



Smart Contract Audit

FOR

KnowieGTX

DATED : 11 MAR 23'



AUDIT SUMMARY

Project name – KnowieGTX

Date: 11 March, 2023

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

Audit Status: **Passed**(Contract developed by Pinksale Safu Dev)

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	1	0	0	0
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- Goerli network:

all tests were done on Goerli network, each test has its transaction has attached to it.

3- Slither : Static Analysis

Testnet Link: all tests were done using this contract, tests are done on BSC Testnet

<https://testnet.bscscan.com/address/0x7Da4D12b674bcB23e20d7fE018d7cb898344f982#code>



Token Information

Token Name : KnowieGTX

Token Symbol: KGTX

Decimals: 18

Token Supply: 100,000,000

Token Address: 0x198599582a80d4f71ce3AAAf2e60d8726575dFC8

Checksum:

2d7c64a76f5f92f97d4f45084c7d0c31c350a1a2

Owner: 0xb386b17eaaeb37dd346703687fbd8314bf2f1d98



TOKEN OVERVIEW

Fees:

Buy Fees: 0%

Sell Fees: 0%

Transfer Fees: 0%

Fees Privilege: Owner

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: None



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 |
-



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.

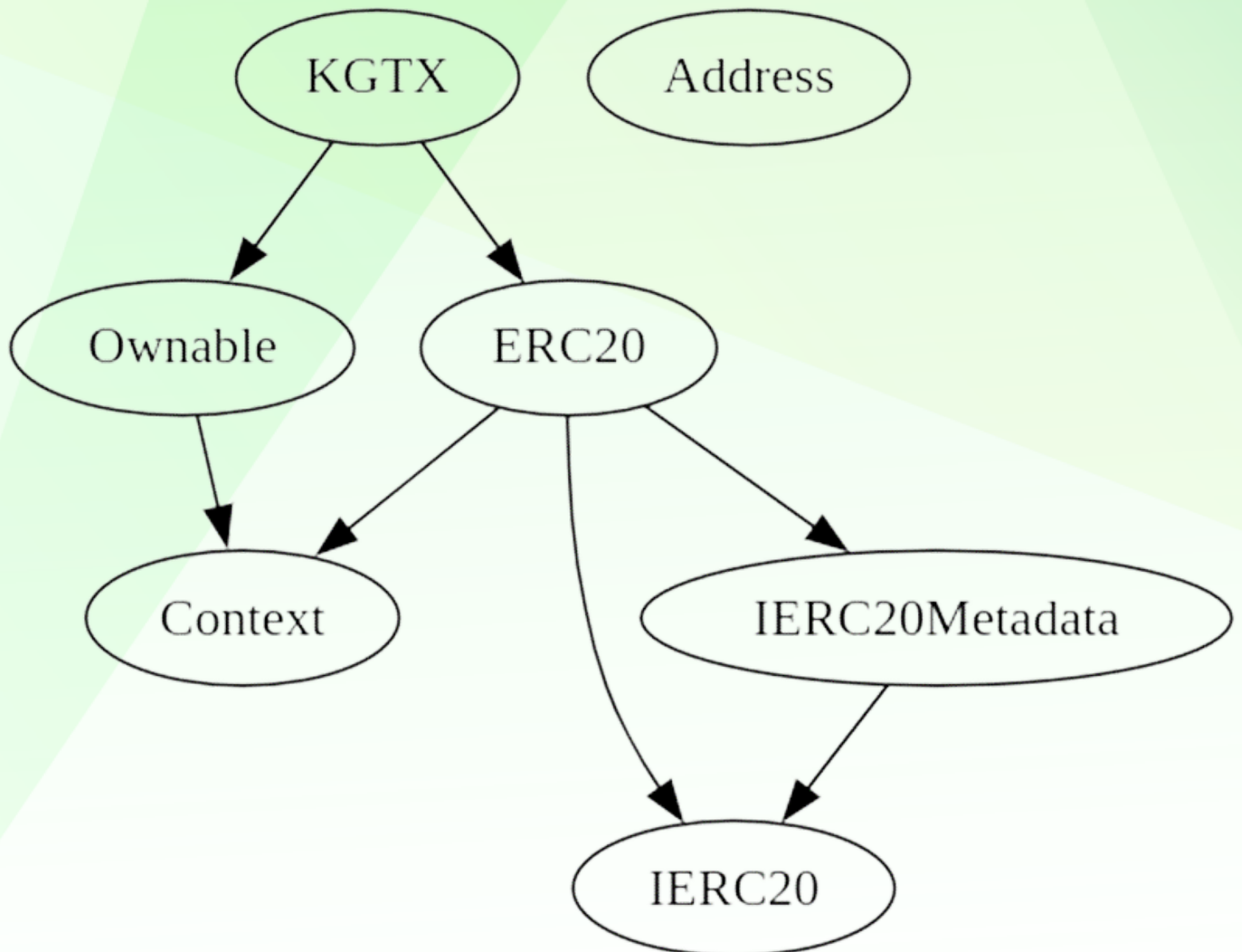
Findings

Severity

Found

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

INHERITANCE TREE



POINTS TO NOTE

- **Owner must enable trading in order for investors to be able to trade (buy/sell/transfer)**
