



Smart Contract Audit

FOR
GOKUSWAP

DATED : 24 March, 2024



AUDIT SUMMARY

Project name - GOKUSWAP

Date: 24 March, 2024

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

Audit Status: Passed

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	1	2	1
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/0x5b5b49c1a007974a434dfbbb6abe06b2634a11fa#code>



Token Information

Token Name : GOKUSWAP

Token Symbol: GOKU

Decimals: 18

Token Supply: 100000000

Network: EtherScan

Token Type: ERC-20

Token Address:

0xc1f72Ea42c96041eeA89f5F43486f38C29E964eE

Checksum:

Ae1c3a4fbb6e83e8393a57617b5a5217

Owner:

0x00
(at time of writing the audit)

Deployer:

0x686B18A868C9d253a8B2BBf8Ef6f9C1D5E4A7443



TOKEN OVERVIEW

Fees:**Buy Fee:** 3-5%**Sell Fee:** 3-5%**Transfer Fee:** 0-0%

Fees Privilege: Owner

Ownership: Renounced

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

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 Limit and 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

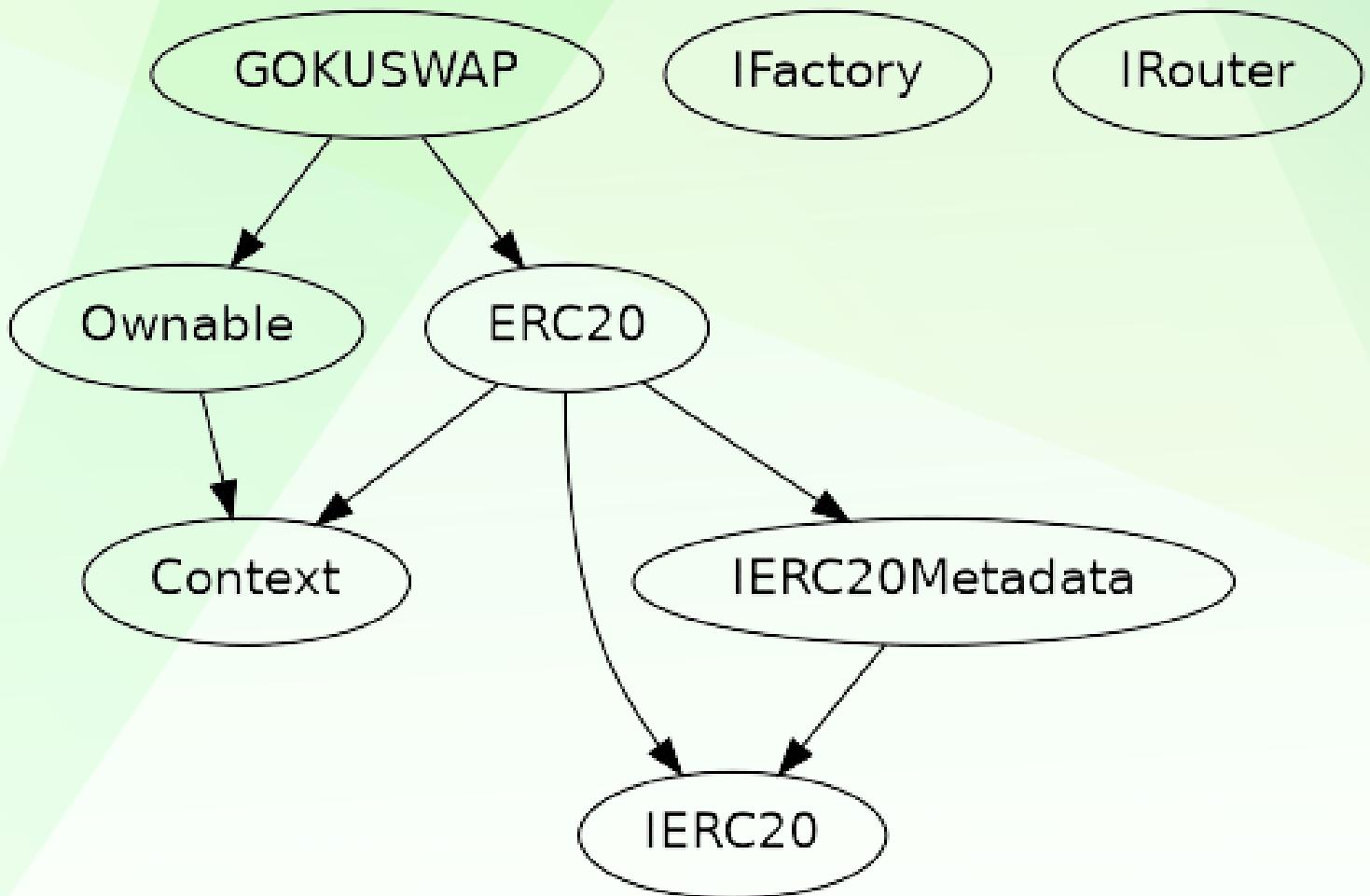


Compiler version not fixed



Using throw

INHERITANCE TREE





STATIC ANALYSIS

A static analysis of the code was performed using Slither.
No issues were found.

```
INFO:Detectors:  
GOKUSWAP.setPair(address)._pair (GOKUSWAP.sol#589) lacks a zero-check on :  
    - pair = _pair (GOKUSWAP.sol#590)  
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-zero-address-validation  
INFO:Detectors:  
Context._msgData() (GOKUSWAP.sol#13-15) is never used and should be removed  
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code  
INFO:Detectors:  
Pragma version^0.8.17 (GOKUSWAP.sol#6) allows old versions  
solc-0.8.24 is not recommended for deployment  
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity  
INFO:Detectors:  
Function IRouter.WETH() (GOKUSWAP.sol#505) is not in mixedCase  
Parameter GOKUSWAP.setPair(address)._pair (GOKUSWAP.sol#589) is not in mixedCase  
Parameter GOKUSWAP.setRouter(address)._router (GOKUSWAP.sol#593) is not in mixedCase  
Parameter GOKUSWAP.setTaxes(uint256,uint256)._buyTax (GOKUSWAP.sol#597) is not in mixedCase  
Parameter GOKUSWAP.setTaxes(uint256,uint256)._sellTax (GOKUSWAP.sol#597) is not in mixedCase  
Parameter GOKUSWAP.setExcludedFromFees(address,bool)._address (GOKUSWAP.sol#613) is not in mixedCase  
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions  
INFO:Detectors:  
GOKUSWAP.slitherConstructorConstantVariables() (GOKUSWAP.sol#522-618) uses literals with too many digits:  
    - _totalSupply = 1000000000 * 1e18 (GOKUSWAP.sol#523)  
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits  
INFO:Slither:GOKUSWAP.sol analyzed (8 contracts with 93 detectors), 12 result(s) found
```



FUNCTIONAL TESTING

1- Approve (**passed**):

