AuditAce
FROM INCEPTION TO SUCCESS

Smart Contract Audit

FOR

Trump 2024

DATED : 2 Feb, 2024

AUDIT SUMMARY

Project name – Trump 2024

Date: 2 Feb, 2024

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	1	1	2
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/0x29d54d462ff2ceb2898d04449ccd098218b4b346#code

Token Information

Token Name : Trump 2024

Token Symbol: TRUMP2024

Decimals: 9

Token Supply: 420000000000000000

Network: BscScan

Token Type: BEP-20

Token Address:
0x20c3d8152FAE9e8c1126F76B1dad4a6Ab5390420

Checksum:
A2032c616934aeb47e6039f76b20d200

Owner:
0xf4CefB442c9C390C67bfFa8D8AD2Fc256Ba00d1a
(at time of writing the audit)

Deployer:
0xf4CefB442c9C390C67bfFa8D8AD2Fc256Ba00d1a

TOKEN OVERVIEW

Fees:

Buy Fee: 9%

Sell Fee: 9%

Transfer Fee: 0-0%

Fees Privilege: Owner

Ownership: Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: No

Blacklist: No

AUDIT METHODOLOGY

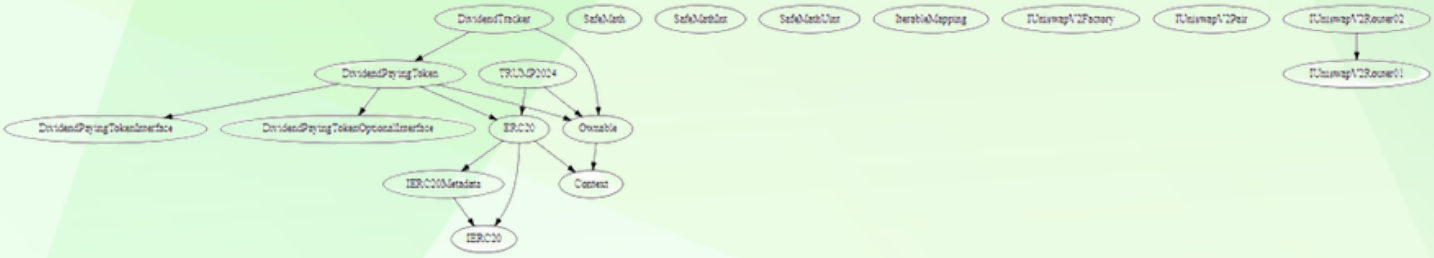
The auditing process will follow a routine as special considerations by Auditace:

- 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

- 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

INHERITANCE TREE



STATIC ANALYSIS

A static analysis of the code was performed using Slither.

