ASSURE DEFI®
THE VERIFICATION GOLD STANDARD

Security Assessment:

Metabrawl TOKEN

January 26, 2025

- Audit Status: **Pass**
- Audit Edition: **Advance**

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Risk Analysis

Classifications of Manual Risk Results

Classification	Description
Critical	Danger or Potential Problems.
High	Be Careful or Fail test.
Medium	Pass, Not-Detected or Safe Item.
Low	Function Detected

Manual Code Review Risk Results

Contract Privilege	Description
Buy Tax	5%
Sale Tax	27%
Cannot Buy	Pass
Cannot Sale	Pass
Max Tax	27%
Modify Tax	Yes
Fee Check	Fail
Is Honeypot?	Not Detected
Trading Cooldown	Detected
Can Pause Trade?	Pass
Pause Transfer?	Not-Detected
Max Tx?	Pass
Is Anti Whale?	Detected
Is Anti Bot?	Not-Detected

Contract Privilege	Description
Is Blacklist?	Not-Detected
Blacklist Check	Pass
is Whitelist?	Detected
Can Mint?	Pass
Is Proxy?	Not Detected
Can Take Ownership?	Not Detected
Hidden Owner?	Not-Detected
Owner	0xEA18dEAf8Cec6cBCe2720896C941C2CAc3942140
Self Destruct?	Not Detected
External Call?	Not-Detected
Other?	Not Detected
Holders	196
Auditor Confidence	Medium
KYC Present	Yes
KYC URL	https://projects.assuredefi.com/project/metabrawl

The following quick summary it's added to the project overview; however, there are more details about the audit and its results. Please read every detail.

Project Overview

Token Summary

Parameter	Result
Address	0xF38DEb975D9a34BC2B8F678dE0c1D53692363851
Name	Metabrawl
Token Tracker	Metabrawl (BRAWL)
Decimals	18
Supply	100,000,000
Platform	ETHEREUM
compiler	v0.8.10+commit.fc410830
Contract Name	Metabrawl
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://etherscan.io/address/0xF38DEb975D9a34BC2B8F678dE0c1D53692363851#code
Payment Tx	Corporate