<https://testnet.bscscan.com/tx/0x1466b17ba5926b53e78f35f55b93e66f4ab1db235debd5eb6c62815652de57fb>

2- Enable Trading (**passed**):

<https://testnet.bscscan.com/tx/0xf57587028c5bd5018e583b585534c599e203e7148a8bda10e90b35ab09e182b9>

3- Set Pair (**passed**):

<https://testnet.bscscan.com/tx/0xbba0f8db5247f0ea68c29d86099365a1c32994a5f763bfd619cc54fb073f292b>

4- Set Marketing Wallet (**passed**):

<https://testnet.bscscan.com/tx/0x28cba21b5d026027c67be36fa383c6b96582f4947dca64b6b5d84162df328189>

5- Set Taxes (**passed**):

<https://testnet.bscscan.com/tx/0x3e71a284f5b9a1ab9cc29411c4fae2404cbb3f7a1559fc23919e20ff0f18abb5>

6- Set Router (**passed**):

<https://testnet.bscscan.com/tx/0x3e71a284f5b9a1ab9cc29411c4fae2404cbb3f7a1559fc23919e20ff0f18abb5>



POINTS TO NOTE

- The owner can change the buy and sell tax not more than 5%.
- The owner can enable trading.
- The owner can set a pair address.
- The owner can set the router address.
- The owner can set the marketing wallet address.



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



MANUAL TESTING

Centralization – Missing Require Check

Severity: Medium

Function: Set Marketing Wallet

Status: Open

Overview:

The owner can set any arbitrary address excluding zero address as this is not recommended because if the owner sets the address to the contract address, then the ETH will not be sent to that address and the transaction will fail and this will lead to a potential honeypot in the contract.

```
function setMarketingWallet(address newWallet) external onlyOwner{
    require(newWallet != address(0), "Marketing Wallet cannot be zero address");
    excludedFromFees[marketingWallet] = false;
    marketingWallet = newWallet;
    excludedFromFees[newWallet] = true;
    emit MarketingWalletUpdated();
}
```

Suggestion:

It is recommended that the address should not be able to set as a contract address.



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 setPair(address _pair) external onlyOwner{
    pair = _pair;
}

function setRouter(address _router) external onlyOwner{
    router = IRouter(_router);
}
```

Suggestion:

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



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 setPair(address _pair) external onlyOwner{
    pair = _pair;
}
function setRouter(address _router) external onlyOwner{
    router = IRouter(_router);
}
```

Suggestion:

Emit an event for critical changes.



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 to avoid them.

```
function _msgData() internal view virtual returns (bytes calldata) {
    return msg.data;
}
interface IFactory{
    function createPair(address tokenA, address tokenB) external returns (address
pair);
}
```

Suggestion:

To reduce high gas fees. It is suggested to remove unused code from the contract.



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