



CFG NINJA AUDITS

Security Assessment

Farmarok Token

November 22, 2022



Table of Contents

1 Assessment Summary

2 Technical Findings Summary

3 Project Overview

3.1 Token Summary

3.2 Risk Analysis Summary

3.3 Main Contract Assessed

4 Smart Contract Risk Checks

4.1 Mint Check

4.2 Fees Check

4.3 Blacklist Check

4.4 MaxTx Check

4.5 Pause Trade Check

5 Contract Ownership

6 Liquidity Ownership

7 KYC Check

8 Smart Contract Vulnerability Checks

8.1 Smart Contract Vulnerability Details

8.2 Smart Contract Inheritance Details

8.3 Smart Contract Privileged Functions

9 Assessment Results and Notes(Important)

10 Social Media Check(Informational)

11 Technical Findings Details

12 Disclaimer



Assessment Summary

This report has been prepared for Farmarok Token on the Binance network. CFGNINJA provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.
- Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders
- Thorough line-by-line manual review of the entire codebase by industry experts.








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	0	0	0
 Major	1	0	1
 Medium	0	0	0
 Minor	2	2	0
 Informational	1	1	0
Total	4	4	0



Project Overview

Token Summary

Parameter	Result
Address	0xDD451Fb4b6359e2d669675E1DC974604B7bCe9dC
Name	Farmarok
Token Tracker	Farmarok (FROK)
Decimals	18
Supply	1,000,000,000
Platform	Binance
compiler	v0.8.17+commit.8df45f5f
Contract Name	Farmarok
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://bscscan.com/address/0xDD451Fb4b6359e2d669675E1DC974604B7bCe9dC
Payment Tx	0xd99dcdabc7d7d56418079c16e5256212dd64645131bfc21542a a2690543a9d72d



Project Overview

Risk Analysis Summary

Parameter	Result
Buy Tax	5%
Sale Tax	5%
Is honeypot?	Clean
Can edit tax?	No
Is anti whale?	No
Is blacklisted?	No
Is whitelisted?	No
Holders	Clean
Confidence Level	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.



Main Contract Assessed Contract Name

Name	Contract	Live
Farmarok	0xDD451Fb4b6359e2d669675E1DC974604B7bCe9dC	Yes

TestNet Contract Assessed Contract Name

Name	Contract	Live
Farmarok	0x66A3402f7F3180FA9e76356048F4F2dED31365bd	Yes

Solidity Code Provided

SolID	File Sha-1	FileName
Farmarok	418953edf233e3de3659aea578ee33fb9306ff4e	Farmarok.sol



Mint Check

The project owners of Farmarok do not have a mint function in the contract, owner cannot mint tokens after initial deploy.

The Project has a Total Supply of 1,000,000,000 and cannot mint any more than the Max Supply.

Mint Notes:

Auditor Notes: No Mint detected, contract use Initialize as function to split the amount between 2 wallets.

Project Owner Notes:



Fees Check

The project owners of Farmarok do not have the ability to set fees higher than 25% .

The team May have fees defined; however, they can't set those fees higher than 25% or may not be able to configure the same.

Tax Fee Notes:

Auditor Notes: The contract currently has 5% buy and 5% sale taxes, and cannot be set higher. 2.5% for Development and 2.5% for Lottery.

Project Owner Notes:

Fees Can Be Changed up to a maximum of 25%



Blacklist Check

The project owners of Farmarok do not have a blacklist function their contract.

The Project allow owners to transfer their tokens without any restrictions.

Token owner cannot blacklist the contract: Malicious or compromised owners can trap contracts relying on tokens with a blacklist.

Blacklist Notes:

Auditor Notes:

Project Owner Notes: undefined



MaxTx Check

The Project Owners of Farmarok cannot set max tx amount

The Team allows any investors to swap, transfer or sell their total amount if needed.

MaxTX Notes:

Auditor Notes:

Project Owner Notes:

Project Has No MaxTX



Pause Trade Check

The Project Owners of Farmarok don't have the ability to stop or pause trading.

The Team has done a great job to avoid stop trading, and investors has the ability to trade at any given time without any problems

Pause Trade Notes:

Auditor Notes: There is an Enable Trade but not a Pause Trade.

Project Owner Notes:

Owner can't pause trading



Contract Ownership

The contract ownership of Farmarok is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible ownable functions that may alter the state of the protocol.

The current owner is the address
0x73e191a0ed92e86a3ed426a8d8f000af9c1cd289
which can be viewed:
[HERE](#)

The owner wallet has the power to call the functions displayed on the privileged functions chart below, if the owner's wallet is compromised, they could exploit these privileges.

We recommend the team renounce ownership at the right time, if possible, or gradually migrate to a timelock with governing functionalities regarding transparency and safety considerations.

