AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

Ange

DATED : 12 July 23'

FUNCTIONAL TESTING

Centralization – Enabling Trades

Severity: High

function: enableTrading

Status: Not Resolved

Overview:

Owner of the contract must enable trades manually for investors, otherwise no one would be able to buy/sell/transfer their tokens.

```
function enableTrading() public onlyOwner {
    require(!tradingEnabled, "Trading already enabled!");
    require(_hasLiqBeenAdded, "Liquidity must be added.");
    if (address(initializer) == address(0)) {
        initializer = Initializer(address(this));
    }
    try initializer.setLaunch(lpPair, uint32(block.number), uint64(block.timestamp), _decimals) {} catch {}
    try initializer.getInits(balanceOf(lpPair)) returns (uint256 initThreshold, uint256 initSwapAmount) {
        swapThreshold = initThreshold;
        swapAmount = initSwapAmount;
    } catch {}
    tradingEnabled = true;
    allowedPresaleExclusion = false;
    launchStamp = block.timestamp;
}
```

Suggestion

Its suggested to either enable trades prior to presale, or transfer ownership of the contract to a certified pinsksale safu developer to guearanee enabling of trades.

FUNCTIONAL TESTING

Centralization – Initializer

Severity: High

function: checkUser

Status: Not Resolved

Overview:

The contract under audit uses an initializer contract to check limited wallets through the checkUser function. If the checkUser function returns false, the transaction will be reverted, giving the initializer contract the ability to essentially blacklist certain addresses.

```
if (_hasLimits(from, to) && false) {
    bool checked;
    try initializer.checkUser(from, to, amount) returns (bool check) {
        checked = check;
    } catch {
        revert("Initializer error");
    }
    if (!checked) revert("You are not checked");
}
```

However, we don't have access to the initializer contract's full implementation, especially functions like checkUser, **and it's not in the scope of this audit.**

Suggestion

- The logic for checking users within the main contract could be made more transparent and auditable. This can be done by implementing the checkUser function in the main contract itself, reducing dependency on an external initializer.
- Lastly, if the initializer contract is required, provide a public and thorough audit of its code. This helps the community to understand its functionalities, providing transparency and building trust among token holders.

FUNCTIONAL TESTING

Centralization – Updating router

Severity: High

function: checkUser

Status: Not Resolved

Overview:

The router contract is currently upgradeable until liquidity is added. If the router is set to an invalid or malicious address, it can potentially cause the internal swaps and sell transactions leading to internal swaps to revert. Although the contract uses a try-catch block to handle the internal swap failures, it doesn't handle all types of errors, such as compiler errors (underflow/overflow).

```
function setNewRouter(address newRouter) external onlyOwner {
    //....
    IRouter02 _newRouter = IRouter02(newRouter);
    //....
}

function contractSwap(uint256 contractTokenBalance) internal inSwapFlag {
    //....
    try dexRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(
        contractTokenBalance, 0, path, address(this), block.timestamp
    ) {} catch {
        return;
    }
    //....
}
```

Suggestion

Transparent and clear processes: Make sure the process for updating the router is clear and transparent. This can be achieved by emitting events when the router is updated or providing mechanisms for stakeholders to propose and vote on updates to the router.

validation: validate the new router contract by implementing a function that checks the legitimacy of the contract, for instance, by ensuring it has the required interface and is not a malicious contract.

AUDIT SUMMARY

Project name – Ange

Date: 12 July, 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	3	2	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/token/0x7115b6224d4F6Df0469b2d4737EdC082cf22118d

Token Information

Token Name : Ange

Token Symbol: aai

Decimals: 9

Token Supply: 100,000,000

Token Address: ---

Checksum:
4aa2711f21a9ddaabbb65ee9df3bc8647b16f482

Owner:

(at time of writing the audit)

Deployer:

TOKEN OVERVIEW

Fees:

Buy Fees: 0-10%

Sell Fees: 0-10%

Transfer Fees: 0%

Fees Privilege: No Fees

Ownership: owned

Minting: none

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

Other Privileges:- Initial distribution of the tokens

- Modifying fees

- 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 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

