

**Building the Futuristic Blockchain Ecosystem** 

# SECURITY AUDIT REPORT

PRESIDENT DONALD MUSK



### **HIGH RISK ANALYSIS**

No High Risks found

Findings	Found
High Risk	0



# TABLE OF CONTENTS

High Risk Analysis
Table of Contents
Overview ————————————————————————————————————
Contract Details ————————————————————————————————————
Owner Privileges
Audit Methodology
Vulnerabilities Checklist ————————————————————————————————————
Risk Classification
Inheritence Trees & Risk Overview
Function Details ————————————————————————————————————
Manual Review ————————————————————————————————————
Findings
About Expelee
Disclaimer



# **OVERVIEW**

The Expelee team has performed a line-by-line manual analysis and automated review of the smart contract. The smart contract was analysed mainly for common smart contract vulnerabilities, exploits, and manipulation hacks. According to the smart contract audit:

Audit Result	Passed
KYC Verification	-
Audit Date	2 June 2023



## **CONTRACT DETAILS**

**Token Name: President Donald Musk** 

Symbol: PDM

**Network: Binance Smart Chain** 

**Language: Solidity** 

**Contract Address:** 

0xC26b6F2E80180773716FD640e56C03eCFe7dC935

Total Supply: 1000000000000

**Owner's Wallet:** 

0xd4C58AF81467154B46c834CF00A5E31C2e631497

**Deployer's Wallet:** 

0xd4C58AF81467154B46c834CF00A5E31C2e631497

**Testnet:** 

https://testnet.bscscan.com/address/0x6717077FBb340B2C 802B46D50028762925956819



## **OWNER PRIVILEGES**

- Trading must be enabled by the owner
- The owner can set fees with limit up to 5%
- The owner can exclude accounts from fees
- The owner can change swap settings
- The owner can withdraw any token and stuck ETH (except native token) from the contract



# AUDIT METHODOLOGY

#### **Audit Details**

Our comprehensive audit report provides a full overview of the audited system's architecture, smart contract codebase, and details on any vulnerabilities found within the system.

#### **Audit Goals**

The audit goal is to ensure that the project is built to protect investors and users, preventing potentially catastrophic vulnerabilities after launch, that lead to scams and rugpulls.

#### **Code Quality**

Our analysis includes both automatic tests and manual code analysis for the following aspects:

- Exploits
- Back-doors
- Vulnerability
- Accuracy
- Readability

#### **Tools**

- DE
- Open Zeppelin
- Code Analyzer
- Solidity Code
- Compiler
- Hardhat



# VULNERABILITY CHECKS

Design Logic	Passed
Compiler warnings	Passed
Private user data leaks	Passed
Timestamps dependence	Passed
Integer overflow and underflow	Passed
Race conditions & reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front Running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zepplin module	Passed



# RISK CLASSIFICATION

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and acces control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

#### **High Risk**

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

#### **Medium Risk**

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

#### **Low Risk**

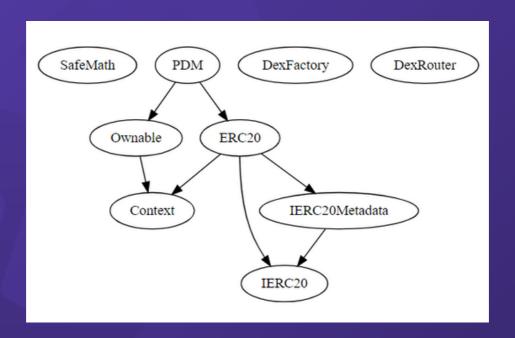
Issues on this level are minor details and warning that can remain unfixed.

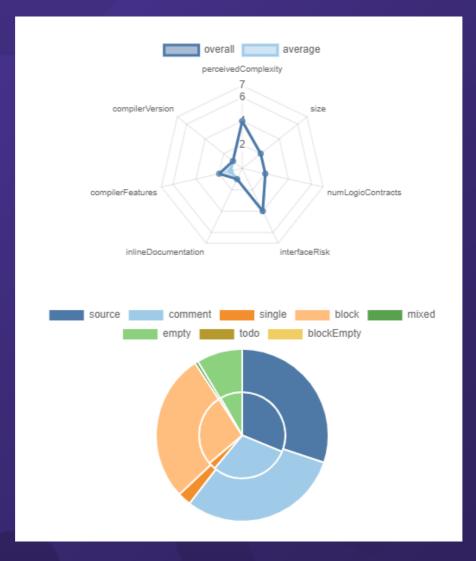
#### **Informational**

Issues on this level are minor details and warning that can remain unfixed.



## INHERITANCE TREES







### **FUNCTION DETAILS**

```
**PDM** | Implementation | ERC20, Ownable |||
 | <Constructor> | Public | | • | ERC20 |
   setmarketingWallet | External | | • | onlyOwner |
   enableTrading | External | | • | onlyOwner |
   setBuyTaxes | External | | • | onlyOwner |
   setSellTaxes | External | | • | onlyOwner |
   setTransferFees | External | |
                                    onlyOwner
   setSwapTokensAtAmount | External | | • | onlyOwner |
  | toggleSwapping | External | | • | onlyOwner |
   setWhitelistStatus | External | |
  checkWhitelist | External | NO |
   _takeTax | Internal 🔒 | (
  _transfer | Internal 🔒 | 🛑
📙 internalSwap | Internal 🔒 |
 | swapToETH | Internal 🔒 | 🛑
   withdrawStuckETH | External | | • | onlyOwner |
   withdrawStuckTokens | External | | • | onlyOwner |
L | <Receive Ether> | External | | NO! |
```



### **MANUAL REVIEW**

#### **Severity Criteria**

Expelee assesses the severity of disclosed vulnerabilities according to methodology based on OWASP standarts.

