

# KISHIELD

Security Audit

**METAFORCE Token**

April 30, 2022

The logo for Metaforce, featuring the word "METAFORCE" in a stylized, yellow, italicized font with a black outline, set against a black square background.

**METAFORCE**



# Table of Contents

## **1 Audit Summary**

## **2 Project Overview**

### 2.1 Token Summary

### 2.2 Main Contract Assessed

## **3 Smart Contract Vulnerability Checks**

## **4 Contract Ownership**

### 4.1 Privileged Functions

## **5 Important Notes To The Users**

## **6 Findings Summary**

### 6.1 Classification of Issues

### 6.1 Findings Table

01 Variables could be declared as constant

02 Public function that could be declared external

03 Missing events arithmetic

04 Division before Multiplication

## **7 Statistics**

### 7.1 Liquidity

### 7.2 Token Holders

### 7.3 Liquidity Holders

## **8 Liquidity Ownership**

## **9 Disclaimer**



# Audit Summary

This report has been prepared for METAFORCE Token on the Binance Chain network. KISHIELD provides both client-centered and user-centered examination of the smart contracts and their current status when applicable. This report represents the security assessment made to find issues and vulnerabilities on the source code along with the current liquidity and token holder statistics of the protocol.

A comprehensive examination has been performed, utilizing Cross Referencing, Static Analysis, In-House Security Tools, and line-by-line Manual Review.

The auditing process pays special attention to the following considerations:

- Ensuring contract logic meets the specifications and intentions of the client without exposing the user's funds to risk.
- Testing the smart contracts against both common and uncommon attack vectors.
- Inspecting liquidity and holders statistics to inform the current status to both users and client when applicable.
- Assessing the codebase to ensure compliance with current best practices and industry standards.
- Verifying contract functions that allow trusted and/or untrusted actors to mint, lock, pause, and transfer assets.
- Thorough line-by-line manual review of the entire codebase by industry experts.

# Project Overview

## Token Summary

Parameter	Result
Address	0xb0a320821af94bb226bad9f9912fb81140a7c840
Name	METAFORCE
Token Tracker	METAFORCE (MTF)
Decimals	18
Supply	100,000,000
Platform	Binance Chain
compiler	v0.8.9+commit.e5eed63a
Optimization	Yes with 200 runs
LicenseType	Unlicense
Language	Solidity
Codebase	<a href="https://bscscan.com/address/0xb0a320821af94bb226bad9f9912fb81140a7c840">https://bscscan.com/ address/0xb0a320821af94bb226bad9f9912fb81140a7c840</a>
Url	Meta-force.co

## Main Contract Assessed

Name	Contract	Live
METAFORCE	0xb0a320821af94bb226bad9f9912fb81140a7c840	Yes

# Smart Contract Vulnerability Checks

Vulnerability	Automatic Scan	Manual Scan	Result
Unencrypted Private Data On-Chain	Complete	Complete	✓ Low / No Risk
Code With No Effects	Complete	Complete	✓ Low / No Risk
Message call with hardcoded gas amount	Complete	Complete	✓ Low / No Risk
Hash Collisions With Multiple Variable Length Arguments	Complete	Complete	✓ Low / No Risk
Unexpected Ether balance	Complete	Complete	✓ Low / No Risk
Presence of unused variables	Complete	Complete	✓ Low / No Risk
Right-To-Left-Override control character (U+202E)	Complete	Complete	✓ Low / No Risk
Typographical Error	Complete	Complete	✓ Low / No Risk
DoS With Block Gas Limit	Complete	Complete	✓ Low / No Risk
Arbitrary Jump with Function Type Variable	Complete	Complete	✓ Low / No Risk
Insufficient Gas Griefing	Complete	Complete	✓ Low / No Risk
Incorrect Inheritance Order	Complete	Complete	✓ Low / No Risk
Write to Arbitrary Storage Location	Complete	Complete	✓ Low / No Risk
Requirement Violation	Complete	Complete	✓ Low / No Risk
Missing Protection against Signature Replay Attacks	Complete	Complete	✓ Low / No Risk
Weak Sources of Randomness from Chain Attributes	Complete	Complete	✓ Low / No Risk

