

Smart Contract Audit

FOR

ACEEAGLE

DATED: 28 Nov 23'



Centralization - Enabling Trades

Severity: High

function: EnableTrading

Status: Open

Overview:

The EnableTrading 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 enableTrading() external onlyOwner{
  require(tradingEnabled == false, "Trading 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.
- 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 bad faith actions by the original owner.



Centralization - Buy and Sell fees.

Severity: High

function: setBuyFeePercentages

Status: Open

Overview:

The owner can set the buy and sell fees to more than 100%, which is not recommended.

```
function setBuyFeePercentages(uint256 _taxFeeonBuy, uint256
_liquidityFeeonBuy, uint256 _marketingFeeonBuy, uint256
_burnFeeOnBuy) external onlyOwner {
  taxFeeonBuy = _taxFeeonBuy;
  liquidityFeeonBuy = _liquidityFeeonBuy;
  marketingFeeonBuy = _marketingFeeonBuy;
  burnFeeOnBuy = _burnFeeOnBuy;

  totalBuyFees = taxFeeonBuy + liquidityFeeonBuy +
  marketingFeeonBuy + burnFeeOnBuy;

  require(totalBuyFees <= 100, "Buy fees cannot be greater than 10%");
  emit BuyFeesChanged(taxFeeonBuy, liquidityFeeonBuy, marketingFeeonBuy);
  }</pre>
```

Suggestion

It is recommended that no fees in the contract should be more than 25% of the contract.



AUDIT SUMMARY

Project name - ACEEAGLE

Date: 28 Nov, 2023

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	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/0x18186c2828f28 0d2c5fba5786b85a59c104b33ab#code



Token Information

Token Address:

0x560d9a8beaae8b1bffeea1fc6ecb1f32dfb9495e

Name: ACEEAGLE

Symbol: AEA

Decimals: 9

Network: Etherscan

Token Type: ERC20

Owner:

0x12528AEa79914bd10a4b9f320358c905462339c1

Deployer:

0x12528AEa79914bd10a4b9f320358c905462339c1

Checksum: cfe3cef7c2c788bc03532d7342fc9fae

Testnet:

https://testnet.bscscan.com/address/0x18186c2828f28 0d2c5fba5786b85a59c104b33ab#code



TOKEN OVERVIEW

Buy Fee: 0-100%

Sell Fee: 0-100%

Transfer Fee: 0-0%

Fee Privilege: Owner

Ownership: Owned

Minting: None

Max Tx: Yes

Blacklist: No

Other Privileges:

- -Whitelist to transfer without enabling trades
- Enabling trades



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-byline 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





CLASSIFICATION OF RISK

Severity

- Critical
- High-Risk
- Medium-Risk
- Low-Risk
- Gas Optimization/Suggestion

Description

These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.

A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.

A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.

A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.

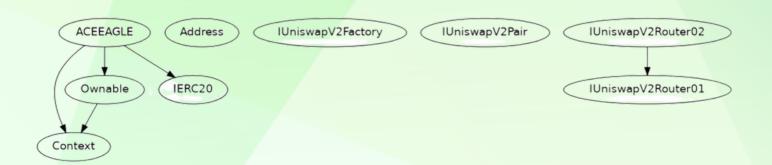
A vulnerability that has an informational character but is not affecting any of the code.

Findings

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



INHERITANCE TREE





POINTS TO NOTE

- Owner can renounce ownership.
- Owner can transfer the ownership.
- Owner can exclude/include accounts from rewards.
- Owner can set swap tokens.
- Owner can set swap enable.
- Owner can set fees more than 100%
- Owner can enable max transaction limit.
- Owner can set mmax wallet amount.



