



Smart Contract Audit

FOR
ZombiePepe

DATED: 12 May 23'



AUDIT SUMMARY

Project name – ZombiePepe

Date: 12 May, 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	1	0	0	0
Acknowledged	0	0	0	0	0
Resolved	0	1	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 done on BSC Test 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/0x214a8899cf9cc28e107a5b441f397bd11b7f7d6d>



Token Information

Token Name : ZombiePepe

Token Symbol: \$ZPEPE

Decimals: 9

Token Supply: 1,000,000,000,000,000

Token Address:

0x3Df48b8314E84e9185865333756cbEee35b12331

Checksum:

050b39edbc3787366f93a806244f6a89b1b9af6

Owner: 0xf58d89c225c404835aeebaf7d53d44f9f3adeeac



TOKEN OVERVIEW

Fees:

Buy Fees: 0 %

Sell Fees: 0 %

Transfer Fees: 0%

Fees Privilige: none

Ownership : owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges: 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-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 |
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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 (RESOLVED)

◆ Medium-Risk

0

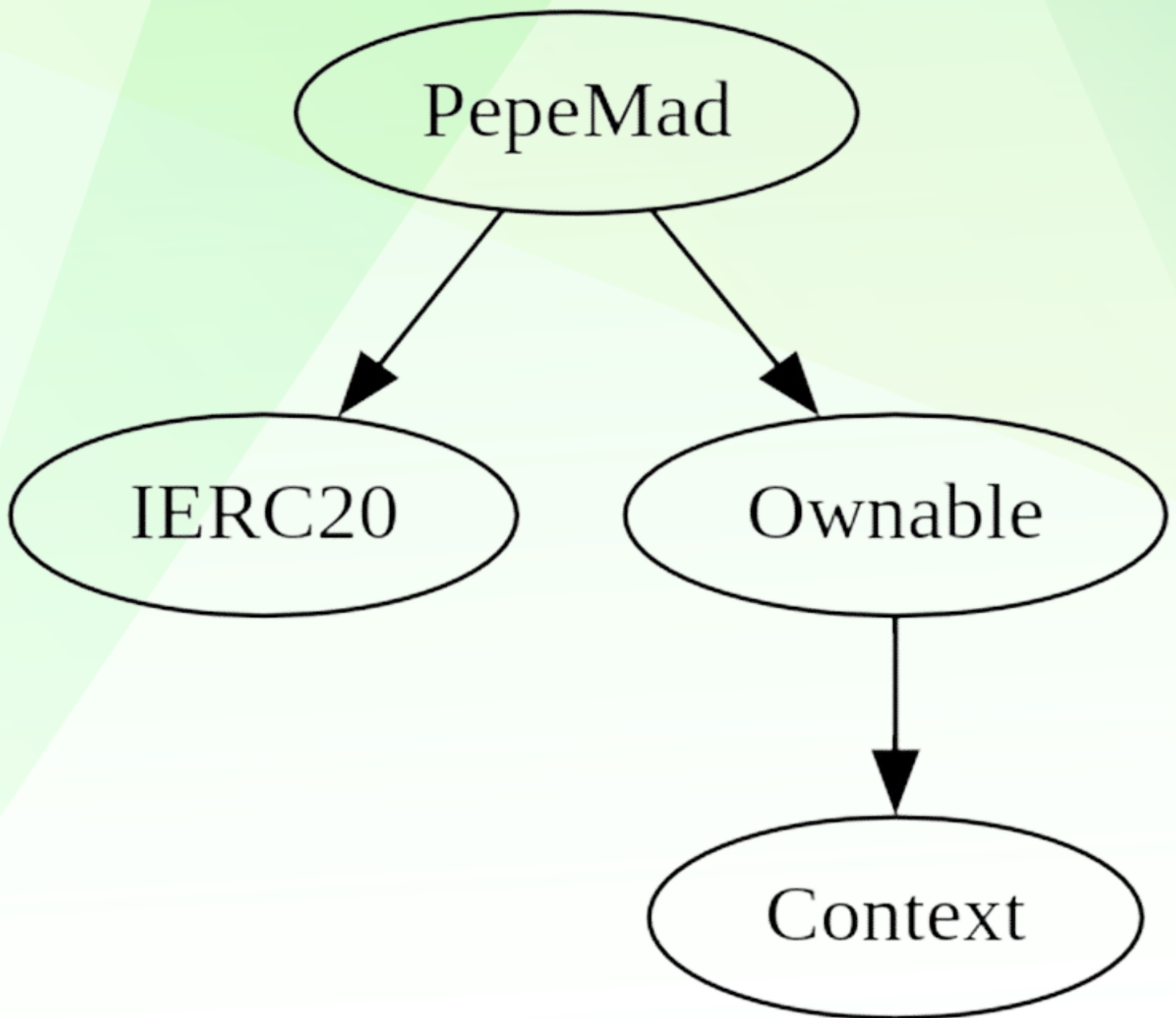
◆ Low-Risk

0

◆ Gas Optimization / Suggestions

0

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to set set buy/sell/transfer tax (0% always)
 - Owner is not able to set a max buy/transfer/wallet/sell 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
 - **Owner must enable trades for holders to be able to trade**
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CONTRACT ASSESMENT