 - **Owner is not able to set taxes (0% tax)**
 - **Owner is not able to blacklist an arbitrary wallet**
 - **Owner is not able to set max buy/sell/transfer amounts**
 - **Owner is not able to disable trades**
 - **Owner is not able to mint new tokens**
-



CONTRACT ASSESMENT

Contract	Type	Bases			
└──┐	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
IUniswapV2Factory	Interface				
└ feeTo	External	!	NO	!	
└ feeToSetter	External	!	NO	!	
└ getPair	External	!	NO	!	
└ allPairs	External	!	NO	!	
└ allPairsLength	External	!	NO	!	
└ createPair	External	!	⊗	NO	!
└ setFeeTo	External	!	⊗	NO	!
└ setFeeToSetter	External	!	⊗	NO	!
IUniswapV2Pair	Interface				
└ name	External	!	NO	!	
└ symbol	External	!	NO	!	
└ decimals	External	!	NO	!	
└ totalSupply	External	!	NO	!	
└ balanceOf	External	!	NO	!	
└ allowance	External	!	NO	!	
└ approve	External	!	⊗	NO	!
└ transfer	External	!	⊗	NO	!
└ transferFrom	External	!	⊗	NO	!
└ DOMAIN_SEPARATOR	External	!	NO	!	
└ PERMIT_TYPEHASH	External	!	NO	!	
└ nonces	External	!	NO	!	
└ permit	External	!	⊗	NO	!
└ MINIMUM_LIQUIDITY	External	!	NO	!	
└ factory	External	!	NO	!	
└ token0	External	!	NO	!	
└ token1	External	!	NO	!	
└ getReserves	External	!	NO	!	
└ price0CumulativeLast	External	!	NO	!	
└ price1CumulativeLast	External	!	NO	!	
└ kLast	External	!	NO	!	
└ mint	External	!	⊗	NO	!
└ burn	External	!	⊗	NO	!
└ swap	External	!	⊗	NO	!
└ skim	External	!	⊗	NO	!
└ sync	External	!	⊗	NO	!
└ initialize	External	!	⊗	NO	!