STATIC ANALYSIS

```
- uniswapVZRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(half,0,path,address(this),block.timestamp) (AceEagle.sol#829-834)
- uniswapVZRouter.addLiquidityETH{value: newBalance}(address(this),otherHalf,0,0,owner(),block.timestamp) (AceEagle.sol#838-845)
swapAndSendMarketing(marketingTokens) (AceEagle.sol#99)
- (success) = recipient.call{value: amount}() (AceEagle.sol#89)
- uniswapVZRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(tokenAmount,0,path,address(this),block.timestamp) (AceEagle.sol#857-862)
- address(marketingWallet).sendValue(newBalance) (AceEagle.sol#866)
                                            - uniswaptZnouter.smaptzactoremsroterHoupportIngreeonTransferTokenstCokenAmount,0,path,address(this),btock.timestamp) (AceEagle. - address(marketingfwallet).sendValue(nemBalance) (AceEagle.solm866)

External calls sending eth:
- swapAndSendMarketing(marketingTokens) (AceEagle.solm789)
- uniswaptZRouter.addLiquidityETH{value: nemBalance}(address(this),otherHalf,0,0,omner(),block.timestamp) (AceEagle.solm838-845)
- swapAndSendMarketing(marketingTokens) (AceEagle.solm890)

Event emitted after the call(s):
- SwapAndSendMarketing(tokenAmount,nemBalance) (AceEagle.solm868)
- swapAndSendMarketing(marketingTokens) (AceEagle.solm794)
- Transfer(sender,recipient,tTransferAmount) (AceEagle.solm892)
- Transfer(sender,recipient,tTransferAmount) (AceEagle.solm892)
- Transfer(sender,recipient,tTransferAmount) (AceEagle.solm802)
                                               ncy in ACEEAGLE.swapAndLiquify(uint256) (AceEagle.sol#819-848):
External calls:
- uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(half,0,path,address(this),block.timestamp) (AceEagle.sol#829-834)
- uniswapV2Router.addLiquidityETH{value: newBalance}(address(this),otherHalf,0,0,owner(),block.timestamp) (AceEagle.sol#838-845)
External calls sending eth:
- uniswapV2Router.addLiquidityETH{value: newBalance}(address(this),otherHalf,0,0,owner(),block.timestamp) (AceEagle.sol#838-845)
Event emitted after the call(s):
- SwapAndLiquify(half,newBalance,otherHalf) (AceEagle.sol#847)
ncy in ACEEAGLE.swapAndSendMarketing(uint256) (AceEagle.sol#850-869):
External calls:
                                                External calls:
- unismapt/2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(tokenAmount,0,path,address(this),block.timestamp) (AceEagle.sol#857-862)
- address(marketingWallet).sendValue(newBalance) (AceEagle.sol#866)

Event emitted after the call(s):
- SwapAndSendMarketing(tokenAmount,newBalance) (AceEagle.sol#868)
ncy in ACEEAGLE.transferFrom(address,address,uint256) (AceEagle.sol#518-522):

External calls:
                                                                    INFO:Detectors:

ACEEAGLE._takeLiquidity(uint256).burnAmount (AceEagle.sol#650) is a local variable never initialized
ACEEAGLE._takeLiquidity(uint256).liquidityAmount (AceEagle.sol#640) is a local variable never initialized
ACEEAGLE._takeLiquidity(uint256).liquidityAmount (AceEagle.sol#640) is a local variable never initialized
Reference: https://github.com/crytic/slither/miki/Detector-Documentation#uninitialized-local-variables
INFO:Detectors:
ACEEAGLE.claimStuckTokens(address) (AceEagle.sol#8592-601) ignores return value by address(msg.sender).sendValue(address(this).balance) (AceEagle.sol#595)
ACEEAGLE.swapAndd.lquify(uint256) (AceEagle.sol#859-860) ignores return value by unismap/2XGouter.addLiquidityETM(value: newBalance)(address(this),otherHalf,0,0,owner(),block.timestamp) (AceEagle.sol#838-845)
ACEEAGLE.swapAndSendMarketing(uint256) (AceEagle.sol#859-869) ignores return value by address(marketingWallet).sendValue(newBalance) (AceEagle.sol#866)
Reference: https://github.com/crytic/slither/miki/Detector-Documentation#unused-return
                                  - Oumable.sumer() (AceEagle.sol#36-38) (function)
nce: https://github.com/crytic/sithry/siki/Detector-OccumentationElocal-variable-shadowing
etectors:
ancy in ACEEAGLE._transfer(address, address, uint256) (AceEagle.sol#739-817):
External calls:
- swapAndLquify(liquidityTokens) (AceEagle.sol#789)
- uniswapV7Router.swapCxactTokensForETHSupportingFeeOnTransferTokens(half,0,path,address(this),block.timestamp) (AceEagle.sol#829-834)
- uniswapV7Router.addiquidityTH(value: nemBalance)(address(this),otherHalf,0,0,mmer(),block.timestamp) (AceEagle.sol#838-845)
- swapAndSendMarketing(marketingTokens) (AceEagle.sol#789)
- uniswapV7Router.swapCxactTokensForETHSupportIngFeeOnTransferTokens(tokenAmount,0,path,address(this),block.timestamp) (AceEagle.sol#857-862)
- address(EarketingNallet).sendValue(nemBalance) (AceEagle.sol#889)
- uniswapV7Router.swapCxactTokensForETHSupportIngFeeOnTransferTokens(tokenAmount,0,path,address(this),block.timestamp) (AceEagle.sol#889-862)
- xwapAndSendGarketing(adityTokens) (AceEagle.sol#789)
- uniswapV7Router.addiquidityTifyTokens) (AceEagle.sol#899)
- uniswapV7Router.addiquidityTifyTokens) (AceEagle.sol#899)
- swapAndSendMarketing(aarketingTokens) (AceEagle.sol#899)
- swapAndSendMarketing(aarketingTokens) (AceEagle.sol#899)
- (success) = recipient.call(value: amount)() (AceEagle.sol#899)
- (success) = recipient.call(value: amount)() (AceEagle.sol#899)
- (liquidityTokens) (AceEagle.
```



