



Smart Contract Audit

FOR
GROK CEO

DATED : 10 January 2024



AUDIT SUMMARY

Project name – GROK CEO

Date: 10 January, 2024

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: **Passed with High Risk**

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	1	0	2	2
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

1- Manual Review:

A line by line code review has been performed by audit ace team.

2- BSC Test Network: All tests were conducted on the BSC Test network, and each test has a corresponding transaction attached to it. These tests can be found in the "Functional Tests" section of the report.

3- Slither :

The code has undergone static analysis using Slither.

Testnet version:

The tests were performed using the contract deployed on the BSC Testnet, which can be found at the following address:

<https://testnet.bscscan.com/address/0x5dedcd8b43e335d30ddfeb968cc3c59ccb729968#code>



Token Information

Token Address:

0x1c64BF31B6F0B93aB4b8977cd4562207Ef2C2B77

Name: GROK CEO

Symbol: GROKCEO

Decimals: 9

Network: BscScan

Token Type: BEP-20

Owner:

0xa860467495a5df4d63D86f6ccA216eBF7ab45C31

Deployer:

0xa860467495a5df4d63D86f6ccA216eBF7ab45C31

Token Supply: 420000000

Checksum: Ae1c3a4fbb6e83e8393a57617b5a5b23

Testnet:

<https://testnet.bscscan.com/address/0x5dedcd8b43e335d30ddfeb968cc3c59ccb729968#code>



TOKEN OVERVIEW

Buy Fee: 0-0%

Sell Fee: 0-0%

Transfer Fee: 0-0%

Fee Privilege: Owner

Ownership: Owned

Minting: None

Max Tx: Yes

Blacklist: No



AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.
 - Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.
 - Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.
 - Test coverage analysis determines whether the test cases are covering the code and how much code is exercised when we run the test cases.
 - Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.
 - Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.
-



VULNERABILITY CHECKLIST

- | | |
|--|---|
|  Return values of low-level calls |  Gasless Send |
|  Private modifier |  Using block.timestamp |
|  Multiple Sends |  Re-entrancy |
|  Using Suicide |  Tautology or contradiction |
|  Gas Limitand Loops |  Timestamp Dependence |
|  Address hardcoded |  Revert/require functions |
|  Exception Disorder |  Use of tx.origin |
|  Using inline assembly |  Integer overflow/underflow |
|  Divide before multiply |  Dangerous strict equalities |
|  Missing Zero Address Validation |  Using SHA3 |
|  Compiler version not fixed |  Using throw |
-