Main Contract Assessed
Contract Name

Name	Contract	Live
Metabrawl	0xF38DEb975D9a34BC2B8F678dE0c1D53692363851	Yes

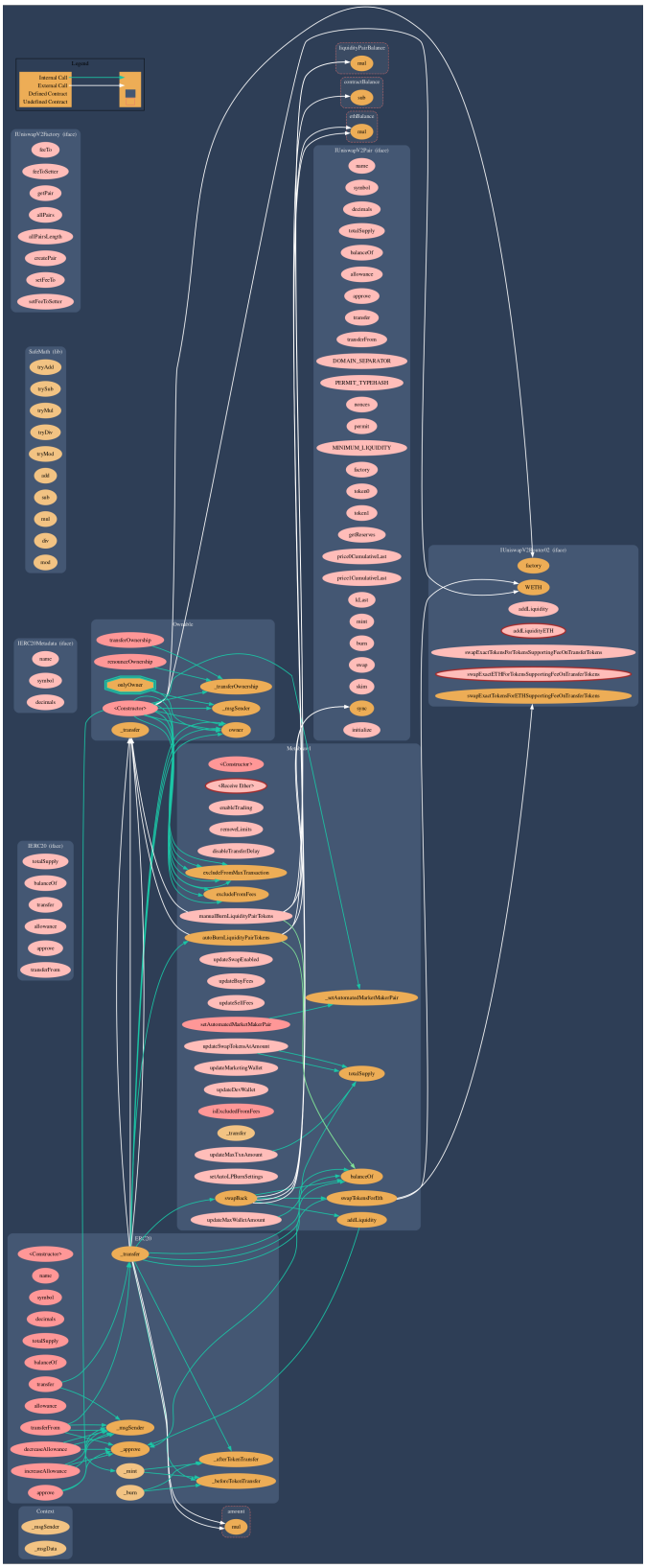
TestNet Contract was Not Assessed

Solidity Code Provided

SolID	File Sha-1	FileName
Metabrawl	f877d30e8d9cd4db4554986186a685bae7f060f2	Metabrawl.sol
Metabrawl		.sol
Metabrawl		.sol
Metabrawl		.sol
Metabrawl		.sol
Metabrawl		.sol

Call Graph

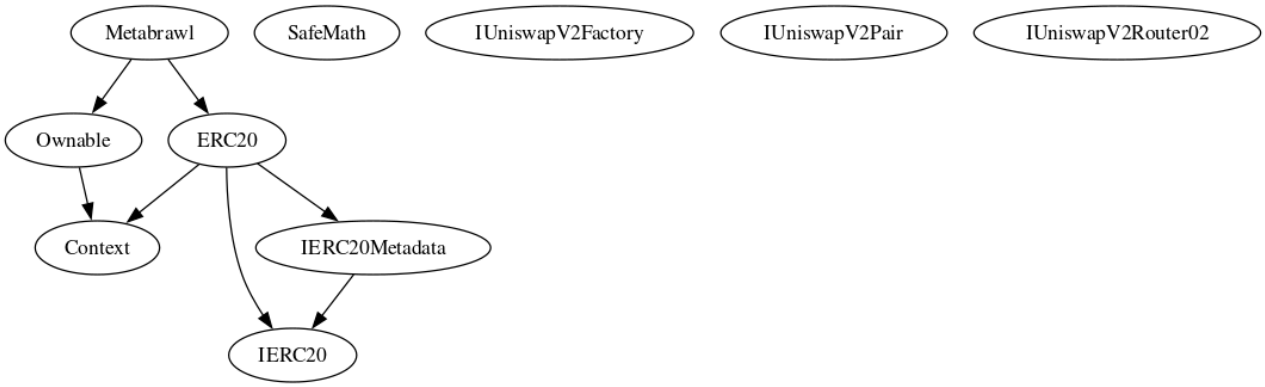
The contract for Metabrawl has the following call graph structure.



Inheritance

The contract for Metabrawl has the following inheritance structure.

The Project has a Total Supply of 100,000,000



Privileged Functions (onlyOwner)

Please Note if the contract is Renounced none of this functions can be executed.

Function Name	Parameters	Visibility
renounceOwnership		Public
transferOwnership	address newOwner	Public
enableTrading		External
removeLimits		External
disableTransferDelay		External
updateSwapTokensAtAmount		External
updateMaxTxnAmount		External
updateMaxWalletAmount		External
excludeFromMaxTransaction		Public
updateSwapEnabled		External
updateBuyFees		External
updateSellFees		External
excludeFromFees		Public
setAutomatedMarketMakerPair		Public
updateMarketingWallet		External

Function Name	Parameters	Visibility
updateDevWallet		External
setAutoLPBurnSettings		External
manualBurnLiquidityPairTokens		External

BRAWL-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	Low	Metabrawl.sol: L: 98 C: 12, L: 1186 C: 12, L: 1193 C: 12, L: 1199 C: 12, L: 1205 C: 12, L: 1238 C: 12, L: 1246 C: 12, L: 1274 C: 12, L: 1297 C: 12, L: 1305 C: 12	Detected

Description

The given input is missing the check for the non-zero address.

The given input is missing the check for the onlyOwners need to be revisited for require..

Remediation

We advise the client to add the check for the passed-in values to prevent unexpected errors as below:

```
...
 require(receiver != address(0), "Receiver is the zero address");
...
...
require(value X limitation, "Your not able to do this function");
...
```

We also recommend customer to review the following function that is missing a required validation. onlyOwners need to be revisited for require..

BRAWL-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	Low	Metabrawl.sol: L: 98 C: 12, L: 106 C: 12, L: 1186 C: 12, L: 1193 C: 12, L: 1199 C: 12, L: 1205 C: 12, L: 1222 C: 12, L: 1230 C: 12, L: 1238 C: 12, L: 1246 C: 12, L: 1250 C: 12, L: 1262 C: 12, L: 1282 C: 12, L: 1543 C: 12, L: 1584 C: 12	Detected

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.The linked code does not create an event for the transfer.

Remediation

Emit an event for critical parameter changes. It is recommended emitting events for the sensitive functions that are controlled by centralization roles.

