nor any other person shall have any claim against 0xSafe.io, for any amount or kind of loss or damage that may result to you or any other person (including without limitation, any direct, indirect, special, punitive, consequential or pure economic loss or damages, or any loss of income, profits, goodwill, data, contracts, use of money, or business interruption, and whether in delict, tort (including without limitation negligence), contract, breach of statutory duty, misrepresentation (whether innocent or negligent) or otherwise under any claim of any nature whatsoever in any jurisdiction) in any way arising from or connected with this report and the use, inability to use or the results of the use of this report, and any reliance on this report.

This report should not be considered as an endorsement or disapproval of any project or team. The information provided in this report does not constitute investment advice, financial advice, trading advice, or any other sort of advice and you should not treat any of the report's content as such. Conduct your own due diligence and consult your financial advisor before making any investment decisions.

https://0xsafe.io