



Security Assessment: **Good Trouble TOKEN**

June 8, 2024

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



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	5%
● Cannot Buy	Pass
● Cannot Sale	Pass
● Max Tax	40%
● Modify Tax	Yes
● Fee Check	Pass
● Is Honeypot?	Not Detected
● Trading Cooldown	Not Detected
● Can Pause Trade?	Pass
● Pause Transfer?	Not Detected
● Max Tx?	Fail
● 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	no
● Self Destruct?	Not Detected
● External Call?	Detected
● Other?	Not Detected
● Holders	0
● Auditor Confidence	Medium Risk
● KYC Present	No
● KYC URL	N/A

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	0x
Name	Good Trouble
Token Tracker	Good Trouble (GTRB)
Decimals	18
Supply	100,000,000
Platform	ETHEREUM
compiler	v0.8.20+commit.a1b79de6
Contract Name	GTRB
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	
Payment Tx	Corporate

Main Contract Assessed Contract Name

Name	Contract	Live
Good Trouble	0x	Yes

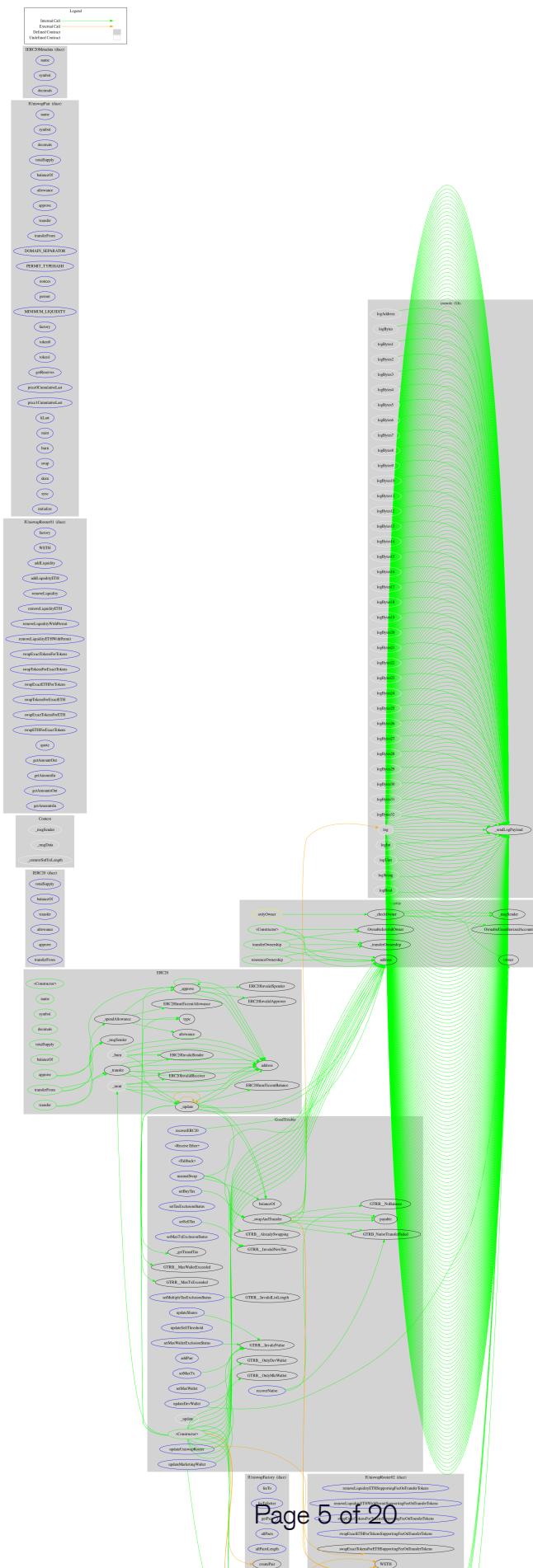
TestNet Contract was Not Assessed

Solidity Code Provided

Solid ID	File Sha-1	File Name
GTRB	e97c3d685bbca27c9c0103e7904dcbe7	GoodTrouble.sol
GTRB		

