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AuditAce
FROM INCEPTION TO SUCCESS

# Smart Contract Audit

FOR

# AIEPH

DATED : 30 June 23'

# AUDIT SUMMARY

**Project name** – AIEPH

**Date**: 30 June, 2023

**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 | 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- 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:**
Contract has been tested on binance smart chain testnet which can be found in below link:
https://testnet.bscscan.com/token/0x6C3a03797378eAE216845CBc13a0b9F585f43F89

# Token Information

**Token Name** : AIEPH EDKBLFEATCGEHGHWPJMUSK DOGE

**Token Symbol**: AIEPH

**Decimals:** 9

**Token Supply**: 100,000,000,000,000,000,000

**Token Address:**
0x04D749487Ad4707509eC4f30d40FC98f06259cFa

**Checksum:**
ea1f0ac0f7d7a7351cce5acac5b771dc62f3df9c

**Owner:**
0x348e51C60e9e15C0f80b95e6a2619655b07489E4
**(at time of writing the audit)**

**Deployer:**
0x348e51C60e9e15C0f80b95e6a2619655b07489E4

# TOKEN OVERVIEW

**Fees:**

Buy Fees: 0%

Sell Fees: 0%

Transfer Fees: 0%

**Fees Privilege:** No fees

**Ownership**: Renounced

**Minting:** none

**Max Tx Amount/ Max Wallet Amount:** No

**Blacklist:** No

**Other Privileges**: - Initial distribution of the tokens

# 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

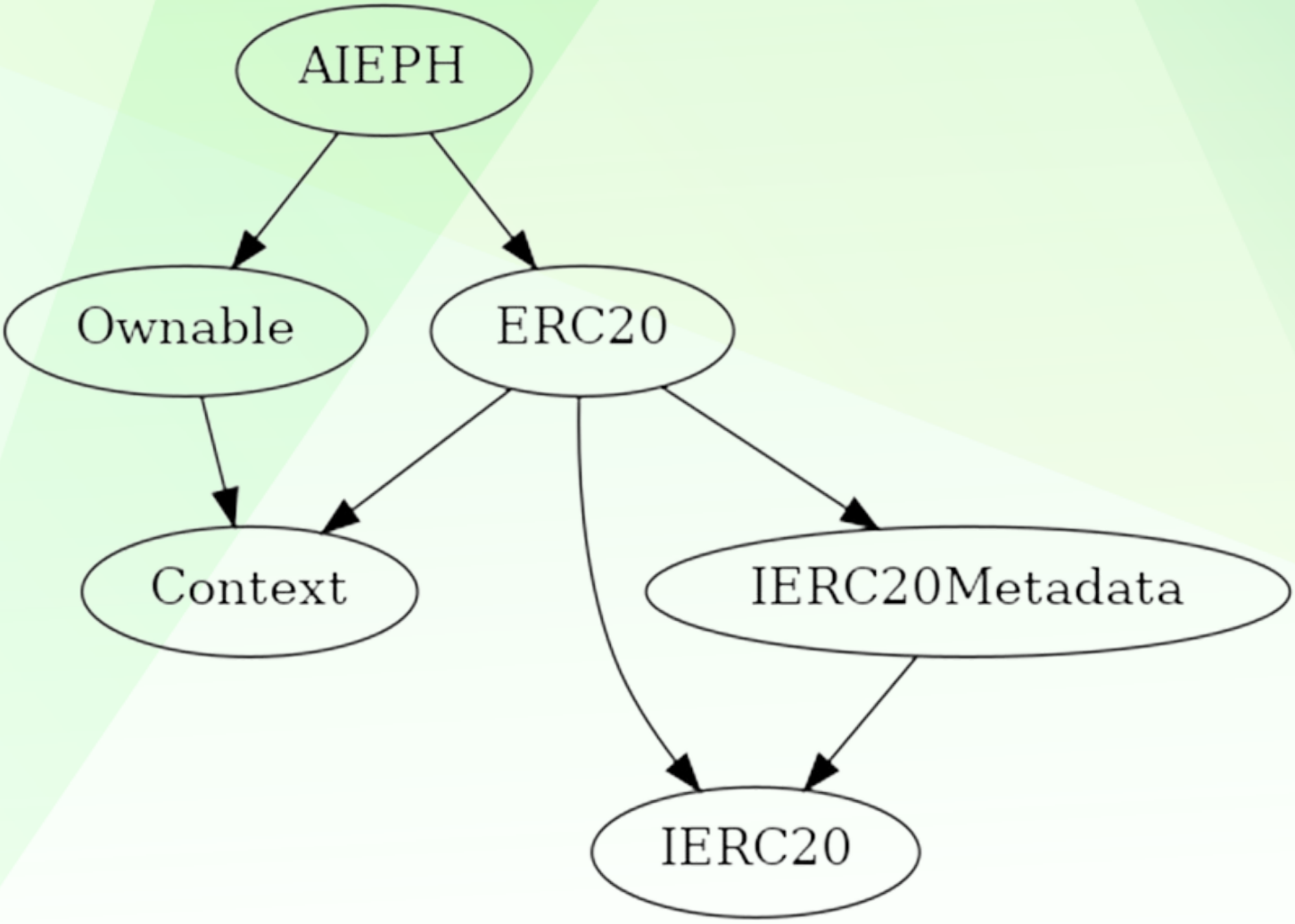
# CLASSIFICATION OF RISK

| 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 | 0 |
| Low-Risk | 0 |
| Gas Optimization / Suggestions | 0 |

# INHERITANCE TREE



# POINTS TO NOTE

- Owner is not able to set buy/sell/transfer tax
- Owner is not able to set max buy/sell/transfer/hold amount
- Owner is not able to blacklist an arbitrary wallet
- 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** |
| | | | | |
| **Context** | Implementation | | | |
| └ | _msgSender | Internal 🔒 | | |
| └ | _msgData | Internal 🔒 | | |
| | | | | |
| **Ownable** | Implementation | Context | | |
| └ | <Constructor> | Public ❗ | 🛑 | NO ❗ |
| └ | owner | Public ❗ | | NO ❗ |
| └ | renounceOwnership | Public ❗ | 🛑 | onlyOwner |
| └ | transferOwnership | Public ❗ | 🛑 | onlyOwner |
| └ | _transferOwnership | Internal 🔒 | 🛑 | |
| | | | | |
| **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 ❗ |
| | | | | |
| **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

| └ | _approve | Internal 🔒 | 🛑 | |
