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AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

Master Of Cats

DATED : 26 April 24'

MANUAL TESTING

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 place a high degree of control and centralization in the hands of the contract owner.

```
function enableTrading() external onlyOwner {
    require(!tradingEnabled, "STOP! Trading is live");
    tradingEnabled = true;
    startTradingBlock = block.number;
    emit TradingEnabled(startTradingBlock);
 }
```

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 give investors more confidence in the eventual activation of trading capabilities, mitigating concerns of potential bad-faith actions by the original owner.

AUDIT SUMMARY

Project name – Master Of Cats

Date: 26 April 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	1	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/0xb2a109ecf5cb7a462e900f3235dac3394c4935c9#code

Token Information

Token Address:
0x73082c8315E365b50964fa65A41edBe12B226147

Name: Master Of Cats

Symbol: MCATS

Decimals: 18

Network: BscScan

Token Type: BEP-20

Owner:
0x9F940E2AB79fd4F68ee5349979d6bc4A20A50487

Deployer:
0x9F940E2AB79fd4F68ee5349979d6bc4A20A50487

Token Supply: 215000000000

Checksum: Ac6659e84744e0102ab19c1d1e78a321

Testnet:
https://testnet.bscscan.com/address/0xb2a109ecf5cb7a462e900f3235dac3394c4935c9#code

TOKEN OVERVIEW

Buy Tax: 5%

Sell Tax: 5%

Transfer Fee: 0-0%

Fee Privilege: Owner

Ownership: Owned

Minting: No

Max Tx: No

Blacklist: No

AUDIT METHODOLOGY

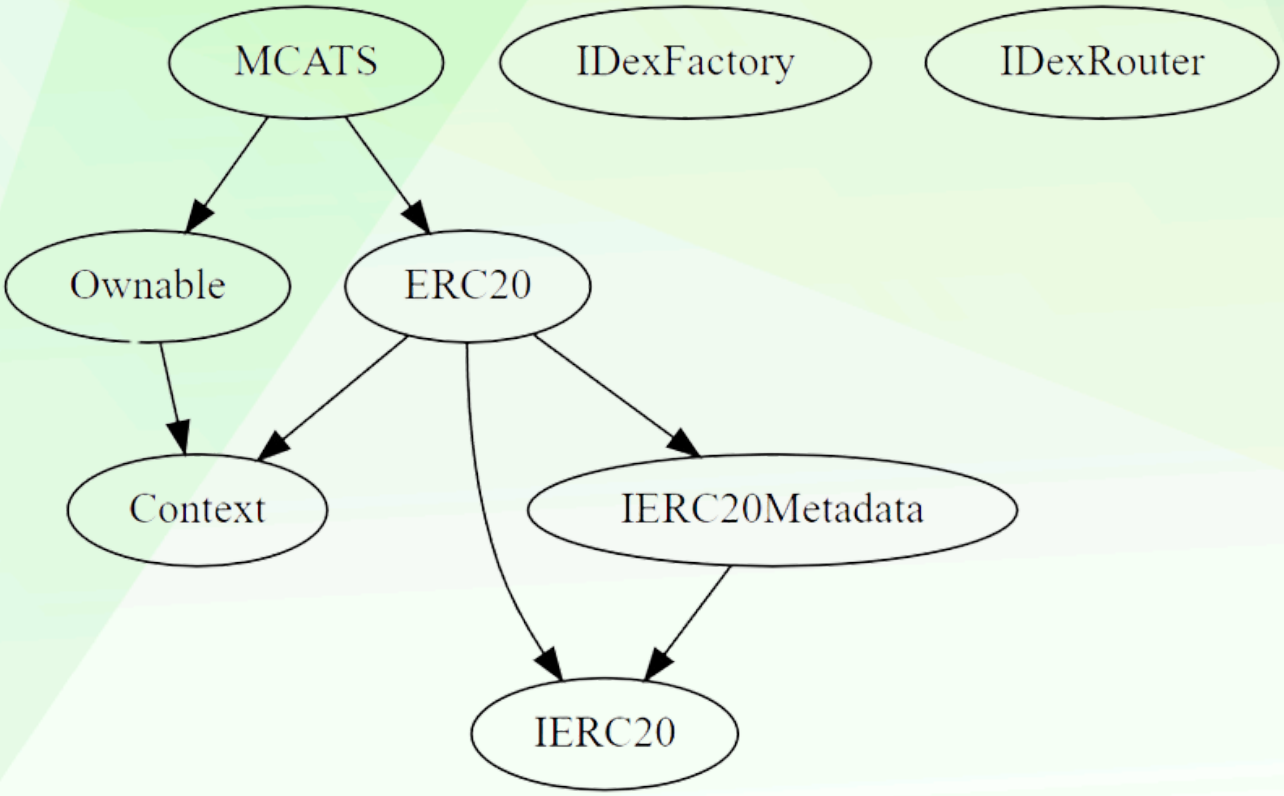
The auditing process will follow a routine as special considerations by Auditace:

- 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

- [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

INHERITANCE TREE



STATIC ANALYSIS

A static analysis of the code was performed using Slither.