Call Graph

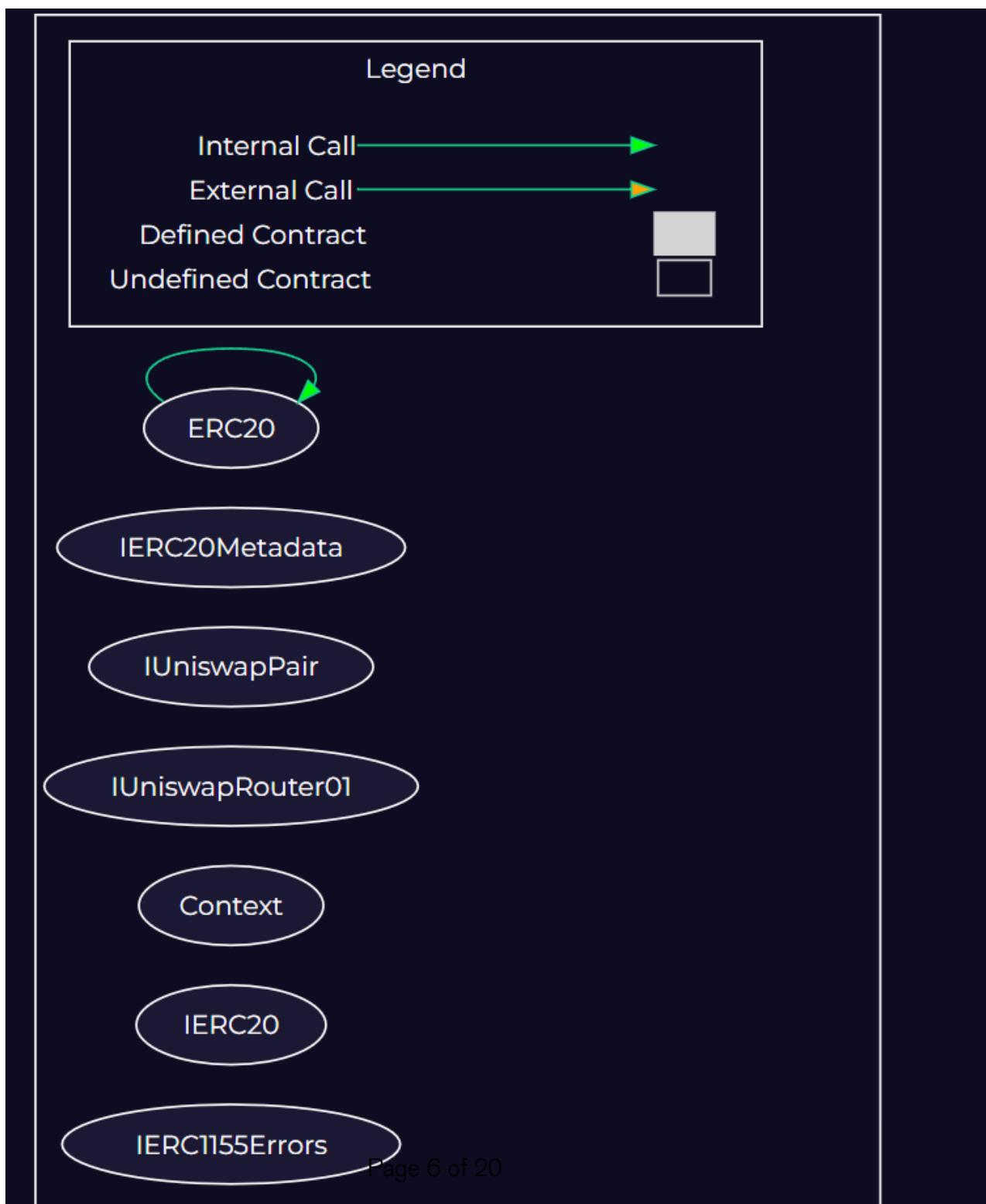
The contract for Good Trouble has the following call graph structure.