No issues were found.

```
INFO:Detectors:
Reentrancy in DividendPayingToken._withdrawDividendOfUser(address) (TRUMP2024.sol#603-618):
        External calls:
        - success = IERC20(rewardToken).transfer(user,_withdrawableDividend) (TRUMP2024.sol#608)
        State variables written after the call(s):
        - withdrawnDividends[user] = withdrawnDividends[user].sub(_withdrawableDividend) (TRUMP2024.sol#611)
        DividendPayingToken.withdrawnDividends (TRUMP2024.sol#580) can be used in cross function reentrancies:
        - DividendPayingToken._withdrawDividendOfUser(address) (TRUMP2024.sol#603-618)
        - DividendPayingToken.withdrawableDividendOf(address) (TRUMP2024.sol#624-626)
        - DividendPayingToken.withdrawnDividendOf(address) (TRUMP2024.sol#628-630)
Reentrancy in DividendTracker.process(uint256) (TRUMP2024.sol#827-872):
        External calls:
        - processAccount(address(account),true) (TRUMP2024.sol#853)
                - success = IERC20(rewardToken).transfer(user,_withdrawableDividend) (TRUMP2024.sol#608)
        State variables written after the call(s):
        - lastProcessedIndex = _lastProcessedIndex (TRUMP2024.sol#869)
        DividendTracker.lastProcessedIndex (TRUMP2024.sol#678) can be used in cross function reentrancies:
        - DividendTracker.getAccount(address) (TRUMP2024.sol#738-781)
        - DividendTracker.getLastProcessedIndex() (TRUMP2024.sol#730-732)
        - DividendTracker.lastProcessedIndex (TRUMP2024.sol#678)
        - DividendTracker.process(uint256) (TRUMP2024.sol#827-872)
        - DividendTracker.setLastProcessedIndex(uint256) (TRUMP2024.sol#726-728)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-1
INFO:Detectors:
TRUMP2024._transfer(address,address,uint256).burnTokens (TRUMP2024.sol#1056) is a local variable never initialized
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#uninitialized-local-variables
INFO:Detectors:
TRUMP2024.getAccountDividendsInfo(address) (TRUMP2024.sol#1195-1206) ignores return value by dividendTracker.getAccount(account) (TRUMP2024.sol#1205)
TRUMP2024.getAccountDividendsInfoAtIndex(uint256) (TRUMP2024.sol#1208-1219) ignores return value by dividendTracker.getAccountAtIndex(index) (TRUMP2024.sol#
1218)
TRUMP2024.claim() (TRUMP2024.sol#1226-1228) ignores return value by dividendTracker.processAccount(address(msg.sender),false) (TRUMP2024.sol#1227)
TRUMP2024.claimAddress(address) (TRUMP2024.sol#1230-1232) ignores return value by dividendTracker.processAccount(address(claimee),false) (TRUMP2024.sol#1231
)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-return
```

```
INFO:Detectors:
DividendPayingToken.constructor(string,string,address)._name (TRUMP2024.sol#582) shadows:
        - ERC20._name (TRUMP2024.sol#439) (state variable)
DividendPayingToken.constructor(string,string,address)._symbol (TRUMP2024.sol#582) shadows:
        - ERC20._symbol (TRUMP2024.sol#440) (state variable)
DividendPayingToken.dividendOf(address)._owner (TRUMP2024.sol#620) shadows:
        - Ownable._owner (TRUMP2024.sol#24) (state variable)
DividendPayingToken.withdrawableDividendOf(address)._owner (TRUMP2024.sol#624) shadows:
        - Ownable._owner (TRUMP2024.sol#24) (state variable)
DividendPayingToken.withdrawnDividendOf(address)._owner (TRUMP2024.sol#628) shadows:
        - Ownable._owner (TRUMP2024.sol#24) (state variable)
DividendPayingToken.accumulativeDividendOf(address)._owner (TRUMP2024.sol#632) shadows:
        - Ownable._owner (TRUMP2024.sol#24) (state variable)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#local-variable-shadowing
INFO:Detectors:
DividendTracker.setLastProcessedIndex(uint256) (TRUMP2024.sol#726-728) should emit an event for:
        - lastProcessedIndex = index (TRUMP2024.sol#727)
TRUMP2024.setSwapTokensAtAmount(uint256) (TRUMP2024.sol#1161-1164) should emit an event for:
        - swapTokensAtAmount = newAmount (TRUMP2024.sol#1163)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-events-arithmetic
INFO:Detectors:
DividendPayingToken.constructor(string,string,address)._rewardToken (TRUMP2024.sol#582) lacks a zero-check on :
                - rewardToken = _rewardToken (TRUMP2024.sol#583)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#missing-zero-address-validation
INFO:Detectors:
DividendPayingToken._withdrawDividendOfUser(address) (TRUMP2024.sol#603-618) has external calls inside a loop: success = IERC20(rewardToken).transfer(user,_
withdrawableDividend) (TRUMP2024.sol#608)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation/#calls-inside-a-loop
INFO:Detectors:
Reentrancy in DividendTracker.processAccount(address,bool) (TRUMP2024.sol#874-884):
        External calls:
        - amount = _withdrawDividendOfUser(account) (TRUMP2024.sol#875)
                - success = IERC20(rewardToken).transfer(user,_withdrawableDividend) (TRUMP2024.sol#608)
        State variables written after the call(s):
        - lastClaimTimes[account] = block.timestamp (TRUMP2024.sol#878)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-2
```