No issues were found.

```
INFO:Detectors:
Pragma version0.8.17 (MCATS.sol#6) allows old versions
solc-0.8.17 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity
INFO:Detectors:
Low level call in MCATS.internalSwap() (MCATS.sol#251-265):
        - (success) = marketingWallet.call{value: newBalance}() (MCATS.sol#261)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls
INFO:Detectors:
Function IDexRouter.WETH() (MCATS.sol#132) is not in mixedCase
Parameter MCATS.setWhitelistStatus(address,bool)._wallet (MCATS.sol#183) is not in mixedCase
Parameter MCATS.setWhitelistStatus(address,bool)._status (MCATS.sol#183) is not in mixedCase
Parameter MCATS.clearTokens(address)._tokenAddress (MCATS.sol#203) is not in mixedCase
Parameter MCATS.checkWhitelist(address)._wallet (MCATS.sol#212) is not in mixedCase
Parameter MCATS.swapToBNB(uint256)._amount (MCATS.sol#267) is not in mixedCase
Constant MCATS._totalSupply (MCATS.sol#138) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions
INFO:Detectors:
Redundant expression "this (MCATS.sol#10)" inContext (MCATS.sol#8-11)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#redundant-statements
INFO:Detectors:
Reentrancy in MCATS.clearBNB() (MCATS.sol#194-200):
        External calls:
        - address(msg.sender).transfer(amount) (MCATS.sol#198)
        Event emitted after the call(s):
        - BNBCleared(msg.sender,amount) (MCATS.sol#199)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-4
INFO:Detectors:
MCATS.slitherConstructorVariables() (MCATS.sol#137-286) uses literals with too many digits:
        - swapTokensAtAmount = _totalSupply / 100000 (MCATS.sol#142)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits
INFO:Detectors:
MCATS.marketingWallet (MCATS.sol#141) should be constant
MCATS.swapTokensAtAmount (MCATS.sol#142) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
INFO:Detectors:
MCATS.pairAddress (MCATS.sol#140) should be immutable
MCATS.uniswapRouter (MCATS.sol#139) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
INFO:Slither:MCATS.sol analyzed (8 contracts with 93 detectors), 27 result(s) found
```

FUNCTIONAL TESTING

1- Approve (passed):

https://testnet.bscscan.com/tx/0xcbc99d0d7dea227861ed20713021963f6c106a0984d1e322ba1ddc6809fb41bc

2- Increase Allowance (passed):

https://testnet.bscscan.com/tx/0x8ce96a27624d2ecf05fe483514c0438f4802b521e07dc3ef3ac8062b27497b41

3- Decrease Allowance (passed):

https://testnet.bscscan.com/tx/0xd0d2159382eb09ea5a779859fa691f1956e83a77e20e0c121da66c20285b6209

4- Enable Trading (passed):

https://testnet.bscscan.com/tx/0xbf4885555919384db04956ec315440701649b28946e8a88015ec865459fb90ca

5- Transfer (passed):

https://testnet.bscscan.com/tx/0x7f122f7f8f26221666ca6b09f265aea53ad7cf6d14c1d8891223e64c47e87dc8

POINTS TO NOTE

- The owner can transfer ownership.
- The owner can renounce ownership.
- The owner can enable trading.
- The owner can set whitelist status.

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

MANUAL TESTING

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Status: Open

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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 _burn(address account, uint256 amount) internal virtual
{
   require(account != address(0), "STOP: burn from the zero
address");
   _beforeTokenTransfer(account, address(0), amount);
   uint256 accountBalance = _balances[account];
   require(accountBalance >= amount, "STOP: burn amount
exceeds balance");
   unchecked {
     _balances[account] = accountBalance - amount;
     _totalSupply -= amount;
   }
   emit Transfer(account, address(0), amount);
   _afterTokenTransfer(account, address(0), amount);
 }
function _msgData() internal view virtual returns (bytes memory)
{this; return msg.data;}
```

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ABOUT AUDITACE

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