STATIC ANALYSIS

```
ARCEAGLE.slitherConstructorVariables() (AceEagle.sol#334-1077) uses literals with too many digits:

- _tTotal = 1000000000 * (10 ** _decimals) (AceEagle.sol#351)

ACEEAGLE.slitherConstructorVariables() (AceEagle.sol#334-1077) uses literals with too many digits:

- _tTotalSupply = 1000000000 * (10 ** _decimals) (AceEagle.sol#352)

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits

INFO:Detectors:

Loop condition i < _excluded.length (AceEagle.sol#639) should use cached array length instead of referencing 'length' member of the storage array.

Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#cache-array-length

INFO:Detectors:

ACEEAGLE.DEAD (AceEagle.sol#383) should be constant

ACEEAGLE._decimals (AceEagle.sol#349) should be constant

ACEEAGLE._name (AceEagle.sol#349) should be constant

ACEEAGLE._name (AceEagle.sol#347) should be constant

ACEEAGLE._symbol (AceEagle.sol#377) should be constant

ACEEAGLE.ceanwallet (AceEagle.sol#377) should be constant

ACEEAGLE.ceanwallet (AceEagle.sol#379) should be constant

ACEEAGLE.teanwallet (AceEagle.sol#379) should be constant

ACEEAGLE.teanwallet (AceEagle.sol#379) should be constant

ACEEAGLE.teanwallet (AceEagle.sol#379) should be constant

ACEEAGLE.tuniswapvallet (AceEagle.sol#385) should be immutable

ACEEAGLE.tuniswapvallet (AceEagle.sol#385) should be immutable

ACEEAGLE.tuniswapvaller (AceEagle.sol#385) should be immutable

ACEEAGLE.uniswapvaller (AceEagle.sol#385) should be immutable

ACEEAGLE.uniswapvall
```

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- Approve (passed):

https://testnet.bscscan.com/tx/0x0304f3eceb77878978e874d6117f4f1174fd7f48e7eb4c5 8dc91804c09463116

2- Increase Allowance (passed):

https://testnet.bscscan.com/tx/0x0f8ac1815f344efe6585349788146083bdf43c7d8151c10 adeae7fe59ca78450

3- Decrease Allowance (passed):

https://testnet.bscscan.com/tx/0x2eeeab01f7dec31a6f0c2d0a04d493ec75108cd54868854 c55d14d324b2de563

4- Enable Trading (passed):

https://testnet.bscscan.com/tx/0xc7f9be39e09022bce73f1ce2f70f9d78f0aa59eb3498cb8edc433e52b3b69515

5- Enable Wallet to Wallet Transfer Without Fee (passed):

https://testnet.bscscan.com/tx/0x12bd948d1589187030773685663770751fd55b60c6cadf 3ecaff5f833767e7d7

6- Set Swap Enabled (passed):

https://testnet.bscscan.com/tx/0xec773156ab8f3dddd6e6da98ddecdf9ed3eca4231b7675 41e4106af2d27b5b21

7- Change Marketing Wallet (passed):

https://testnet.bscscan.com/tx/0xaa48d853a746a2f3dba894044eba4ef25bf29fbabd3d3b8d9ef2bf599bd994a6

8- Transfer Ownership (passed):

https://testnet.bscscan.com/tx/0x76f36cd9ef64cc0775329f0f7c62acd00cdefe4c7d38469cdc1ce3e0d2ae5be4



Centralization - Enabling Trades

Severity: High

function: EnableTrading

Status: Open

Overview:

The EnableTrading 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 enableTrading() external onlyOwner{
  require(tradingEnabled == false, "Trading 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.
- 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 bad faith actions by the original owner.