STATIC ANALYSIS

```
INFO:Detectors:
DividendTracker.getAccount(address) (TRUMP2024.sol#738-781) uses timestamp for comparisons
        Dangerous comparisons:
        - nextClaimTime > block.timestamp (TRUMP2024.sol#778-780)
DividendTracker.canAutoClaim(uint256) (TRUMP2024.sol#802-808) uses timestamp for comparisons
        Dangerous comparisons:
        - lastClaimTime > block.timestamp (TRUMP2024.sol#803)
        - block.timestamp.sub(lastClaimTime) >= claimWait (TRUMP2024.sol#807)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#block-timestamp
INFO:Detectors:
TRUMP2024._transfer(address,address,uint256) (TRUMP2024.sol#1032-1138) has a high cyclomatic complexity (17).
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#cyclomatic-complexity
INFO:Detectors:
Context._msgData() (TRUMP2024.sol#18-20) is never used and should be removed
DividendPayingToken._transfer(address,address,uint256) (TRUMP2024.sol#637-643) is never used and should be removed
SafeMath.div(uint256,uint256) (TRUMP2024.sol#87-89) is never used and should be removed
SafeMath.div(uint256,uint256,string) (TRUMP2024.sol#91-97) is never used and should be removed
SafeMath.mod(uint256,uint256) (TRUMP2024.sol#99-101) is never used and should be removed
SafeMath.mod(uint256,uint256,string) (TRUMP2024.sol#103-106) is never used and should be removed
SafeMathInt.abs(int256) (TRUMP2024.sol#138-141) is never used and should be removed
SafeMathInt.div(int256,int256) (TRUMP2024.sol#121-127) is never used and should be removed
SafeMathInt.mul(int256,int256) (TRUMP2024.sol#113-120) is never used and should be removed
TRUMP2024.isContract(address) (TRUMP2024.sol#994-996) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code
INFO:Detectors:
Pragma version0.8.17 (TRUMP2024.sol#11) 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 TRUMP2024.sendBNB(address,uint256) (TRUMP2024.sol#998-1003):
        - (success) = recipient.call{value: amount}() (TRUMP2024.sol#1001)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls
```

```
INFO:Detectors:
SafeMathInt.MAX_INT256 (TRUMP2024.sol#111) is never used in SafeMathInt (TRUMP2024.sol#109-146)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#unused-state-variable
INFO:Detectors:
TRUMP2024.gasForProcessing (TRUMP2024.sol#915) should be constant
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-constant
INFO:Detectors:
TRUMP2024.burnFeeOnBuy (TRUMP2024.sol#888) should be immutable
TRUMP2024.burnFeeOnSell (TRUMP2024.sol#894) should be immutable
TRUMP2024.dividendTracker (TRUMP2024.sol#913) should be immutable
TRUMP2024.marketingFeeOnBuy (TRUMP2024.sol#889) should be immutable
TRUMP2024.marketingFeeOnSell (TRUMP2024.sol#895) should be immutable
TRUMP2024.rewardsFeeOnBuy (TRUMP2024.sol#890) should be immutable
TRUMP2024.rewardsFeeOnSell (TRUMP2024.sol#896) should be immutable
TRUMP2024.totalBuyFee (TRUMP2024.sol#892) should be immutable
TRUMP2024.totalSellFee (TRUMP2024.sol#898) should be immutable
TRUMP2024.uniswapV2Pair (TRUMP2024.sol#903) should be immutable
TRUMP2024.uniswapV2Router (TRUMP2024.sol#902) should be immutable
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#state-variables-that-could-be-declared-immutable
INFO:Slither:TRUMP2024.sol analyzed (18 contracts with 93 detectors), 70 result(s) found
```