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

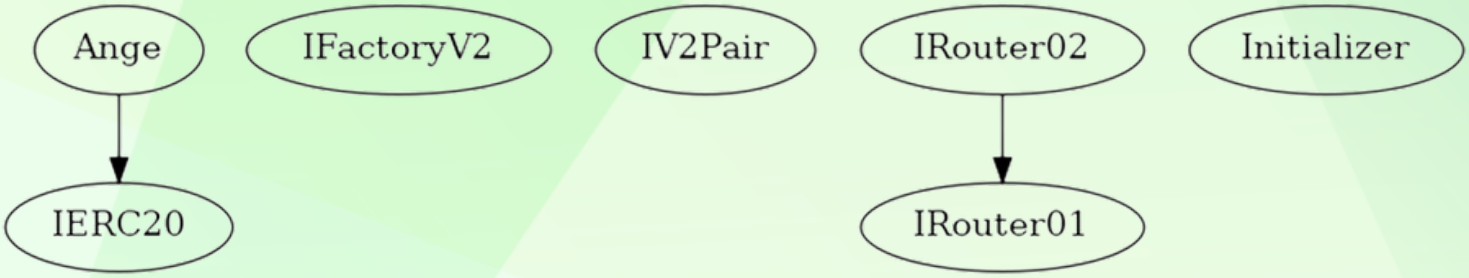
CLASSIFICATION OF RISK

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	3
Medium-Risk	2
Low-Risk	0
Gas Optimization / Suggestions	1

INHERITANCE TREE



POINTS TO NOTE

- **Owner is able to change buy/sell/transfer fees within 0-10%**
- Owner is not able to blacklist an address
- Owner is not able to disable buy/sell/transfers
- Owner is not able to set max wallet limit and minimum wallet limits
- Owner is not able to mint new tokens
- **Owner must enable trades manually**

CONTRACT ASSESMENT

Contract	Type	Bases		
└	**Function Name**	**Visibility**	**Mutability**	**Modifiers**
IERC20	Interface			
└	totalSupply	External ❗		NO ❗
└	decimals	External ❗		NO ❗
└	symbol	External ❗		NO ❗
└	name	External ❗		NO ❗
└	getOwner	External ❗		NO ❗
└	balanceOf	External ❗		NO ❗
└	transfer	External ❗	🛑	NO ❗
└	allowance	External ❗		NO ❗
└	approve	External ❗	🛑	NO ❗
└	transferFrom	External ❗	🛑	NO ❗
IFactoryV2	Interface			
└	getPair	External ❗		NO ❗
└	createPair	External ❗	🛑	NO ❗
IV2Pair	Interface			
└	factory	External ❗		NO ❗
└	getReserves	External ❗		NO ❗
└	sync	External ❗	🛑	NO ❗
IRouter01	Interface			
└	factory	External ❗		NO ❗
└	WETH	External ❗		NO ❗
└	addLiquidityETH	External ❗	💵	NO ❗
└	addLiquidity	External ❗	🛑	NO ❗
└	swapExactETHForTokens	External ❗	💵	NO ❗
└	getAmountsOut	External ❗		NO ❗
└	getAmountsIn	External ❗		NO ❗
IRouter02	Interface	IRouter01		
└	swapExactTokensForETHSupportingFeeOnTransferTokens	External ❗	🛑	NO ❗
└	swapExactETHForTokensSupportingFeeOnTransferTokens	External ❗	💵	NO ❗
└	swapExactTokensForTokensSupportingFeeOnTransferTokens	External ❗	🛑	NO ❗
└	swapExactTokensForTokens	External ❗	🛑	NO ❗
Initializer	Interface			
└	setLaunch	External ❗	🛑	NO ❗
└	getConfig	External ❗	🛑	NO ❗
└	getInits	External ❗	🛑	NO ❗