We recommend the team use a Multisignature Wallet if the contract is not going to be renounced; this will give the team more control over the contract.



Liquidity Ownership

The token does not have liquidity at the moment of the audit, block 22737936

If liquidity is unlocked, then the token developers can do what is infamously known as 'rugpull'. Once investors start buying token from the exchange, the liquidity pool will accumulate more and more coins of established value (e.g., ETH or BNB or Tether). This is because investors are basically sending these tokens of value to the exchange, to get the new token. Developers can withdraw this liquidity from the exchange, cash in all the value and run off with it. Liquidity is locked by renouncing the ownership of liquidity pool (LP) tokens for a fixed time period, by sending them to a time-lock smart contract. Without ownership of LP tokens, developers cannot get liquidity pool funds back. This provides confidence to the investors that the token developers will not run away with the liquidity money. It is now a standard practice that all token developers follow, and this is what really differentiates a scam coin from a real one.

[Read More](#)



KYC Information

The Project Owners of Farmarok have provided KYC Documentation.

KYC Certificated can be found on the Following:
KYC Data

KYC Information Notes:

Auditor Notes:

Project Owner Notes:



Smart Contract Vulnerability Checks

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	Farmarok.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	Farmarok.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	Farmarok.sol	L: 0 C: 0
SWC-103	Pass	A floating pragma is set.	Farmarok.sol	L: 0 C: 0
SWC-104	Pass	Unchecked Call Return Value.	Farmarok.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	Farmarok.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	Farmarok.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	Farmarok.sol	L: 0 C: 0
SWC-108	Pass	State variable visibility is not set..	Farmarok.sol	L: 0 C: 0
SWC-109	Pass	Uninitialized Storage Pointer.	Farmarok.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	Farmarok.sol	L: 0 C: 0
SWC-111	Pass	Use of Deprecated Solidity Functions.	Farmarok.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	Farmarok.sol	L: 0 C: 0



ID	Severity	Name	File	location
SWC-113	Pass	Multiple calls are executed in the same transaction.	Farmarok.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	Farmarok.sol	L: 0 C: 0
SWC-115	Pass	Authorization through tx.origin.	Farmarok.sol	L: 0 C: 0
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	Farmarok.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	Farmarok.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	Farmarok.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	Farmarok.sol	L: 0 C: 0
SWC-120	Pass	Potential use of block.number as source of randomness.	Farmarok.sol	L: 0 C: 0
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	Farmarok.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	Farmarok.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	Farmarok.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	Farmarok.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	Farmarok.sol	L: 0 C: 0
SWC-126	Pass	Insufficient Gas Griefing.	Farmarok.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	Farmarok.sol	L: 0 C: 0



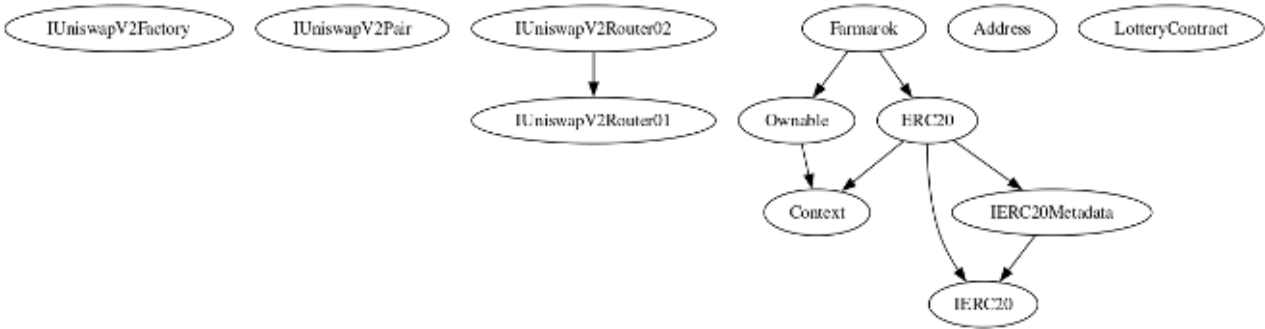
ID	Severity	Name	File	location
SWC-128	Pass	DoS With Block Gas Limit.	Farmarok.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	Farmarok.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U +202E).	Farmarok.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	Farmarok.sol	L: 0 C: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



Privileged Functions (onlyOwner)

Function Name	Parameters	Visibility
renounceOwnership		public
transferOwnership	newOwner (address)	public
claimStuckTokens	token (address)	external
excludeFromFees	account (address), excluded (bool)	external
changeDevelopment Wallet	_developmentWalle t (address)	external
changeLotteryContr act	_lotteryContract (address)	external
setSwapTokensAtAm ount	newAmount (uint256)	external
enableTrade		external