CONTRACT ASSESMENT


|||||


| ****IUniswapV2Router01**** | Interface | |||


| | factory | External ! | | NO! |

| | WETH | External ! | | NO! |


| | addLiquidity | External ! |  | NO! |

| | addLiquidityETH | External ! |  | NO! |


| | removeLiquidity | External ! |  | NO! |


| | removeLiquidityETH | External ! |  | NO! |


| | removeLiquidityWithPermit | External ! |  | NO! |


| | removeLiquidityETHWithPermit | External ! |  | NO! |


| | swapExactTokensForTokens | External ! |  | NO! |

| | swapTokensForExactTokens | External ! |  | NO! |

| | swapExactETHForTokens | External ! |  | NO! |

| | swapTokensForExactETH | External ! |  | NO! |

| | swapExactTokensForETH | External ! |  | NO! |

| | swapETHForExactTokens | External ! |  | NO! |

| | quote | External ! | | NO! |

| | getAmountOut | External ! | | NO! |

| | getAmountIn | External ! | | NO! |

| | getAmountsOut | External ! | | NO! |

| | getAmountsIn | External ! | | NO! |


|||||

| ****IUniswapV2Router02**** | Interface | IUniswapV2Router01 |||

| | removeLiquidityETHSupportingFeeOnTransferTokens | External ! |  | NO! |

| | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External ! |  | NO! |

| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External ! |  | NO! |

| | swapExactETHForTokensSupportingFeeOnTransferTokens | External ! |  | NO! |

| | swapExactTokensForETHSupportingFeeOnTransferTokens | External ! |  | NO! |

|||||

| ****IERC20**** | Interface | |||

| | totalSupply | External ! | | NO! |

| | balanceOf | External ! | | NO! |

| | transfer | External ! |  | NO! |

| | allowance | External ! | | NO! |

| | approve | External ! |  | NO! |

| | transferFrom | External ! |  | NO! |

|||||

| ****IERC20Metadata**** | Interface | IERC20 |||

| | name | External ! | | NO! |

| | symbol | External ! | | NO! |

| | decimals | External ! | | NO! |

|||||

CONTRACT ASSESMENT






















```

| **Address** | Library | ||| |
|  | isContract | Internal | | |
|  | sendValue | Internal | | |
|  | functionCall | Internal | | |
|  | functionCall | Internal | | |
|  | functionCallWithValue | Internal | | |
|  | functionCallWithValue | Internal | | |
|  | functionStaticCall | Internal | | |
|  | functionStaticCall | Internal | | |
|  | functionDelegateCall | Internal | | |
|  | functionDelegateCall | Internal | | |
|  | verifyCallResultFromTarget | Internal | | |
|  | verifyCallResult | Internal | | |
|  | _revert | Private | | |
| | | |
| **Context** | Implementation | |||
|  | _msgSender | Internal | | |
|  | _msgData | Internal | | |
| | | |
| **Ownable** | Implementation | Context | |||
|  | <Constructor> | Public | | | NO |
|  | owner | Public | | | NO |
|  | renounceOwnership | Public | | | onlyOwner |
|  | transferOwnership | Public | | | onlyOwner |
| | | |
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata | |||
|  | <Constructor> | Public | | | NO |
|  | name | Public | | | NO |
|  | symbol | Public | | | NO |
|  | decimals | Public | | | NO |
|  | totalSupply | Public | | | NO |
|  | balanceOf | Public | | | NO |
|  | transfer | Public | | | NO |
|  | allowance | Public | | | NO |
|  | approve | Public | | | NO |
|  | transferFrom | Public | | | NO |
|  | increaseAllowance | Public | | | NO |
|  | decreaseAllowance | Public | | | NO |
|  | _transfer | Internal | | |
|  | _mint | Internal | | |
|  | _burn | Internal | | |

```




CONTRACT ASSESMENT

^L	_approve	Internal 		
^L	_beforeTokenTransfer	Internal 		
^L	_afterTokenTransfer	Internal 		
KGTX	Implementation	ERC20, Ownable		
^L	<Constructor>	Public 		ERC20
^L	<Receive Ether>	External 		NO 
^L	claimStuckTokens	External 		onlyOwner
^L	excludeFromFees	External 		onlyOwner
^L	isExcludedFromFees	Public 		NO 
^L	enableTrading	External 		onlyOwner
^L	_transfer	Internal 		

