



# CFG NINJA AUDITS

Security Assessment

**GROK Token**

November 27, 2023

Audit Status: Pass

Audit Edition: Advance














POWERED BY  
**BLADE POOL**

# Risk Analysis

















## Classifications of Manual Risk Results

Classification	Description
 Critical	Danger or Potential Problems.
 Major	Be Careful or Fail test.
 Minor	Pass, Not-Detected or Safe Item.
 Informational	Function Detected

## Manual Code Review Risk Results

Contract Priviledge	Description
 Buy Tax	5
 Sale Tax	5
 Cannot Buy	Pass
 Cannot Sale	Pass
 Max Tax	5
 Modify Tax	Not-Detected
 Fee Check	Pass
 Is Honeypot?	Not detected
 Trading Cooldown	Not Detected
 Can Pause Trade?	Fail
 Pause Transfer?	Resolved



Contract Priviledge	Description
 Max Tx?	Pass
 Is Anti Whale?	Resolved
 Is Anti Bot?	Not Detected
 Is Blacklist?	Resolved
 Blacklist Check	Fail
 is Whitelist?	Resolved
 Can Mint?	Pass
 Is Proxy?	Not Detected
 Can Take Ownership?	Not detected
 Hidden Owner?	Not detected
 Owner	No
 Self Destruct?	Not Detected
 Other?	Not detected
 Other?	Not detected
 Holders	23,384
 Auditor Confidence	High

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.



# Project Overview

## Token Summary

Parameter	Result
Address	0xC53ca0d56C420E8f913316e84d2c492eDe99c61e
Name	GROK
Token Tracker	GROK (GROK)
Decimals	18
Supply	1,000,000,000,000
Platform	Binance Smart Chain
compiler	v0.8.4+commit.c7e474f2
Contract Name	FatToken
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	<a href="https://bscscan.com/address/0xC53ca0d56C420E8f913316e84d2c492eDe99c61e#code">https://bscscan.com/address/0xC53ca0d56C420E8f913316e84d2c492eDe99c61e#code</a>
Payment Tx	0x68c33da5f2400c4da1cee9fc6580b94be0b0eb16771cd724c6870aaafbba5038