| └ | _beforeTokenTransfer | Internal 🔒 | 🛑 | |
| └ | _afterTokenTransfer | Internal 🔒 | 🛑 | |
||||||
| **AIEPH** | Implementation | Ownable, ERC20 |||
| └ | <Constructor> | Public ❗ | 🛑 | ERC20 |

### Legend

| Symbol | Meaning |
|:---:|---|
| 🛑 | Function can modify state |
| 💵 | Function is payable |

# STATIC ANALYSIS

```
AIEPH.constructor(uint256)._totalSupply (contracts/Token.sol#535) shadows:
        - ERC20._totalSupply (contracts/Token.sol#234) (state variable)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#local-variable-shadowing

Different versions of Solidity are used:
        - Version used: ['^0.8.0', '^0.8.17']
        - ^0.8.0 (contracts/Token.sol#30)
        - ^0.8.0 (contracts/Token.sol#102)
        - ^0.8.0 (contracts/Token.sol#178)
        - ^0.8.0 (contracts/Token.sol#202)
        - ^0.8.0 (contracts/Token.sol#532)
        - ^0.8.17 (contracts/Token.sol#8)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#different-pragma-directives-are-used

Context._msgData() (contracts/Token.sol#25-27) is never used and should be removed
ERC20._burn(address,uint256) (contracts/Token.sol#461-476) 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#8) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
Pragma version^0.8.0 (contracts/Token.sol#30) allows old versions
Pragma version^0.8.0 (contracts/Token.sol#102) allows old versions
Pragma version^0.8.0 (contracts/Token.sol#178) allows old versions
Pragma version^0.8.0 (contracts/Token.sol#202) allows old versions
Pragma version^0.8.0 (contracts/Token.sol#532) allows old versions
solc-0.8.20 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity
```

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

**No major issues were found in the output**

# FUNCTIONAL TESTING

**1- Adding liquidity (passed):**

https://testnet.bscscan.com/tx/0x5dbb292ff818f7f1d7cdb09f5b22203082f838bb42127f69e192af03b3ccc88f

**2- Buying (0% tax) (passed):**

https://testnet.bscscan.com/tx/0x7ad14297657e81b214d0518128e710dfc0ed4b6dfbf8951a23c3742e04787ec6

**3- Selling (0% tax) (passed):**

https://testnet.bscscan.com/tx/0xabecdbfa61e76c94207b437c53766d03523ea517b85e95c5115f7b19ca66deb5

**4- Transferring (0% tax) (passed):**

https://testnet.bscscan.com/tx/0xd15de64a346e48adb008bfa3b9050769ad71ae79eb80b2247b49ecf14af0b36c

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