| Symbol | Meaning |

| :-----: | ----- |

|  | Function can modify state |

|  | Function is payable |



STATIC ANALYSIS

```
Address.revert(bytes,string) (contracts/Token.sol#549-564) is never used and should be removed
Address.functionCall(address,bytes) (contracts/Token.sol#408-419) is never used and should be removed
Address.functionCall(address,bytes,string) (contracts/Token.sol#421-427) is never used and should be removed
Address.functionCallWithValue(address,bytes,uint256) (contracts/Token.sol#429-441) is never used and should be removed
Address.functionCallWithValue(address,bytes,uint256,string) (contracts/Token.sol#443-463) is never used and should be removed
Address.functionDelegateCall(address,bytes) (contracts/Token.sol#492-502) is never used and should be removed
Address.functionDelegateCall(address,bytes,string) (contracts/Token.sol#504-517) is never used and should be removed
Address.functionStaticCall(address,bytes) (contracts/Token.sol#465-475) is never used and should be removed
Address.functionStaticCall(address,bytes,string) (contracts/Token.sol#477-490) is never used and should be removed
Address.isContract(address) (contracts/Token.sol#391-393) is never used and should be removed
Address.verifyCallResult(bool,bytes,string) (contracts/Token.sol#537-547) is never used and should be removed
Address.verifyCallResultFromTarget(address,bool,bytes,string) (contracts/Token.sol#519-535) is never used and should be removed
Context.msgData() (contracts/Token.sol#572-575) is never used and should be removed
ERC20_burn(address,uint256) (contracts/Token.sol#762-777) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version^0.8.17 (contracts/Token.sol#23) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.18 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in Address.sendValue(address,uint256) (contracts/Token.sol#395-406):
- (success) = recipient.call{value: amount}() (contracts/Token.sol#401)
Low level call in Address.functionCallWithValue(address,bytes,uint256,string) (contracts/Token.sol#443-463):
- (success,returndata) = target.call{value: value}(data) (contracts/Token.sol#453-455)
Low level call in Address.functionStaticCall(address,bytes,string) (contracts/Token.sol#477-490):
- (success,returndata) = target.staticcall(data) (contracts/Token.sol#482)
Low level call in Address.functionDelegateCall(address,bytes,string) (contracts/Token.sol#504-517):
- (success,returndata) = target.delegatecall(data) (contracts/Token.sol#509)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IUniswapV2Pair.DOMAIN_SEPARATOR() (contracts/Token.sol#85) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (contracts/Token.sol#87) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (contracts/Token.sol#118) is not in mixedCase
Function IUniswapV2Router01.WETH() (contracts/Token.sol#158) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Redundant expression "this (contracts/Token.sol#573)" inContext (contracts/Token.sol#567-576)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements

Variable IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#163) is too similar to IUniswapV2Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#164)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

KGTX.uniswapV2Pair (contracts/Token.sol#888) should be immutable
KGTX.uniswapV2Router (contracts/Token.sol#887) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
```

Result => A static analysis of contract's source code has been performed using slither,

No issues found



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

1- Adding Liquidity (Passed):

liquidity added on Pancakeswap V2:

<https://testnet.bscscan.com/tx/0xec8155aa0092c332c8c7210e6a7d45fda8bc6e3b06e4bb5f40e471ddf4a45669>

2- Buying from a non-excluded wallet (0% max) (Passed):

<https://testnet.bscscan.com/tx/0x7926ddcc55aa7f6ba2192564167188d4d600f07f23ec51fdd53ad91771927042>

3- Selling from a non-excluded wallet (0% max) (Passed):

<https://testnet.bscscan.com/tx/0xaf4bdac0dff594fb3b0659a04f35b4e523707012d2417c78f58a010e7dc9f7fe>

MANUAL TESTING

Issue: Owner must enable trading

Type: Centralization

Severity: **High**

Function: enableTrading

Line: 627-630

Overview:

Owner must enable trading in order to start trades.

Since contract is owend by safu dev, enabling trades is guaranteed.

```
function enableTrading() external onlyOwner {  
    require(!tradingEnabled, "Trading already enabled.");  
    tradingEnabled = true;  
}
```

Social Media Overview

**Here are the Social Media Accounts of
KnowieGTX**



<https://knowiegtx.app/>



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