auditace.tech

AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

LinkiFi

DATED : 27 Jan, 2024

MANUAL TESTING

Centralization – Missing Require Check

Severity: High

Subject: set_dev

Status: Open

Overview:

The owner can set any arbitrary address excluding zero address as this is not recommended because if the owner will set 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 set_dev(address dev_) public virtual onlyOwner {
  m_fee_dev = dev_;
  set_exclud_fee(dev_, true);
  emit e_set_dev(dev_);
}
```

Suggestion:

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

MANUAL TESTING

Centralization – The owner can lock the token

Severity: Medium

Subject: set_whale_max

Status: Open

Overview:

```
function set_whale_max(uint256 whale_max_) public virtual onlyOwner { //@audit
owner can lock tokens
    require(whale_max_ > 0, 'Token: set_whale_max m_whale_max_ need > 0'); //0.1%
to the total supply
    m_whale_max = whale_max_;

    emit e_set_whale_max(whale_max_);
  }
```

Suggestion:

It is recommended that the set whale max value should be 0.1% of the total supply.

AUDIT SUMMARY

Project name – LinkiFi

Date: 27 Jan, 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	2	0	0	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/0x634aa49115531c89d00b9c60d55ed55c1ae5a58e#code

Token Information

Token Name : LinkiFi

Token Symbol: LinkiFi

Decimals: 18

Token Supply: 1,000,000,000

Network: BscScan

Token Type: BEP-20

Token Address:
0x679d2C23497d4431311aC001618cd0B8789Ac29C

Checksum:
f2032c616934aeb47e6039f76b20d2h5

Owner:
0x37Cc9c22cDEb4F62f84e3Fab3a24C64a2e2132E6
(at time of writing the audit)

Deployer:
0x37Cc9c22cDEb4F62f84e3Fab3a24C64a2e2132E6

TOKEN OVERVIEW

Fees:

Buy Fee: 3-15%

Sell Fee: 3-15%

Transfer Fee: 3-15%

Fees Privilege: Owner

Ownership: Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

AUDIT METHODOLOGY

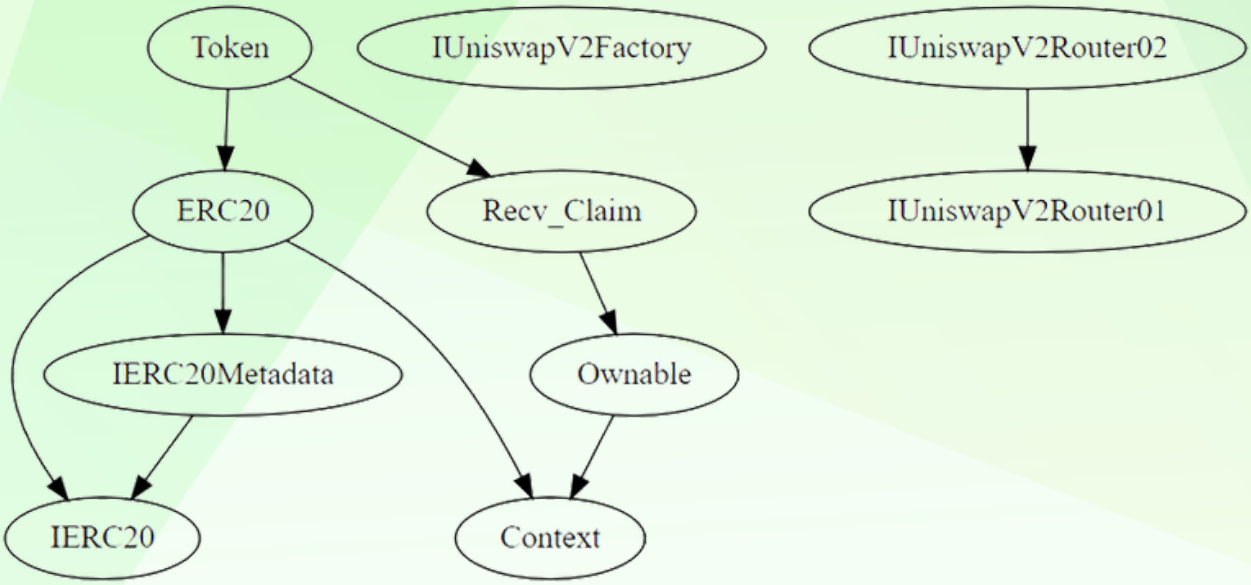
The auditing process will follow a routine as special considerations by Auditace:

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

INHERITANCE TREE



STATIC ANALYSIS

A static analysis of the code was performed using Slither.

No issues were found.

```
INFO:SlitherSolcParsing:No contracts were found in None, check the correct compilation
WARNING:Slither:No contract was analyzed
INFO:Slither:Token.sol analyzed (0 contracts with 93 detectors), 0 result(s) found
```

FUNCTIONAL TESTING

1- Approve (passed):

https://testnet.bscscan.com/tx/0x395e4a739ec63f3c1759dffd5223e093d0504c9cd50f2d73f6270b7110849395

2- Set Fee (passed):

https://testnet.bscscan.com/tx/0xe3d54dddbf60854d1bb700260f2502479343310c472848c0001fbeb6239e0c68

3- Set open trade (passed):

https://testnet.bscscan.com/tx/0x4e582d8ed44dede8b0cfee12a6fd4fa69fdabfedf54f759a465e47c135db90f4

4- Set dev (passed):

https://testnet.bscscan.com/tx/0x71b8d8eab8f9b6d0e4ca5bdd9a73f7d260dc1782dcf5ca819bc5fadefb8b6d55

5- Set Dividend (passed):

https://testnet.bscscan.com/tx/0x94c0eb916aceced03f6a18c6948fec97fc619c332f2f2be9b2114e86bc75739e

POINTS TO NOTE

- The owner can transfer ownership.
- The owner can renounce ownership.
- The owner can Enable trading.
- The owner can close fee.
- The owner can set the fees not more than 15%.
- The owner can set the dev address.
- The owner can set whale max.
- The owner can set dividend address.
- The owner can claim stuck tokens.
- The owner can blacklist wallets.

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

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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 calldata) {
        return msg.data;
    }
```

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