FUNCTIONAL TESTING

1- Approve (passed):
https://testnet.bscscan.com/tx/0x3ccef6c394e269d5e2bcc0ff7c179de85988cc7eeacb72325b76f84798b69d99

2- Increase Allowance (passed):
https://testnet.bscscan.com/tx/0x2eb5fcc37fd0f06b15a2e091637e7dbb7dfd7ba7cf0ada83ecb892dcb4217e75

3- Decrease Allowance (passed):
https://testnet.bscscan.com/tx/0x255f41d78d8430e141b6b6247f167076fe7872783f4ba2bf205a54e0fced5b0f

4- Exclude From Fees (passed):
https://testnet.bscscan.com/tx/0x3a0943bbfb4dcad5da436f60ed3a3b63068d339e50dcbafd3129777bd3d15d20

5- Exclude From Dividends (passed):
https://testnet.bscscan.com/tx/0xf969bb25465bb89b439b546cebc3054e860755c693fcf4adde183f6b8234d394

6- Update Marketing Wallet (passed):
https://testnet.bscscan.com/tx/0xb0cb146bb8569fa1e25981d7d5e9b0a4a69b513cb7a1ad1a5f22c138510f2d12

POINTS TO NOTE

- The owner can transfer ownership.
- The owner can renounce ownership.
- The owner can distribute dividends amount.
- The owner can update the minimum token balance for dividends.
- The owner can exclude the account from dividends.
- The owner can update claim wait.
- The owner can update marketing wallet addresses.
- The owner can set balance.
- The owner can claim stuck tokens
- The owner can exclude wallet from fees.
- The owner can set swap tokens at amount.
- The owner can exclude the account from dividends.

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	1
Low-Risk	1
Gas Optimization / Suggestions	2

MANUAL TESTING

Centralization – Missing Require Check

Severity: Medium

Subject: updateMarketingWallet

Status: Open

Overview:

The owner can set any arbitrary address excluding zero address as this is not recommended because if the owner will set the address to the contract address, then the Eth will not be sent to that address and the transaction will fail and this will lead to a potential honeypot in the contract.

```
function updateMarketingWallet(address newWallet) external onlyOwner {
        require(newWallet != address(0), "Fee Address cannot be zero address");
        marketingWallet = newWallet;
    }
```

Suggestion:

It is recommended that the address should not be able to set as a contract address.

MANUAL TESTING

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 setLastProcessedIndex(uint256 index) external onlyOwner {
        dividendTracker.setLastProcessedIndex(index);
    }
function updateMarketingWallet(address newWallet) external onlyOwner {
        require(newWallet != address(0), "Fee Address cannot be zero address");
        marketingWallet = newWallet;
    }
function setSwapTokensAtAmount(uint256 newAmount) external onlyOwner{
        require(newAmount > totalSupply() / 100_000, "SwapTokensAtAmount must be
greater than 0.001% of total supply");
        swapTokensAtAmount = newAmount;
    }
function setSwapTokensAtAmount(uint256 newAmount) external onlyOwner{
        require(newAmount > totalSupply() / 100_000, "SwapTokensAtAmount must be
greater than 0.001% of total supply");
        swapTokensAtAmount = newAmount;
    }
```

Suggestion:

It is recommended that the address should not be able to set as a contract address.

MANUAL TESTING

Optimization

Severity: Informational

Subject: Remove Safe Math

Status: Open

Line: 57-107

Overview:

compiler version above 0.8.0 can control arithmetic overflow/underflow, it is recommended to remove the unwanted code to avoid high gas fees.

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 _msgData() internal view virtual returns (bytes calldata) {
        return msg.data;
    }
event UpdateUniswapV2Router(address indexed newAddress, address indexed
oldAddress);
event UpdateDividendTracker(address indexed newAddress, address indexed
oldAddress);
event GasForProcessingUpdated(uint256 indexed newValue, uint256 indexed oldValue);
function isContract(address account) internal view returns (bool) {
        return account.code.length > 0;
    }
```

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