BRAWL-14 | Unnecessary Use Of SafeMath

Category	Severity	Location	Status
Logical Issue	Medium	Metabrawl.sol: L: 0 C: 0	Detected

Description

The SafeMath library is used unnecessarily. With Solidity compiler versions 0.8.0 or newer, arithmetic operations
will automatically revert in case of integer overflow or underflow.
library SafeMath {
An implementation of SafeMath library is found.
using SafeMath for uint256;
SafeMath library is used for uint256 type in contract.

Remediation

We advise removing the usage of SafeMath library and using the built-in arithmetic operations provided by the
Solidity programming language

Project Action

BRAWL-19 | Centralization Privileges of.

Category	Severity	Location	Status
	Medium	Metabrawl.sol: L: 0 C: 14	Detected

Description

Centralized Privileges are found on the following functions.

Remediation

Inheriting from Ownable and calling its constructor on yours ensures that the address deploying your contract is registered as the owner. The onlyOwner modifier makes a function revert if not called by the address registered as the owner.

Project Action

Technical Findings Summary

Classification of Risk

Severity	Description
Critical	Risks are those that impact the safe functioning of a platform and must be addressed before launch. Users should not invest in any project with outstanding critical risks.
High	Risks can include centralization issues and logical errors. Under specific circumstances, these major risks can lead to loss of funds and/or control of the project.
Medium	Risks may not pose a direct risk to users' funds, but they can affect the overall functioning of a platform
Low	Risks can be any of the above but on a smaller scale. They generally do not compromise the overall integrity of the Project, but they may be less efficient than other solutions.
Informational	Errors are often recommended to improve the code's style or certain operations to fall within industry best practices. They usually do not affect the overall functioning of the code.

Findings

Severity	Found	Pending	Resolved
Critical	0	0	0
High	0	0	0
Medium	2	2	0
Low	2	2	0
Informational	0	0	0
Total	4	4	0

Social Media Checks

Social Media	URL	Result
Twitter	https://twitter.com/metabrawlportal	Pass
Other		N/A
Website	https://www.metabrawl.io	Pass
Telegram	https://t.me/metabrawlgameportal	Pass

We recommend to have 3 or more social media sources including a completed working websites.

Social Media Information Notes:

Auditor Notes: undefined

Project Owner Notes:

Assessment Results

Score Results

Review	Score
Overall Score	87/100
Auditor Score	88/100
Review by Section	**Score**
Manual Scan Score	30
Auto Scan Score	37
Advance Check Score	20

The Following Score System Has been Added to this page to help understand the value of the audit, the maximum score is 100, however to attain that value the project most pass and provide all the data needed for the assessment. Our Passing Score has been changed to 84 Points for a higher standard, if a project does not attain 85% is an automatic failure. Read our notes and final assessment below.

Audit Passed

Assessment Results

Important Notes:

- Code Quality: Uses OpenZeppelin libraries for ERC20, and Ownable Follows Solidity best practices with clear function documentation.ı
- Ownership and Permissions: Owner has significant control over fees, limits, and wallets. Functions like enableTrading, updateSwapEnabled, and setAutoLPBurnSettings are owner-restricted.ı
- Fee Structure: Buy and sell fees can be set up to 11%. Fees are split among marketing, liquidity, and development.ı
- Liquidity Management: Auto and manual liquidity burns are implemented. Owner can adjust burn frequency and percentage.ı
- Potential Risks: Centralized control could lead to misuse if owner keys are compromised. High fees might deter users.ı
- Gas Optimization: Consider reviewing gas usage in swap and liquidity functions.ı
- Testing and Deployment: E[illegible] thorough testing, especially around fee changes and [illegible]ons.

Aud[illegible]=88
Au[illegible]ed

Appendix

Finding Categories

Centralization / Privilege

Centralization / Privilege findings refer to either feature logic or implementation of components that actagainst the nature of decentralization, such as explicit ownership or specialized access roles incombination with a mechanism to relocate funds.

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimalEVM opcodes resulting in a reduction on the total gas cost of a transaction.

Logical Issue

Logical Issue findings detail a fault in the logic of the linked code, such as an incorrect notion on howblock.timestamp works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functionsbeing invoke-able by anyone under certain circumstances.

Volatile Code

Volatile Code findings refer to segments of code that behave unexpectedly on certain edge cases that mayresult in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to makethe codebase more legible and, as a result, easily maintainable.

Inconsistency

Inconsistency findings refer to functions that should seemingly behave similarly yet contain different code,such as a constructor assignment imposing different require statements on the input variables than a setterfunction.

Coding Best Practices

ERC 20 Conding Standards are a set of rules that each developer should follow to ensure the code meet a set of creterias and is readable by all the developers.

Disclaimer

Assure Defi has conducted an independent security assessment to verify the integrity of and highlight any vulnerabilities or errors, intentional or unintentional, that may be present in the reviewed code for the scope of this assessment. This report does not constitute agreement, acceptance, or advocation for the Project, and users relying on this 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 the Project in question may pursue, and 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 entirely free of exploits, bugs, vulnerabilities or deprecation of technologies.

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