CONTRACT ASSESMENT

└	setLpPair	External ❗	🛑	NO ❗
└	checkUser	External ❗	🛑	NO ❗
└	setProtections	External ❗	🛑	NO ❗
└	removeSniper	External ❗	🛑	NO ❗
Ange	Implementation	IERC20		
└	<Constructor>	Public ❗	💵	NO ❗
└	transferOwner	External ❗	🛑	onlyOwner
└	renounceOwnership	External ❗	🛑	onlyOwner
└	setOperator	Public ❗	🛑	NO ❗
└	renounceOriginalDeployer	External ❗	🛑	NO ❗
└	<Receive Ether>	External ❗	💵	NO ❗
└	totalSupply	External ❗		NO ❗
└	decimals	External ❗		NO ❗
└	symbol	External ❗		NO ❗
└	name	External ❗		NO ❗
└	getOwner	External ❗		NO ❗
└	allowance	External ❗		NO ❗
└	balanceOf	Public ❗		NO ❗
└	transfer	Public ❗	🛑	NO ❗
└	approve	External ❗	🛑	NO ❗
└	_approve	Internal 🔒	🛑	
└	approveContractContingency	External ❗	🛑	onlyOwner
└	transferFrom	External ❗	🛑	NO ❗
└	setNewRouter	External ❗	🛑	onlyOwner
└	setLpPair	External ❗	🛑	onlyOwner
└	setInitializer	Public ❗	🛑	onlyOwner
└	isExcludedFromFees	External ❗		NO ❗
└	setExcludedFromFees	Public ❗	🛑	onlyOwner
└	isExcludedFromProtection	External ❗		NO ❗
└	setExcludedFromProtection	External ❗	🛑	onlyOwner
└	getCirculatingSupply	Public ❗		NO ❗
└	removeSniper	External ❗	🛑	onlyOwner
└	setProtectionSettings	External ❗	🛑	onlyOwner
└	lockTaxes	External ❗	🛑	onlyOwner
└	setTaxes	External ❗	🛑	onlyOwner
└	setWallets	External ❗	🛑	onlyOwner
└	getTokenAmountAtPriceImpact	External ❗		NO ❗
└	setSwapSettings	External ❗	🛑	onlyOwner
└	setPriceImpactSwapAmount	External ❗	🛑	onlyOwner
└	setContractSwapEnabled	External ❗	🛑	onlyOwner
└	excludePresaleAddresses	External ❗	🛑	onlyOwner

CONTRACT ASSESMENT

└	_hasLimits	Internal 🔒		
└	_transfer	Internal 🔒	🛑	
└	contractSwap	Internal 🔒	🛑	inSwapFlag
└	_checkLiquidityAdd	Internal 🔒	🛑	
└	enableTrading	Public ❗	🛑	onlyOwner
└	sweepContingency	External ❗	🛑	onlyOwner
└	sweepExternalTokens	External ❗	🛑	onlyOwner
└	multiSendTokens	External ❗	🛑	onlyOwner
└	finalizeTransfer	Internal 🔒	🛑	
└	takeTaxes	Internal 🔒	🛑	