Smart Contract Advance Checks

ID	Severity	Name	Result	Status
FROK-01	Minor	Potential Sandwich Attacks.	Fail	In-Review
FROK-02	Informational	Function Visibility Optimization	Fail	In-Review
FROK-03	Minor	Lack of Input Validation.	Pass	Not Found
FROK-04	Major	Centralized Risk In addLiquidity.	Pass	Not Found
FROK-05	Major	Missing Event Emission.	Pass	Not Found
FROK-06	Minor	Conformance with Solidity Naming Conventions.	Pass	Not Found
FROK-07	Minor	State Variables could be Declared Constant.	Fail	In-Review
FROK-08	Major	Dead Code Elimination.	Pass	Not Found
FROK-09	Major	Third Party Dependencies.	Pass	Not Found
FROK-10	Major	Initial Token Distribution.	Fail	Resolved
FROK-11	Informational	excludeFromDividends can be called and is missing an Include Function to revert action.	Pass	Not Found
FROK-12	Major	Centralization Risks In The X Role	Pass	Not Found
FROK-13	Informational	Extra Gas Cost For User..	Pass	Not Found
FROK-14	Informational	Unnecessary Use Of SafeMath	Pass	Not Found



FROK-01 | Potential Sandwich Attacks.

Category	Severity	Location	Status
Security	 Minor	Farmarok.sol: 882,13	 In-Review

Description

A sandwich attack might happen when an attacker observes a transaction swapping tokens or adding liquidity without setting restrictions on slippage or minimum output amount. The attacker can manipulate the exchange rate by frontrunning (before the transaction being attacked) a transaction to purchase one of the assets and make profits by back running (after the transaction being attacked) a transaction to sell the asset. The following functions are called without setting restrictions on slippage or minimum output amount, so transactions triggering these functions are vulnerable to sandwich attacks, especially when the input amount is large:

- swapExactTokensForETHSupportingFeeOnTransferTokens()
- addLiquidityETH()

Remediation



We recommend setting reasonable minimum output amounts, instead of 0, based on token prices when calling the aforementioned functions.

References:

What Are Sandwich Attacks in DeFi – and How Can You Avoid Them?.



FROK-02 | Function Visibility Optimization.

Category	Severity	Location	Status
Gas Optimization	 Informational	Farmarok.sol: 686,21, 687,21	 In-Review

Description

The following functions are declared as public and are not invoked in any of the contracts contained within the projects scope:

Function Name	Parameters	Visibility
_totalFeesOnBuy		private
_totalFeesOnSell		private

The functions that are never called internally within the contract should have external visibility

Remediation



We advise that the function's visibility specifiers are set to external, and the array-based arguments change their data location from memory to calldata, optimizing the gas cost of the function.

References:

external vs public best practices.



FROK-07 | State Variables could be Declared Constant.

Category	Severity	Location	Status
Coding Style	 Minor	Farmarok.sol: 693,21	 In-Review

Description

Constant state variables should be declared constant to save gas.

```
DEAD  
BUSD
```



Remediation

Add the constant attribute to state variables that never changes.

<https://docs.soliditylang.org/en/latest/contracts.html#constant-state-variables>



FROK-10 | Initial Token Distribution.

Category	Severity	Location	Status
Centralization / Privilege	 Major	Farmarok.sol: 755,15	 Resolved

Description

All of the Farmarok tokens are sent to the contract deployer when deploying the contract. This could be a centralization risk as the deployer can distribute tokens without obtaining the consensus of the community.

Remediation

We recommend the team to be transparent regarding the initial token distribution process, and the team shall make enough efforts to restrict the access of the private key.

Project Action

Partial Token Distribution goes to the msg.sender, and rest to Owner.
89.5000%/10.5000%



Social Media Checks

Social Media	URL	Result
Twitter	https://twitter.com/farmarok_cash?s=21&t=teoew9Q8X6lxSzAh6gULIQ	Pass
Other		Fail
Website	http://farmarok.cash	Pass
Telegram	https://t.me/Farmarok_Cash	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	90/100
Auditor Score	94/100
Review by Section	Score
Manual Scan Score	33/35
SWC Scan Score	37 /37
Advance Check Score	20 /28

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project must 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.



Assessment Results

Important Notes:

- This contract is done by a SAFU Developer, no error or formatting issues found.
- Contract have 2.5% buy and 2.5% Sale Tax and cannot be changed.
- Security Vulnerabilities have not been found and no major issues during the advance check and testing of the contract.
- No high-risk Exploits/Vulnerabilities Were Found in the Source Code.

Audit Passed



Appendix

Finding Categories

Centralization / Privilege

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

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM 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 how block.timestamp works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being 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 may result in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the 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 requirements on the input variables than a setter function.

Coding Best Practices

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



Disclaimer

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