STATIC ANALYSIS

```
INFO:Detectors:
GROKCEO.distributeTaxes(uint256) (GROKCEO.sol#971-1000) performs a multiplication on the result of a division:
- buybackTaxRatio = (taxRates.buyback * 100) / totalTaxRate (GROKCEO.sol#978)
- buybackTokens = (buybackTaxRatio * contractTokenBalance) / 100 (GROKCEO.sol#981)
GROKCEO.distributeTaxes(uint256) (GROKCEO.sol#971-1000) performs a multiplication on the result of a division:
- marketingTaxRatio = (taxRates.marketing * 100) / totalTaxRate (GROKCEO.sol#976)
- marketingEth = (remainingEth * marketingTaxRatio) / 100 (GROKCEO.sol#991)
GROKCEO.distributeTaxes(uint256) (GROKCEO.sol#971-1000) performs a multiplication on the result of a division:
- developingTaxRatio = (taxRates.developing * 100) / totalTaxRate (GROKCEO.sol#979)
- developingEth = (remainingEth * developingTaxRatio) / 100 (GROKCEO.sol#992)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#divide-before-multiply
INFO:Detectors:
GROKCEO.changeSwapTokenAtAmount(uint256) (GROKCEO.sol#1064-1071) should emit an event for:
- swapTokenAtAmount = newAmount (GROKCEO.sol#1070)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-events-arithmetic
INFO:Detectors:
GROKCEO.changeMarketingWallet(address)._marketing (GROKCEO.sol#1002) lacks a zero-check on :
- marketing = _marketing (GROKCEO.sol#1003)
GROKCEO.changeDeveloperWallet(address)._developer (GROKCEO.sol#1006) lacks a zero-check on :
- developing = _developer (GROKCEO.sol#1007)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-zero-address-validation
INFO:Detectors:
Reentrancy in GROKCEO._transfer(address,address,uint256) (GROKCEO.sol#937-969):
  External calls:
  - distributeTaxes(contractTokenBalance) (GROKCEO.sol#955)
  - (success) = address(_to).call{value: amount}() (GROKCEO.sol#1017)
  - router.swapExactTokensForETHSupportingFeeOnTransferTokens(tokenAmount,0,path,address(this),block.timestamp) (GROKCEO.sol#1045-1053)
  External calls sending eth:
  - distributeTaxes(contractTokenBalance) (GROKCEO.sol#955)
  - (success) = address(_to).call{value: amount}() (GROKCEO.sol#1017)
  Event emitted after the call(s):
  - Transfer(from,to,value) (GROKCEO.sol#669)
  - super._transfer(sender,recipient,transferAmount) (GROKCEO.sol#967)
  - Transfer(from,to,value) (GROKCEO.sol#669)
  - super._transfer(sender,address(this),taxAmount) (GROKCEO.sol#966)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-3
```

```
INFO:Detectors:
Context._contextSuffixLength() (GROKCEO.sol#212-214) is never used and should be removed
Context._msgData() (GROKCEO.sol#208-210) is never used and should be removed
ERC20._burn(address,uint256) (GROKCEO.sol#695-700) is never used and should be removed
ReentrancyGuard._reentrancyGuardEntered() (GROKCEO.sol#855-857) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code
INFO:Detectors:
Pragma version^0.8.19 (GROKCEO.sol#14) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
Pragma version^0.8.19 (GROKCEO.sol#191) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
Pragma version^0.8.19 (GROKCEO.sol#221) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
Pragma version^0.8.19 (GROKCEO.sol#324) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
Pragma version^0.8.19 (GROKCEO.sol#416) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
Pragma version^0.8.19 (GROKCEO.sol#442) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
Pragma version^0.8.19 (GROKCEO.sol#791) necessitates a version too recent to be trusted. Consider deploying with 0.8.18.
solc-0.8.19 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity
INFO:Detectors:
Low level call in GROKCEO.sendBNB(address,uint256) (GROKCEO.sol#1010-1020):
- (success) = address(_to).call{value: amount}() (GROKCEO.sol#1017)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls
INFO:Detectors:
Function IRouter.WETH() (GROKCEO.sol#802) is not in mixedCase
Parameter GROKCEO.changeMarketingWallet(address)._marketing (GROKCEO.sol#1002) is not in mixedCase
Parameter GROKCEO.changeDeveloperWallet(address)._developer (GROKCEO.sol#1006) is not in mixedCase
Parameter GROKCEO.sendBNB(address,uint256)._to (GROKCEO.sol#1010) is not in mixedCase
Function GROKCEO.AddExemptFee(address) (GROKCEO.sol#1056-1058) is not in mixedCase
Parameter GROKCEO.AddExemptFee(address)._address (GROKCEO.sol#1056) is not in mixedCase
Function GROKCEO.RemoveExemptFee(address) (GROKCEO.sol#1060-1062) is not in mixedCase
Parameter GROKCEO.RemoveExemptFee(address)._address (GROKCEO.sol#1060) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Detectors:
GROKCEO.feeDenominator (GROKCEO.sol#873) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
```




STATIC ANALYSIS



FUNCTIONAL TESTING

1- Approve (passed):

<https://testnet.bscscan.com/tx/0x93e96e05ab6a1a187b183a64c63eae1678c586aed513aaa0f5bf43c180f978db>

2- Add Exempt Fee (passed):

<https://testnet.bscscan.com/tx/0x092fd2a779c561253e05ecba6ceaa51fa9542d640959ba92e8e5ab7a0f699c08>

3- Remove Exempt Fee (passed):

<https://testnet.bscscan.com/tx/0xe883e7d3277dd26d7735009539f53a1b7f28004c8406cd411daf05e2636db364>

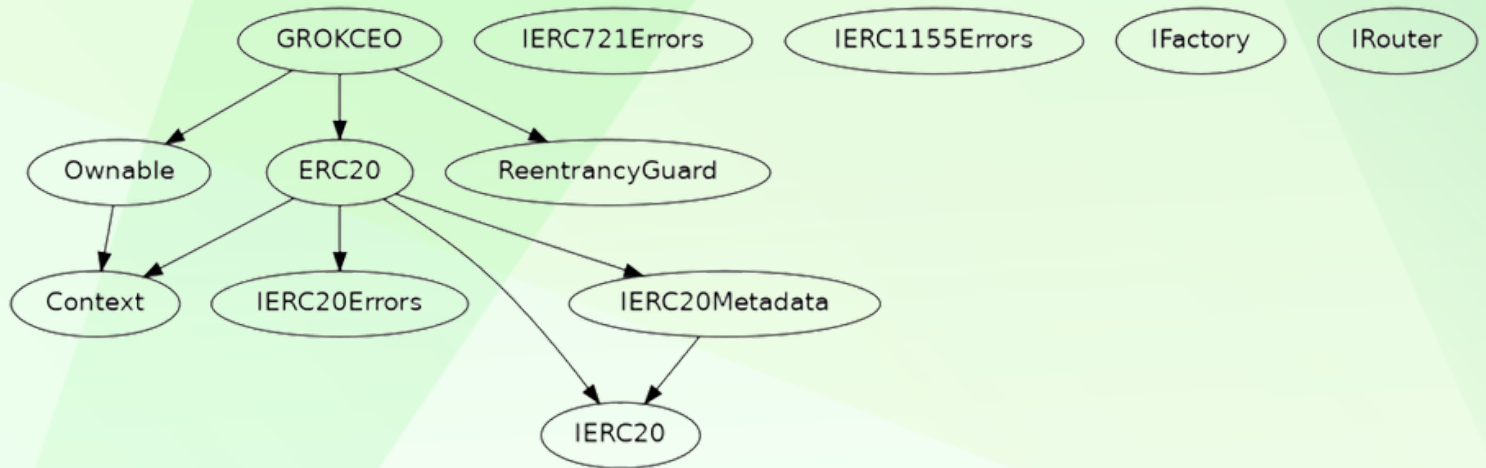
4- Set Trading Enabled (passed):