## Main Contract Assessed

### Contract Name

Name	Contract	Live
GROK	0xC53ca0d56C420E8f913316e84d2c492eDe99c61e	Yes

## TestNet Contract Assessed

### Contract Name

Name	Contract	Live
GROK	0xb8e9a694920aC1E2c837BC9a16e9791193a89E1c	Yes

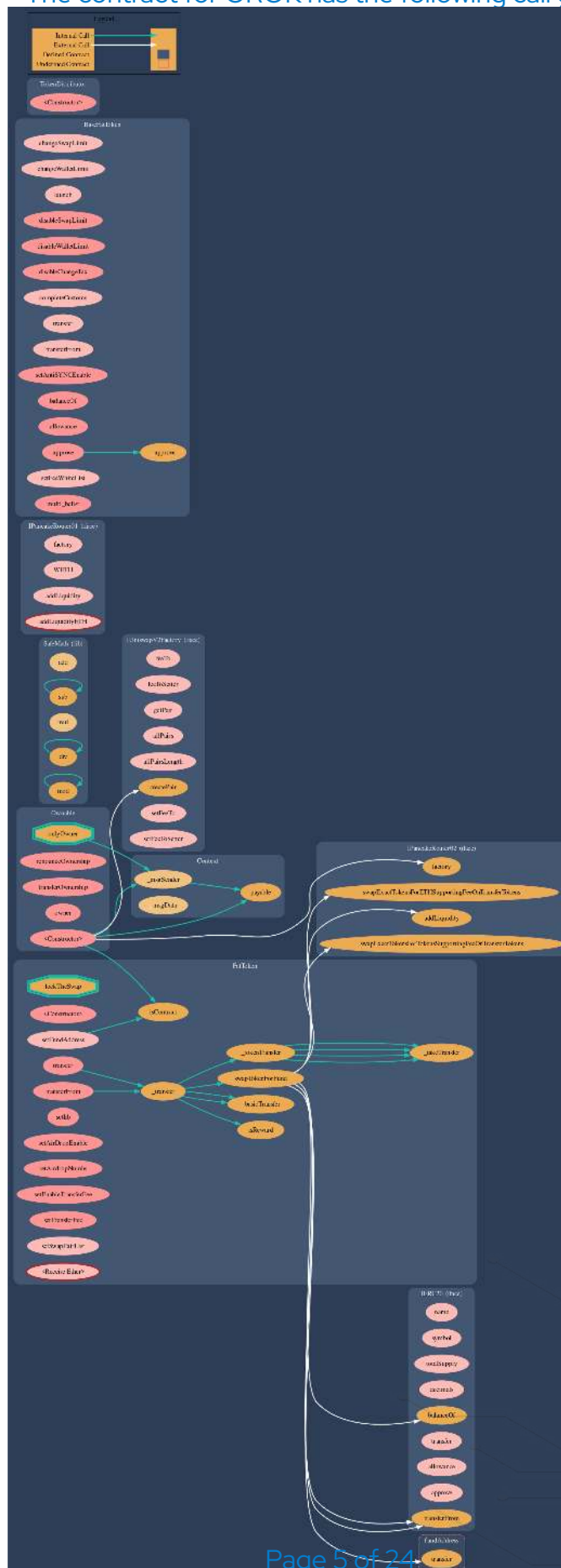
## Solidity Code Provided

SolID	File Sha-1	FileName
GROK	2852d892af29be775df00cb7970a93a8cfa41514	GROK.sol
GROK		
GROK		
GROK		



# Call Graph

The contract for GROK has the following call graph structure.



# Smart Contract Vulnerability Checks

The Smart Contract Weakness Classification Registry (SWC Registry) is an implementation of the weakness classification scheme proposed in EIP-1470. It is loosely aligned to the terminologies and structure used in the Common Weakness Enumeration (CWE) while overlaying a wide range of weakness variants that are specific to smart contracts.

ID	Severity	Name	File	location
SWC-100	Pass	Function Default Visibility	GROK.sol	L: 0 C: 0
SWC-101	Pass	Integer Overflow and Underflow.	GROK.sol	L: 0 C: 0
SWC-102	Pass	Outdated Compiler Version file.	GROK.sol	L: 0 C: 0
SWC-103	Low	A floating pragma is set.	GROK.sol	L: 6 C: 0
SWC-104	Pass	Unchecked Call Return Value.	GROK.sol	L: 0 C: 0
SWC-105	Pass	Unprotected Ether Withdrawal.	GROK.sol	L: 0 C: 0
SWC-106	Pass	Unprotected SELFDESTRUCT Instruction	GROK.sol	L: 0 C: 0
SWC-107	Pass	Read of persistent state following external call.	GROK.sol	L: 0 C: 0
SWC-108	Low	State variable visibility is not set..	GROK.sol	L: 297 C: 12
SWC-109	Pass	Uninitialized Storage Pointer.	GROK.sol	L: 0 C: 0
SWC-110	Pass	Assert Violation.	GROK.sol	L: 0 C: 0





ID	Severity	Name	File	location
SWC-111	Pass	Use of Deprecated Solidity Functions.	GROK.sol	L: 0 C: 0
SWC-112	Pass	Delegate Call to Untrusted Callee.	GROK.sol	L: 0 C: 0
SWC-113	Pass	Multiple calls are executed in the same transaction.	GROK.sol	L: 0 C: 0
SWC-114	Pass	Transaction Order Dependence.	GROK.sol	L: 0 C: 0
SWC-115	Low	Authorization through tx.origin.	GROK.sol	L: 516 C: 22
SWC-116	Pass	A control flow decision is made based on The block.timestamp environment variable.	GROK.sol	L: 0 C: 0
SWC-117	Pass	Signature Malleability.	GROK.sol	L: 0 C: 0
SWC-118	Pass	Incorrect Constructor Name.	GROK.sol	L: 0 C: 0
SWC-119	Pass	Shadowing State Variables.	GROK.sol	L: 0 C: 0
SWC-120	Low	Potential use of block.number as source of randomness.	GROK.sol	L: 328 C: 26, L: 649 C: 20
SWC-121	Pass	Missing Protection against Signature Replay Attacks.	GROK.sol	L: 0 C: 0
SWC-122	Pass	Lack of Proper Signature Verification.	GROK.sol	L: 0 C: 0
SWC-123	Pass	Requirement Violation.	GROK.sol	L: 0 C: 0
SWC-124	Pass	Write to Arbitrary Storage Location.	GROK.sol	L: 0 C: 0
SWC-125	Pass	Incorrect Inheritance Order.	GROK.sol	L: 0 C: 0