Vulnerability	Automatic Scan	Manual Scan	Result
Authorization through tx.origin	Complete	Complete	✓ Low / No Risk
Delegatecall to Untrusted Callee	Complete	Complete	✓ Low / No Risk
Use of Deprecated Solidity Functions	Complete	Complete	✓ Low / No Risk
Assert Violation	Complete	Complete	✓ Low / No Risk
Reentrancy	Complete	Complete	✓ Low / No Risk
Unprotected SELFDESTRUCT Instruction	Complete	Complete	✓ Low / No Risk
Unprotected Ether Withdrawal	Complete	Complete	✓ Low / No Risk
Unchecked Call Return Value	Complete	Complete	✓ Low / No Risk
Outdated Compiler Version	Complete	Complete	✓ Low / No Risk
Integer Overflow and Underflow	Complete	Complete	✓ Low / No Risk
Function Default Visibility	Complete	Complete	✓ Low / No Risk

## Contract Ownership

The contract ownership of METAFORCE is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible ownable functions that may alter the state of the protocol.

The current owner is the address 0xeecf9704F22dC4bf750d74c22795f7eF5f90fC2E which can be viewed from:  
[HERE](#)

The owner wallet has the power to call the functions displayed on the privileged functions chart below, if the owner wallet is compromised this privileges could be exploited.

We recommend the team to renounce ownership at the right timing if possible, or gradually migrate to a timelock with governing functionalities in respect of transparency and safety considerations.

## Important Notes To The Users:

- The owner CAN stop Trading.
- The owner cannot mint tokens after initial deployment.
- The owner cannot change the min tx amount.
- Once the owner renounces ownership of the contract, none of the following are applicable.
- The owner can change buy and sell tax fee amounts with no restrictions.
- The owner can include/exclude addresses from fees and dividends.
- The owner can add/remove WALLETS and contracts addresses to the bot blacklist.
- The owner can pause/unpause the trading.
- The owner can update the dividend tracker address and its configuration.
- No high-risk Exploits/Vulnerabilities Were Found in token Source Code other than Owner Privileges.

## Audit Passed



# Findings Summary

## Classification of Issues

Severity	Description
● High	Exploits, vulnerabilities or errors that will certainly or probabilistically lead towards loss of funds, control, or impairment of the contract and its functions. Issues under this classification are recommended to be fixed with utmost urgency
● Medium	Bugs or issues with that may be subject to exploit, though their impact is somewhat limited. Issues under this classification are recommended to be fixed as soon as possible.
● Low	Effects are minimal in isolation and do not pose a significant danger to the project or its users. Issues under this classification are recommended to be fixed nonetheless.
● Info	Consistency, syntax or style best practices. Generally pose a negligible level of risk, if any.

## Findings

Severity	Found
● High	0
● Medium	0
● Low	1
● Info	3
Total	4



# Findings

## Variables could be declared as constant

ID	Severity	Contract	Function
01	Informational	METAFORCE	variables _dividendToken, deadAddress, rewardEnable, swapTokensAtAmount

### Description

Gas Optimization. Variables that are never changed could be declared as constant.

### Recommendation

We recommend declaring those variables as constant.

## Public function that could be declared external

ID	Severity	Contract	Function
02	Informational	METAFORCE	Functions whitelistDxSale, setTradingIsEnabled, updateDividendTracker, updateBuyFees, updateSellFees, updateUniswapV2Router, updateMarketingAddress, updateTeamAddress, updateTreasuryAddress, excludeMultipleAccountsFromFees, setAutomatedMarketMakerPair, updateGasForProcessing, isExcludedFromFees, withdrawableDividendOf, blacklistUpdate

### Description

Gas Optimization. Public function that could be declared external

### Recommendation

Public functions that are never called by the contract should be declared external to save gas.

## Missing events arithmetic

ID	Severity	Contract	Function
03	Informational	METAFORCE	Missing events for updateBuyFees, updateSellFees

### Description

Functions that change critical arithmetic parameters should emit an event.