<https://testnet.bscscan.com/tx/0xa73b977bca06665f1cf77096dd46d0340c46bd6bbf0c589a3bab6577576a3947>

5- Update Exempt Fee (passed):

<https://testnet.bscscan.com/tx/0xe3841f18d8912f7bb27fed6077f9b7e02367f4c05a67b3f1c8d2a84fbc02fdf7>

INHERITANCE TREE





POINTS TO NOTE

- Whitelist to transfer without enabling trades
- Enabling trades



CLASSIFICATION OF RISK

Severity

Description

◆ Critical	These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.
◆ High-Risk	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.
◆ Medium-Risk	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.
◆ Low-Risk	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.
◆ Gas Optimization /Suggestion	A vulnerability that has an informational character but is not affecting any of the code.

Findings

Severity

Found

◆ Critical	0
◆ High-Risk	1
◆ Medium-Risk	0
◆ Low-Risk	2
◆ Gas Optimization / Suggestions	2

MANUAL TESTING

Centralization - Enabling Trades

Severity: High

Function: setTradingEnable

Overview:

The **setTradingEnable** function permits only the contract owner to activate trading capabilities. Until this function is executed, no investors can buy, sell, or transfer their tokens. This places a high degree of control and centralization in the hands of the contract owner.

```
function setTradingEnabled() external onlyOwner {  
    require(!tradingEnabled, "Trade is already enabled");  
    tradingEnabled = true;  
}
```

Suggestion:

To reduce centralization and potential manipulation, consider one of the following approaches:

1. Automatically enable trading after a specified condition, such as the completion of a presale, is met. bad faith actions by the original owner.

MANUAL TESTING

2.If manual activation is still desired, consider transferring the ownership of the contract to a trustworthy, third-party entity like a certified "PinkSale Safu" developer. This can provide investors with more confidence in the eventual activation of trading capabilities, mitigating concerns of potential

MANUAL TESTING

Centralization - Missing Events

Severity: Low

Subject: Missing Events

Status: Open

Overview:

They serve as a mechanism for emitting and recording data onto the blockchain, making it transparent and easily accessible.

```
function changeMarketingWallet(address _marketing)
external onlyOwner {
    marketing = _marketing;
}
function changeDeveloperWallet(address _developer)
external onlyOwner {
    developing = _developer;
}
```




MANUAL TESTING

```
function setAutomatedMarketMakerPair(address
lpPair, bool value)
external
onlyOwner
{
require(
pair != lpPair,
"The pair cannot be removed from
automatedMarketMakerPairs"
);

_setAutomatedMarketMakerPair(pair, value);
}
function changeSwapTokenAtAmount(uint256
newAmount) external onlyOwner {
require(
newAmount > totalSupply() / 100_000 &&
newAmount < (totalSupply() / 100),
"Amount should be greater than 1 and less than 1% of
total supply"
);
swapTokenAtAmount = newAmount;
}
```

MANUAL TESTING

Centralization - Missing Zero Address

Severity: Low

Status: Open

Overview:

Functions can take a zero address as a parameter (0x00000...). If a function parameter of address type is not properly validated by checking for zero addresses, there could be serious consequences for the contract's functionality.

```
function changeMarketingWallet(address _marketing)
external onlyOwner {
    marketing = _marketing;
}
function changeDeveloperWallet(address _developer)
external onlyOwner {
    developing = _developer;
}
```

Suggestion:

It is suggested that the address should not be zero or dead.



MANUAL TESTING

Optimization

Severity: Optimization

Subject: Remove unused code.

Status: Open

Overview:

Unused variables are allowed in Solidity, and they do not pose a direct security issue. It is the best practice, though to avoid them.

```
function _msgData() internal view virtual returns (bytes  
memory) {  
    this;  
    return msg.data;  
}
```

MANUAL TESTING

Optimization

Severity: Informational

Subject: Floating Pragma Solidity version

Status: Open

Overview:

It is considered best practice to pick one compiler version and stick with it. With a floating pragma, contracts may accidentally be deployed using an outdated.

```
pragma solidity ^0.8.19;
```

Suggestion:

Adding the latest constant version of solidity is recommended, as this prevents the unintentional deployment of a contract with an outdated compiler that contains unresolved bugs.



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