ID	Severity	Name	File	location
SWC-126	Pass	Insufficient Gas Griefing.	GROK.sol	L: 0 C: 0
SWC-127	Pass	Arbitrary Jump with Function Type Variable.	GROK.sol	L: 0 C: 0
SWC-128	Pass	DoS With Block Gas Limit.	GROK.sol	L: 0 C: 0
SWC-129	Pass	Typographical Error.	GROK.sol	L: 0 C: 0
SWC-130	Pass	Right-To-Left-Override control character (U+202E).	GROK.sol	L: 0 C: 0
SWC-131	Pass	Presence of unused variables.	GROK.sol	L: 0 C: 0
SWC-132	Pass	Unexpected Ether balance.	GROK.sol	L: 0 C: 0
SWC-133	Pass	Hash Collisions with Multiple Variable Length Arguments.	GROK.sol	L: 0 C: 0
SWC-134	Pass	Message call with hardcoded gas amount.	GROK.sol	L: 0 C: 0
SWC-135	Pass	Code With No Effects (Irrelevant/Dead Code).	GROK.sol	L: 0 C: 0
SWC-136	Pass	Unencrypted Private Data On-Chain.	GROK.sol	L: 0 C: 0

We scan the contract for additional security issues using MYTHX and industry-standard security scanning tools.



# Smart Contract Vulnerability Details

## SWC-103 - Floating Pragma.

### CWE-664: Improper Control of a Resource Through its Lifetime.

#### References:

#### Description:

Contracts should be deployed with the same compiler version and flags that they have been tested with thoroughly. Locking the pragma helps to ensure that contracts do not accidentally get deployed using, for example, an outdated compiler version that might introduce bugs that affect the contract system negatively.

#### Remediation:

Lock the pragma version and also consider known bugs (<https://github.com/ethereum/solidity/releases>) for the compiler version that is chosen.

Pragma statements can be allowed to float when a contract is intended for consumption by other developers, as in the case with contracts in a library or EthPM package. Otherwise, the developer would need to manually update the pragma in order to compile locally.

#### References:

Ethereum Smart Contract Best Practices - Lock pragmas to specific compiler version.



# Smart Contract Vulnerability Details

## SWC-108 - State Variable Default Visibility

### CWE-710: Improper Adherence to Coding Standards

#### Description:

Labeling the visibility explicitly makes it easier to catch incorrect assumptions about who can access the variable.

#### Remediation:

Variables can be specified as being public, internal or private. Explicitly define visibility for all state variables.

#### References:

Ethereum Smart Contract Best Practices - Explicitly mark visibility in functions and state variables



# Smart Contract Vulnerability Details

## SWC-115 - Authorization through tx.origin

### CWE-477: Use of Obsolete Function

#### Description:

tx.origin is a global variable in Solidity which returns the address of the account that sent the transaction. Using the variable for authorization could make a contract vulnerable if an authorized account calls into a malicious contract. A call could be made to the vulnerable contract that passes the authorization check since tx.origin returns the original sender of the transaction which in this case is the authorized account.

#### Remediation:

tx.origin should not be used for authorization. Use msg.sender instead.

#### References:

Solidity Documentation - tx.origin

Ethereum Smart Contract Best Practices - Avoid using tx.origin

SigmaPrime - Visibility.



# Smart Contract Vulnerability Details

## SWC-120 - Weak Sources of Randomness from Chain Attributes

### CWE-330: Use of Insufficiently Random Values

#### Description:

Solidity allows for ambiguous naming of state variables when inheritance is used. Contract A with a variable x could inherit contract B that also has a state variable x defined. This would result in two separate versions of x, one of them being accessed from contract A and the other one from contract B. In more complex contract systems this condition could go unnoticed and subsequently lead to security issues.