Legend

Symbol	Meaning
🛑	Function can modify state
💵	Function is payable

STATIC ANALYSIS

```
Reentrancy in Ange.setNewRouter(address) (contracts/Token.sol#307-320):
        External calls:
        - lpPair = IFactoryV2(_newRouter.factory()).createPair(address(this),_newRouter.WETH()) (contracts/Token.sol#313)
        Event emitted after the call(s):
        - Approval(sender,spender,amount) (contracts/Token.sol#291)
                - _approve(address(this),address(dexRouter),type()(uint256).max) (contracts/Token.sol#319)
Reentrancy in Ange.transferOwner(address) (contracts/Token.sol#195-208):
        External calls:
        - finalizeTransfer(_owner,newOwner,balanceOf(_owner),false,false,true) (contracts/Token.sol#202)
                - initializer.checkUser(from,to,amount) (contracts/Token.sol#578-582)
        Event emitted after the call(s):
        - OwnershipTransferred(oldOwner,newOwner) (contracts/Token.sol#207)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-3

Ange.setLpPair(address,bool) (contracts/Token.sol#322-335) uses timestamp for comparisons
        Dangerous comparisons:
        - timeSinceLastPair != 0 (contracts/Token.sol#327)
        - require(bool,string)(block.timestamp - timeSinceLastPair > 259200,3 Day cooldown.) (contracts/Token.sol#328)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#block-timestamp

Ange._checkLiquidityAdd(address,address) (contracts/Token.sol#517-531) has costly operations inside a loop:
        - _hasLiqBeenAdded = true (contracts/Token.sol#524)
Ange._checkLiquidityAdd(address,address) (contracts/Token.sol#517-531) has costly operations inside a loop:
        - initializer = Initializer(address(this)) (contracts/Token.sol#526)
Ange._checkLiquidityAdd(address,address) (contracts/Token.sol#517-531) has costly operations inside a loop:
        - contractSwapEnabled = true (contracts/Token.sol#528)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#costly-operations-inside-a-loop

Pragma version>=0.6.0<0.9.0 (contracts/Token.sol#2) is too complex
solc-0.8.20 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in Ange.contractSwap(uint256) (contracts/Token.sol#498-515):
        - (success,None) = marketingWallet.call{gas: 55000,value: address(this).balance}() (contracts/Token.sol#514)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function IRouter01.WETH() (contracts/Token.sol#35) is not in mixedCase
Parameter Ange.setProtectionSettings(bool,bool)._antiSnipe (contracts/Token.sol#376) is not in mixedCase
Parameter Ange.setProtectionSettings(bool,bool)._antiBlock (contracts/Token.sol#376) is not in mixedCase
Constant Ange.startingSupply (contracts/Token.sol#119) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange._name (contracts/Token.sol#120) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange._symbol (contracts/Token.sol#121) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange._decimals (contracts/Token.sol#122) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange._tTotal (contracts/Token.sol#123) is not in UPPER_CASE_WITH_UNDERSCORES
Variable Ange._taxRates (contracts/Token.sol#131) is not in mixedCase
Constant Ange.maxBuyTaxes (contracts/Token.sol#133) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange.maxSellTaxes (contracts/Token.sol#134) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange.maxTransferTaxes (contracts/Token.sol#135) is not in UPPER_CASE_WITH_UNDERSCORES
Constant Ange.masterTaxDivisor (contracts/Token.sol#136) is not in UPPER_CASE_WITH_UNDERSCORES
Variable Ange._hasLiqBeenAdded (contracts/Token.sol#153) is not in mixedCase
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Variable IRouter01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountADesired (contracts/Token.sol#47) is too similar to I
Router01.addLiquidity(address,address,uint256,uint256,uint256,uint256,address,uint256).amountBDesired (contracts/Token.sol#48)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar
```

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

1- Adding liquidity (passed):
https://testnet.bscscan.com/tx/0xfe0b702c58767f29f621c56e3e54cf7a9910a63608e1b685627dd1e66c3748ec

2- Buying when excluded from fees (0% tax) (passed):
https://testnet.bscscan.com/tx/0x9d4922a6bed350966a93f4a9072c196b4216f2035d183ff0cb7fa251fa51883e

3- Selling when excluded from fees (0% tax) (passed):
https://testnet.bscscan.com/tx/0xf33813b0a43b1b7008571297b3878623c0d15121dd54781fe1e3be2c3f910511

4- Transferring when excluded from fees (0% tax) (passed):
https://testnet.bscscan.com/tx/0xd071802824ce90520c2d58395a64c3ec151998736088d9d3d3cfe05e7c57bcf7

5- Buying(0-10% tax) (passed):
https://testnet.bscscan.com/tx/0xb634f7b86b6de534ccbc6c0f43e002f664c8d91b092864b4b84d3eed59df0874

6- Selling (0-10% tax) (passed):
https://testnet.bscscan.com/tx/0xb634f7b86b6de534ccbc6c0f43e002f664c8d91b092864b4b84d3eed59df0874

FUNCTIONAL TESTING

4- Transferring (0-10% tax) (passed):
https://testnet.bscscan.com/tx/0xab33813b6163800e9b038cbd6cda7ceedd5bc2e782a3bff4f1e1030639676639