Vulnerabilities are dividend into three primary risk categroies:

High

Medium

Low

High-level considerations for vulnerabilities span the following key areas when conducting assessments:

- Malicious input handling
- Escalation of privileges
- Arithmetic
- Gas use

Overall Risk Severity					
Impact	HIGH	Medium	High	Critical	
	MEDIUM	Low	Medium	High	
	LOW	Note	Low	Medium	
		LOW	MEDIUM	HIGH	
	Likelihood				



# **FINDINGS**

Findings	Severity	Found
High Risk	High	0
Medium Risk	Medium	0
Low Risk	Low	5
Suggestion & discussion	Informational	2
Gas Optimizations	● Gas Opt.	0



#### Trading must be enabled by the owner

#### **Severity: Low**

#### **Overview**

The **enableTrading** function can be used to enable trading on the contract.

```
function enableTrading() external onlyOwner { //@audit Trade
    require(!tradingEnabled, "Trading is already enabled");
    tradingEnabled = true;
    startTradingBlock = block.number;
}
```

#### Recommendation

Recommended to include appropriate access control mechanisms to ensure that only authorized users can modify the smart contract's critical parameters. This can help prevent unauthorized changes to the smart contract that can potentially cause issues or put the business at risk.



The owner can set fees with limit up to 5%

#### **Severity: Low**

#### **Overview**

Owner can update fees up to 5% with using setBuyTaxes(), setSellTaxes() and but setTransferFees()

```
function setBuyTaxes(uint256 _marketingTaxt, uint256 _burnTaxt) external onlyOwner {
   buyTaxes = Tax(_marketingTaxt, _burnTaxt);
   require(_marketingTaxt + _burnTaxt \leq 5, "Can not set buy fees higher than 5%");
   emit BuyFeesUpdated(_marketingTaxt, _burnTaxt);
}

O references | Control flow graph | a11a1682 | ftrace | funcSig
function setSellTaxes(uint256 _marketingTaxt, uint256 _burnTaxt) external onlyOwner {
    sellTaxes = Tax(_marketingTaxt, _burnTaxt);
    require(_marketingTaxt + _burnTaxt \leq 5, "Can not set sell fees higher than 5%");
   emit SellFeesUpdated(_marketingTaxt, _burnTaxt);
}

O references | Control flow graph | f639d534 | ftrace | funcSig
function setTransferFees(uint256 _marketingTaxt, _uint256 _burnTaxt) external onlyOwner {
    transferTaxes = Tax(_marketingTaxt, _burnTaxt);
    require(_marketingTaxt + _burnTaxt \leq 5, "Can not set transfer tax higher than 5%");
    emit TransferFeesUpdated(_marketingTaxt, _burnTaxt);
}
```

#### Recommendation

You should careffuly manage the private key of the owner's account. You should use powerful security mechanism that will prevent a single user from accessing the contract owner functions.



#### The owner can exclude accounts from fees

#### **Severity: Low**

#### **Overview**

Authorizing privileged roles to exclude accounts from fees. After excluding the user from accounts, the user trades without paying a any fee and the other user sees it).

```
function setWhitelistStatus(address _wallet1,bool _status1) external onlyOwner {
    whitelisted[_wallet1] = _status1;
    emit Whitelist(_wallet1, _status1);
}
```

#### Recommendation

You should careffuly manage the private key of the owner's account. You should use powerful security mechanism that will prevent a single user from accessing the contract owner functions. That risk can be prevented by temporarily locking the contract or renouncing ownership



#### The owner can change swap settings

#### **Severity: Low**

#### **Overview**

The owner can set new swap settings and allows the contract owner to enable or disable the automatic swapping.

```
function toggleSwapping() external onlyOwner { //@audit Owner can cl
swapAndLiquifyEnabled = (swapAndLiquifyEnabled) ? false : true;
}
```

#### Recommendation

Recommended to include appropriate access control mechanisms to ensure that only authorized users can modify the smart contract's critical parameters.



The owner can withdraw any token and stuck ETH (except native token) from the contract

**Severity: Low** 

#### **Overview**

The owner's ability to withdraw any token and any stuck ETH from the contract can be a potential security risk, especially if not implemented with appropriate safeguards. Even if there is an onlyOwner modifier. it is still important to consider the potential risks associated with allowing the owner to withdraw funds, especially if the contract holds a large amount of assets.

#### **Recommendation:**

Use multi-sig wallets or time-locks to ensure that the withdrawal function can only be executed after multiple owners have approved it or after a certain amount of time has elapsed. It is recommended that you still implement some safeguards to ensure that the owner cannot withdraw funds in a malicious or fraudulent manner.



### **INFORMATIONAL RISK FINDING**

Too many digits

**Severity: Informational** 

#### **Overview**

Literals with many digits are difficult to read and review.

uint256 private constant \_totalSupply = 1\_000\_000\_000\_000 \* 1e18;

#### **Recommendation**

While 1\_ether looks like 1 ether, it is 10 ether. As a result, it's likely to be used incorrectly.



### INFORMATIONAL RISK FINDING

Outdated versions of pragma;

**Severity: Informational** 

#### **Overview**

Outdated versions were detected pragma solidity 0.8.17;

pragma solidity 0.8.17;

#### **Recommendation**

Consider using the latest version of Solidity for testing. Should lock pragmas to a specific compiler version. Besides, consider the known compiler bugs in the following references and check whether the contracts include those bugs.



### **ABOUT EXPELEE**

Expelee is a product-based aspirational Web3 start-up.
Coping up with numerous solutions for blockchain security and constructing a Web3 ecosystem from deal making platform to developer hosting open platform, while also developing our own commercial and sustainable blockchain.

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