Shadowing state variables can also occur within a single contract when there are multiple definitions on the contract and function level.

#### Remediation:

Using commitment scheme, e.g. RANDAO. Using external sources of randomness via oracles, e.g. Oraclize. Note that this approach requires trusting in oracle, thus it may be reasonable to use multiple oracles. Using Bitcoin block hashes, as they are more expensive to mine.

#### References:

How can I securely generate a random number in my smart contract?)

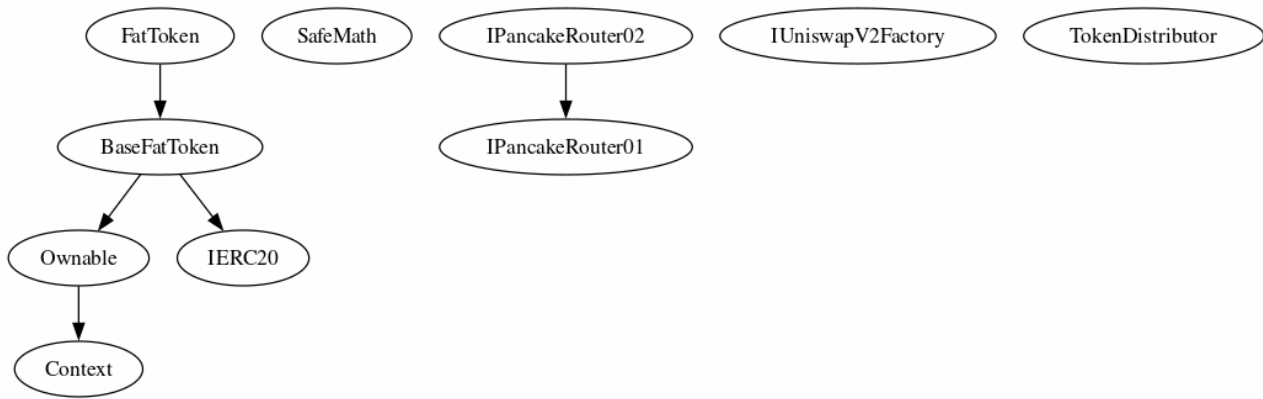
When can BLOCKHASH be safely used for a random number? When would it be unsafe?

The Run smart contract.



# Inheritance

The contract for GROK has the following inheritance structure.



# Smart Contract Advance Checks

ID	Severity	Name	Result	Status
GROK-01	Minor	Potential Sandwich Attacks.	Pass	Not-Found
GROK-02	Minor	Function Visibility Optimization	Pass	Not-Detected
GROK-03	Major	Lack of Input Validation.	Pass	Not-Detected
GROK-04	Major	Centralized Risk In addLiquidity.	Pass	Not-Detected
GROK-05	Major	Missing Event Emission.	Pass	Not-Detected
GROK-06	Minor	Conformance with Solidity Naming Conventions.	Pass	Not-Detected
GROK-07	Minor	State Variables could be Declared Constant.	Pass	Not-Found
GROK-08	Minor	Dead Code Elimination.	Pass	Not-Found
GROK-09	Major	Third Party Dependencies.	Pass	Not-Found
GROK-10	Major	Initial Token Distribution.	Pass	Not-Found
GROK-11	Major	Airdrop is present in code.	Fail	Resolved
GROK-12	Major	Centralization Risks In The X Role	Pass	Not-Found
GROK-13	Informational	Extra Gas Cost For User..	Pass	Not-Found
GROK-6	Minor	Unnecessary Use Of SafeMath	Pass	Not-Detected
GROK-15	Medium	Symbol Length Limitation due to Solidity Naming Standards.	Fail	Resolved







ID	Severity	Name	Result	Status
GROK-16	Meduium	Invalid collection of Taxes during Transfer.	Pass	Not-Detected
GROK-17	Informational	Conformance to numeric notation best practice.	Pass	Not-Found
GROK-18	Critical	Stop Transactions by using Enable Trade.	Fail	Resolved



# GROK-11 | Airdrop is present in code..

Category	Severity	Location	Status
Optimization	 Major	GROK.sol: 305,14	 Resolved

## Description

An airdrop function has been found in the code.