4- Internal swap (ETH sent to marketing wallet / swap threshold equal to 1/1000000 of supply, the correct amount was swapped) (passed):
https://testnet.bscscan.com/address/0xc1610893d7770b2be156f0ffadf21efa55d7eb81#internaltx

FUNCTIONAL TESTING

Centralization – Enabling Trades

Severity: High

function: enableTrading

Status: Not Resolved

Overview:

Owner of the contract must enable trades manually for investors, otherwise no one would be able to buy/sell/transfer their tokens.

```
function enableTrading() public onlyOwner {
    require(!tradingEnabled, "Trading already enabled!");
    require(_hasLiqBeenAdded, "Liquidity must be added.");
    if (address(initializer) == address(0)) {
        initializer = Initializer(address(this));
    }
    try initializer.setLaunch(lpPair, uint32(block.number), uint64(block.timestamp), _decimals) {} catch {}
    try initializer.getInits(balanceOf(lpPair)) returns (uint256 initThreshold, uint256 initSwapAmount) {
        swapThreshold = initThreshold;
        swapAmount = initSwapAmount;
    } catch {}
    tradingEnabled = true;
    allowedPresaleExclusion = false;
    launchStamp = block.timestamp;
}
```

Suggestion

Its suggested to either enable trades prior to presale, or transfer ownership of the contract to a certified pinsksale safu developer to guearanee enabling of trades.

FUNCTIONAL TESTING

Centralization – Initializer

Severity: High

function: checkUser

Status: Not Resolved

Overview:

The contract under audit uses an initializer contract to check limited wallets through the checkUser function. If the checkUser function returns false, the transaction will be reverted, giving the initializer contract the ability to essentially blacklist certain addresses.

```
if (_hasLimits(from, to) && false) {
    bool checked;
    try initializer.checkUser(from, to, amount) returns (bool check) {
        checked = check;
    } catch {
        revert("Initializer error");
    }
    if (!checked) revert("You are not checked");
}
```

However, we don't have access to the initializer contract's full implementation, especially functions like checkUser, **and it's not in the scope of this audit.**

Suggestion

- The logic for checking users within the main contract could be made more transparent and auditable. This can be done by implementing the checkUser function in the main contract itself, reducing dependency on an external initializer.
- Lastly, if the initializer contract is required, provide a public and thorough audit of its code. This helps the community to understand its functionalities, providing transparency and building trust among token holders.

FUNCTIONAL TESTING

Centralization – Updating router

Severity: High

function: checkUser

Status: Not Resolved

Overview:

The router contract is currently upgradeable until liquidity is added. If the router is set to an invalid or malicious address, it can potentially cause the internal swaps and sell transactions leading to internal swaps to revert. Although the contract uses a try-catch block to handle the internal swap failures, it doesn't handle all types of errors, such as compiler errors (underflow/overflow).

```
function setNewRouter(address newRouter) external onlyOwner {
    //....
    IRouter02 _newRouter = IRouter02(newRouter);
    //....
}

function contractSwap(uint256 contractTokenBalance) internal inSwapFlag {
    //....
    try dexRouter.swapExactTokensForETHSupportingFeeOnTransferTokens(
        contractTokenBalance, 0, path, address(this), block.timestamp
    ) {} catch {
        return;
    }
    //....
}
```

Suggestion

Transparent and clear processes: Make sure the process for updating the router is clear and transparent. This can be achieved by emitting events when the router is updated or providing mechanisms for stakeholders to propose and vote on updates to the router.

validation: validate the new router contract by implementing a function that checks the legitimacy of the contract, for instance, by ensuring it has the required interface and is not a malicious contract.

FUNCTIONAL TESTING

Logical – Misconfiguration of initializer variable in token contract

Impact: Medium
function: ---
Status: Not Resolved
Overview:

In the contract under review, the initializer is set to the address of the token contract itself if it's not assigned to another address before trading is enabled. This configuration poses several significant issues in the contract that could impede its proper functioning:

1. In the finalizeTransfer function, if the initializer is set to the token address, an error will occur during the execution of the initializer.checkUser method, as it's not implemented in the contract. The contract will catch this error and revert the entire transaction.
2. Functions such as setPair, setLpPair in the contract will be uncallable due to the onlyOwner modifier. As the contract externally calls these functions, and the initializer is set to the token address, the msg.sender will be the token address, which is not equal to the contract owner.
3. Recursive calls will occur if the contract makes a call to the initializer set to its own address, which can exceed the block's gas limit, resulting in the transaction being reverted.