### Recommendation

Emit corresponding events for critical parameter changes.

## Division before Multiplication

ID	Severity	Contract	Function
04	Low	METAFORCE	function _transfer()

### Description

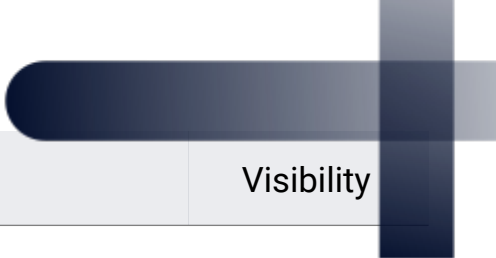
Precision Loss. 'fees = amount.div(100).mul(buyTotalFees)'. Division before multiplication can result in truncation and less accurate results

### Recommendation

Multiplication should be performed before division to not lose precision.

## Privileged Functions (onlyOwner)

Function Name	Parameters	Visibility
renounceOwnership	none	public
transferOwnership	address newOwner	public
whitelistDxSale	address _presaleAddress	public
setWalletBalance	uint256 _maxWalletBalance	external
excludeFromDividends	address wallet	external
includeInDividend	address wallet	external
setTradingIsEnabled	bool _enabled	public
updateDividendTracker	address newAddress	public
updateBuyFees	uint256 reward, uint256 team, uint256 treasury, uint256 liquidity, uint256 burn, uint256 marketing	public
updateSellFees	uint256 reward, uint256 team, uint256 treasury, uint256 liquidity, uint256 burn, uint256 marketing	public
updateUniswapV2Router	address newAddress	public
updateMarketingAddress	address newAddress	public
updateTeamAddress	address newAddress	public
updateTreasuryAddress	address newAddress	public
excludeFromFees	address account, bool excluded	public



Function Name	Parameters	Visibility
excludeMultipleAccountsFromFees	calldata accounts, bool excluded	public
setAutomatedMarketMakerPair	address pair, bool value	public
updateGasForProcessing	uint256 newValue	public
updateClaimWait	uint256 claimWait	external
blacklistUpdate	address user, bool value	public
excludeFromDividends	address account	external
includeInDividends	address account, uint256 balance	external
updateClaimWait	uint256 newClaimWait	external
setBalance	address account, uint256 newBalance	external
processAccount	address account, bool automatic	public



# Statistics

## Liquidity Info

Parameter	Result
Pair Address	0x46bAF2EEa4384171489781ee2Eb586ab3443DDC7
MTF Reserves	0.00 MTF
BNB Reserves	0.00 BNB
Liquidity Value	\$0 USD

## Token (MTF) Holders Info

Parameter	Result
MTF Percentage Burnt	0.00%
MTF Amount Burnt	0 MTF
Top 10 Percentage Own	100.00%
Top 10 Amount Owned	100,000,000 MTF
Top 10 Aprox Value	\$NaN USD

## LP (MTF/BNB) Holders Info

Parameter	Result
MTF/BNB % Burnt	0.00%
MTF/BNB Amount Burnt	0 MTF
Top 10 Percentage Owned	0.00%
Top 10 Amount Owned	0 MTF
Locked Tokens Percentage	0.00%
Locked Tokens Amount	0 MTF

\* All the data displayed above was taken on-chain at block 17386442

\* The tokens on industry-standard burn wallets are not included on the top 10 wallets calculations

## Liquidity Ownership

The token does not have liquidity at the moment of the audit, block 17386442

# KISHIELD



## Disclaimer

KISHIELD has conducted an independent audit to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the codes that were provided for the scope of this audit. This audit report does not constitute agreement, acceptance or advocacy for the Project that was audited, and users relying on this audit report should not consider this as having any merit for financial advice in any shape, form or nature. The contracts audited do not account for any economic developments that may be pursued by the Project in question, and that the veracity of the findings thus presented in this report relate solely to the proficiency, competence, aptitude and discretion of our independent auditors, who make no guarantees nor assurance that the contracts are completely free of exploits, bugs, vulnerabilities or deprecation of technologies.

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