Centralization - Buy and Sell fees.

Severity: High

function: setBuyFeePercentages

Status: Open

Overview:

The owner can set the buy and sell fees to more than 100%, which is not recommended.

```
function setBuyFeePercentages(uint256 _taxFeeonBuy, uint256
_liquidityFeeonBuy, uint256 _marketingFeeonBuy, uint256
_burnFeeOnBuy) external onlyOwner {
  taxFeeonBuy = _taxFeeonBuy;
  liquidityFeeonBuy = _liquidityFeeonBuy;
  marketingFeeonBuy = _marketingFeeonBuy;
  burnFeeOnBuy = _burnFeeOnBuy;

  totalBuyFees = taxFeeonBuy + liquidityFeeonBuy +
  marketingFeeonBuy + burnFeeOnBuy;

  require(totalBuyFees <= 100, "Buy fees cannot be greater than 10%");
  emit BuyFeesChanged(taxFeeonBuy, liquidityFeeonBuy, marketingFeeonBuy);
  }</pre>
```

Suggestion

It is recommended that no fees in the contract should be more than 25% of the contract.



Centralization - Liquidity is added to EOA.

Severity: Medium

function: swapAndLiquify

Status: Open

Overview:

Liquidity is adding to EOA. It may be drained by the addLiquidityETH.

```
function swapAndLiquify(uint256 tokens) private {
 uint256 half = tokens / 2;
 uint256 otherHalf = tokens - half;
 uint256 initialBalance = address(this).balance;
 address[] memory path = new address[](2);
 path[0] = address(this);
 path[1] = uniswapV2Router.WETH();
 uniswapV2Router.swapExactTokensForETHSupportingFeeOnTransferTokens(
  half.
  0, // accept any amount of ETH
  path.
  address(this),
  block.timestamp);
 uint256 newBalance = address(this).balance - initialBalance;
 uniswapV2Router.addLiquidityETH{value: newBalance}(
  address(this).
  otherHalf,
  0, // slippage is unavoidable
  0, // slippage is unavoidable
  owner(),
  block.timestamp
 );
 emit SwapAndLiquify(half, newBalance, otherHalf);
}
```

Suggestion:

It is suggested that the address should be a contract address or a dead address.



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 openTrading() external onlyOwner {
   tradingOpen = true;
}

function setPreLaunchAddress(
   address _address,
   bool state
) external onlyOwner {
   preLaunchAddress[_address] = state;
}
```



Centralization - Local variable Shadowing

Severity: Low

Subject: Variable Shadowing

Status: Open

Overview:

```
function _approve(address owner, address spender, uint256
amount) private {
    require(owner!= address(0), "ERC20: approve from the zero
address");
    require(spender!= address(0), "ERC20: approve to the zero
address");

    _allowances[owner][spender] = amount;
    emit Approval(owner, spender, amount);
}

function allowance(address owner, address spender) public view
override returns (uint256) {
    return _allowances[owner][spender];
}
```

Suggestion:

Rename the local variables that shadow another component



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 functionCall(address target, bytes memory data) internal
returns (bytes memory) {
 return functionCall(target, data, "Address: low-level call failed");
function functionCall(address target, bytes memory data, string
memory errorMessage) internal returns (bytes memory) {
  return _functionCallWithValue(target, data, 0, errorMessage);
 }
function functionCallWithValue(address target, bytes memory data,
uint256 value) internal returns (bytes memory) {
  return functionCallWithValue(target, data, value, "Address: low-
level call with value failed"):
function functionCallWithValue(address target, bytes memory data,
uint256 value, string memory errorMessage) internal returns (bytes
```

memory) { //

require(address(this).balance >= value, "Address: insufficient balance for call");



```
return_functionCallWithValue(target, data, value, errorMessage);
 function _functionCallWithValue(address target, bytes memory
data, uint256 weiValue, string memory errorMessage) private
returns (bytes memory) {
  require(isContract(target), "Address: call to non-contract");
  // solhint-disable-next-line avoid-low-level-calls
  (bool success, bytes memory returndata) = target.call{ value:
weiValue }(data);
  if (success) {
   return returndata:
  } else {
   // Look for revert reason and bubble it up if present
   if (returndata.length > 0) {
// The easiest way to bubble the revert reason is using memory via
assembly
// solhint-disable-next-line no-inline-assembly
assembly {
let returndata_size := mload(returndata)
revert(add(32, returndata), returndata_size)
    }
   } else {
revert(errorMessage);
```



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