Although this is a medium-severity issue because the initializer can be set to a valid contract before enabling trades, it's important to note that we don't have access to the full implementation of the initializer contract, especially the checkUser function.

Suggestion: We recommend developing and linking an initializer contract to the main contract from the onset instead of setting it to a valid initializer after adding liquidity and enabling trades. The time between adding liquidity and enabling trades could be error-prone, e.g., mistakenly renouncing ownership, which could render the token unusable.

FUNCTIONAL TESTING

Logical – Excessive 45% tax if initializer is not correctly set

Impact: Medium
function: ---
Status: Not Resolved
Overview:

The current contract design leads to a 45% tax imposition on all buy/sell/transfer transactions if the initializer is not set to another address before enabling trades. This high tax rate is caused by the fact that both conditions in the if (address(initializer) == address(this) && block.chainid != 97) statement are true. The first condition is true when the initializer is not updated, and the second condition will always be true on any network other than the Binance Smart Chain Testnet, which has a chain ID of 97.

```
if (address(initializer) == address(this) && block.chainid != 97) currentFee = 4500;
```

The current setting of these conditions thus leads to a potential tax fee of 45%, which is considered extremely high for standard transactions.

This issue is categorized as medium severity because it can be mitigated by setting the initializer to a valid contract before enabling trades. However, note that we don't have access to the full implementation of the initializer contract.

Suggestion: It is recommended to develop and link an initializer contract to the main contract from the beginning rather than setting it to a valid initializer after adding liquidity and enabling trades. The period between adding liquidity and enabling trades is susceptible to errors, such as accidentally renouncing ownership, which could make the token unusable. Also, to ensure the takeTaxes function behaves as expected on the mainnet, the chain ID comparison value (currently set to 97) should be adjusted to match the chain ID of the intended production network. This will prevent the inadvertent application of the excessive 45% tax.

FUNCTIONAL TESTING

Optimizations – Redundant code

Severity: Informational

function: ---

Status: Not Resolved

Overview:

Below codes are not used in other core sections of the contract.

```
    address public originalDeployer;
    address public operator;

    // Function to set an operator to allow someone other the deployer to create things such as launchpads.
    // Only callable by original deployer.
    function setOperator(address newOperator) public {
        require(msg.sender == originalDeployer, "Can only be called by original deployer.");
        address oldOperator = operator;
        if (oldOperator != address(0)) {
            _liquidityHolders[oldOperator] = false;
            setExcludedFromFees(oldOperator, false);
        }
        operator = newOperator;
        _liquidityHolders[newOperator] = true;
        setExcludedFromFees(newOperator, true);
    }

    function renounceOriginalDeployer() external {
        //@audit redundant
        require(msg.sender == originalDeployer, "Can only be called by original deployer.");
        setOperator(address(0));
        originalDeployer = address(0);
    }
```

Suggestion

Delete redundant code in order to reduce overall size of the contract.

DISCLAIMER

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment. Team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed. The Auditace team has audited this project for general information and only expresses their opinion based on similar projects and checks from popular diagnostic tools. Under no circumstances did Auditace receive a payment to manipulate those results or change the awarding badge that we will be adding in our website. Always Do your own research and protect yourselves from scams. This document should not be presented as a reason to buy or not buy any particular token. The Auditace team disclaims any liability for the resulting losses.

ABOUT AUDITACE

We specializes in providing thorough and reliable audits for Web3 projects. With a team of experienced professionals, we use cutting-edge technology and rigorous methodologies to evaluate the security and integrity of blockchain systems. We are committed to helping our clients ensure the safety and transparency of their digital assets and transactions.

https://auditace.tech/

https://t.me/Audit_Ace

https://twitter.com/auditace_

https://github.com/Audit-Ace