## Remediation

Its recommended that airdrop is separate from the core functions.

## Project Action



## GROK-15 | Symbol Length Limitation due to Solidity Naming Standards.

Category	Severity	Location	Status
Logical Issue	 Minor	GROK.sol: 7,9	 Not-Detected

### Description

The Symbol is one of the most important part of the identity of a project, as industry standard this usually match the leng of stock market traditions. The Symbol used in contract is too long, this can create issues for most Dapps including uniswap, pancakeSwap and Metamask.

The current character limit for metamask is 11 and will be increased overtime to 20 characters, however APIS like uniswap,pancakeswap and coinmarketcap may have issues readins such symbols.

### Remediation

We advise removing the limiting the symbol to more industry standard naming to avoid issues with dapps and others. is suggested to use between 3 to 4 characters for a project, however for a coin is recommended no more than seven.

### Project Action



Recommend limiting the amount of letters in the symbol to avoid issues.

#### References:

Increase Token Symbol Length - Metamask



## GROK-18 | Stop Transactions by using Enable Trade.

Category	Severity	Location	Status
Logical Issue	 Critical	GROK.sol: 469, 13	 Resolved

### Description

Enable Trade is present on the following contract and when combined with Exclude from fees it can be considered a whitelist process, this will allow anyone to trade before others and can represent an issue for the holders.

### Remediation






We recommend the project owner to carefully review this function and avoid problems when performing both actions.

### Project Action








# 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	1	0	0
 Major	1	0	0
 Medium	0	0	0
 Minor	1	0	0
 Informational	0	0	0
Total	3	0	0



# Social Media Checks

Social Media	URL	Result
Twitter	<a href="https://twitter.com/TOKEN204999">https://twitter.com/TOKEN204999</a>	Pass
Other	<a href="https://doc.groktoken.vip">https://doc.groktoken.vip</a> , <a href="https://coinmarketcap.com/currencies/grok-bsc/">https://coinmarketcap.com/currencies/grok-bsc/</a> , <a href="https://www.coingecko.com/en/coins/grok-4">https://www.coingecko.com/en/coins/grok-4</a> , <a href="https://www.bitmart.com/trade/zh-CN?symbol=%24GROK_USDT&amp;layout=pro">https://www.bitmart.com/trade/zh-CN?symbol=%24GROK_USDT&amp;layout=pro</a>	Pass
Website	<a href="https://www.grokbsc.xyz/">https://www.grokbsc.xyz/</a>	Pass
Telegram	<a href="https://t.me/GROKBSC8">https://t.me/GROKBSC8</a>	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	80/100
Auditor Score	86/100
Review by Section	Score
Manual Scan Score	30/53
SWC Scan Score	33 /37
Advance Check Score	17 /19

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.

## Audit Passed





## Assessment Results

### Important Notes:

- Contract is renounced.█
- No high-risk Exploits/Vulnerabilities Were Found in the Source Code.

**Auditor Score =86**  
**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

CFGNINJA has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocacy for the Project, and users relying on this report should not consider this as having any merit for financial advice in any shape, form, or nature. The contracts audited do not account for any economic developments that the Project in question may pursue, and the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude, and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are entirely free of exploits, bugs, vulnerabilities or deprecation of technologies.

All information provided in this report does not constitute financial or investment advice, nor should it be used to signal that any persons reading this report should invest their funds without sufficient individual due diligence, regardless of the findings presented. Information is provided 'as is, and CFGNINJA is under no covenant to audited completeness, accuracy, or solidity of the contracts. In no event will CFGNINJA or its partners, employees, agents, or parties related to the provision of this audit report be liable to any parties for, or lack thereof, decisions or actions with regards to the information provided in this audit report.

The assessment services provided by CFGNINJA are subject to dependencies and are under continuing development. You agree that your access or use, including but not limited to any services, reports, and materials, will be at your sole risk on an as-is, where-is, and as-available basis. Cryptographic tokens are emergent technologies with high levels of technical risk and uncertainty. The assessment reports could include false positives, negatives, and unpredictable results. The services may access, and depend upon, multiple layers of third parties.