Contract	Type	Bases			
└──	**Function Name**	**Visibility**	**Mutability**	**Modifiers**	
PepeMad Implementation IERC20, Ownable					
└──	<Constructor>	Public !		NO !	
└──	<Receive Ether>	External !		NO !	
└──	totalSupply	External !		NO !	
└──	name	Public !		NO !	
└──	symbol	Public !		NO !	
└──	decimals	Public !		NO !	
└──	balanceOf	Public !		NO !	
└──	allowance	External !		NO !	
└──	approve	Public !		NO !	
└──	approveMax	External !		NO !	
└──	transfer	External !		NO !	
└──	transferFrom	External !		NO !	
└──	_transferFrom	Internal			
└──	enableTrading	External !		onlyOwner	
└──	setAuthorizedWallets	External !		onlyOwner	
└──	rescueBNB	External !		onlyOwner	
└──	withdrawBep20Tokens	External !		onlyOwner	
Ownable Implementation Context					
└──	<Constructor>	Public !		NO !	
└──	owner	Public !		NO !	
└──	_checkOwner	Internal			
└──	renounceOwnership	Public !		onlyOwner	
└──	transferOwnership	Public !		onlyOwner	
└──	_transferOwnership	Internal			
Context Implementation					
└──	_msgSender	Internal			
└──	_msgData	Internal			
IERC20 Interface					
└──	totalSupply	External !		NO !	
└──	balanceOf	External !		NO !	
└──	transfer	External !		NO !	
└──	allowance	External !		NO !	
└──	approve	External !		NO !	
└──	transferFrom	External !		NO !	



CONTRACT ASSESMENT

Legend

| Symbol | Meaning |

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

|  | Function can modify state |

|  | Function is payable |



STATIC ANALYSIS

```
Context. msgData() (contracts/Token.sol#25-27) 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
solc-0.8.19 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Parameter PepeMad.setAuthorizedWallets(address,bool)._wallet (contracts/Token.sol#334) is not in mixedCase
Parameter PepeMad.setAuthorizedWallets(address,bool)._status (contracts/Token.sol#335) is not in mixedCase
Parameter PepeMad.withdrawBep20Tokens(address,uint256)._tokenAddress (contracts/Token.sol#348) is not in mixedCase
Parameter PepeMad.withdrawBep20Tokens(address,uint256)._amount (contracts/Token.sol#349) is not in mixedCase
Constant PepeMad._name (contracts/Token.sol#223) is not in UPPER_CASE_WITH_UNDERSCORES
Constant PepeMad._symbol (contracts/Token.sol#224) is not in UPPER_CASE_WITH_UNDERSCORES
Constant PepeMad._decimals (contracts/Token.sol#225) is not in UPPER_CASE_WITH_UNDERSCORES
Variable PepeMad._totalSupply (contracts/Token.sol#227) is not in mixedCase
Variable PepeMad._balances (contracts/Token.sol#229) is not in mixedCase
Variable PepeMad._allowances (contracts/Token.sol#230) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

PepeMad._totalSupply (contracts/Token.sol#227) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
contracts/Token.sol analyzed (4 contracts with 64 detectors) - 15 problems found
```

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

No major issues were found in the output



FUNCTIONAL TESTING

Router (PCS V2):

0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):

<https://testnet.bscscan.com/tx/0x84dda5597004762f94957c5751d01397f3749d7d82afbfd10ccbbc5b9d48519d>

2- Buying when excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x3420746b8773a05091b495d9272749ca59c969b7003c1dfbf7a8462f1511e776>

3- Selling when excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x4a63054f588b320136e1d5f23ff59b6c26f7127d30a709bd3b89371c315d6fa3>

4- Transferring when excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xbe5b002ec49df49f62ecda12e7e3a5975532e0bce392c116e0b2ba96a80faa70>

5- Buying when not excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xdaf080a0641a3816bb70f8e9cb85fd4995602251216721c297e6e17fea278105>

6- Selling when not excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0x21ffe55b1eb87301794559587d90085687034c77f9fea0066a59611086efc122>



FUNCTIONAL TESTING

7- Transferring when not excluded (0% tax) (passed):

<https://testnet.bscscan.com/tx/0xe9433f47deea07983c0ad790d89cb093547a54710b751acac7eaca9015d04f53>

MANUAL TESTING

Centralization – Trades must be enabled

Severity: **High**

function: enableTrading

Status: Resolved (contract Is owned by safu dev)

Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.

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

Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3rd party in order to guarantee enabling of the trades



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