Inheritance

The contract for Good Trouble 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
setBuyTax	uint8 _buyTax	external
setSellTax	uint8 _sellTax	external
setTaxExclusionStatus	address _address, bool _status	external
setMultipleTaxExclusionStatus	address[] calldata addresses, bool _status	external
setMaxTxExclusionStatus	address _address, bool _status	external
setMaxWalletExclusionStatus	address _address, bool _status	external
setMaxTx	uint _maxTx	external
setMaxWallet	uint _maxWallet	external
updateDevWallet	address _devWallet	external
updateMarketingWallet	address _marketingWallet	external
updateSellThreshold	uint _sellThreshold	external
manualSwap		external
addPair	address _pair	external

Function Name	Parameters	Visibility
updateShares	uint16 _mktShare, uint16 _devShare	external
updateUniswapRouter	address _router	external
recoverNative	address _to, uint _amount	external
recoverERC20	address _token, address _to	external

GTRB-01 | Potential Sandwich Attacks.

Category	Severity	Location	Status
Security	 Low	GoodTrouble.sol: L: 2950	 Acknowledge

Description

A sandwich attack might happen when an attacker observes a transaction swapping tokens or adding liquidity without setting restrictions on slippage or minimum output amount. The attacker can manipulate the exchange rate by frontrunning (before the transaction being attacked) a transaction to purchase one of the assets and make profits by back running (after the transaction being attacked) a transaction to sell the asset. The following functions are called without setting restrictions on slippage or minimum output amount, so transactions triggering these functions are vulnerable to sandwich attacks, especially when the input amount is large:

- swapExactTokensForETHSupportingFeeOnTransferTokens()
- addLiquidityETH()

Remediation

We recommend setting reasonable minimum output amounts, instead of 0, based on token prices when calling the aforementioned functions.

References:

What Are Sandwich Attacks in DeFi — and How Can You Avoid Them?.

GTRB-10 | Initial Token Distribution.

Category	Severity	Location	Status
Centralization / Privilege	● High	GoodTrouble.sol: L: 2693	[] Acknowledge

Description

All of the Good Trouble tokens are sent to the contract deployer when deploying the contract. This could be a centralization risk as the deployer can distribute tokens without obtaining the consensus of the community.

Remediation

We recommend the team to be transparent regarding the initial token distribution process, and the team shall make enough efforts to restrict the access of the private key.

Project Action

GTRB-11 | Potential Reentrancy in _swapAndTransfer.

Category	Severity	Location	Status
Optimization	● High	GoodTrouble.sol: L: 2950 C: 14	[] Acknowledge

Description

The _swapAndTransfer function involves external calls which could be exploited for reentrancy.

Remediation

Use reentrancy guards or check-effects-interactions pattern.

Project Action

GTRB-21 | Max Transaction/Wallet Limits Control.

Category	Severity	Location	Status
Acknowledged	 Medium	GoodTrouble.sol: L: 2797, L: 2808	 Detected

Description

The contract allows the owner to set maximum transaction and wallet limits. While this provides flexibility, it also introduces the risk of unfair trading conditions if misused.

Remediation

Set Reasonable Limits: Ensure that the limits are set to reasonable values that do not hinder normal trading activities. Add Governance Mechanism: Introduce a governance mechanism to allow the community to vote on changes to these limits, reducing centralization risks. Emit Events: Ensure that any changes to these limits emit events for better transparency and tracking. Validation Checks: Add validation checks to ensure the new limits are within acceptable ranges.

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	2	2	0
● Medium	2	2	0
● Low	0	0	4
● Informational	0	0	0
Total	4	4	4

Social Media Checks

Social Media	URL	Result
Twitter	https://x.com/goodtroubleent	Pass
Other		
Website	https://projectgoodtrouble.com	Pass
Telegram	https://t.me/GoodTroubleEnt	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:



Audit Result

Final Audit Score

Review	Score
Security Score	85
Auditor Score	85

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 must pass and provide all the data needed for the assessment. Our Passing Score has been changed to 85 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:

- Centralization Risk:
 - Significant control by the owner over critical functions.
 - Recommendation: Implement multi-signature wallet for critical functions.
- Lack of Timelock for Critical Functions:
 - Immediate changes to tax rates and wallet addresses.
 - Recommendation: Introduce a timelock mechanism.
- High Initial Tax Rates:
 - Initial buy/sell tax rates set at 40%.
 - Recommendation: Consider starting with a lower tax rate.
- Insufficient Validation for Pair Addition:
 - No validation for the address being a valid Uniswap pair.
 - Recommendation: Add validation for Uniswap pair addresses.
- Potential Reentrancy in _swapAndTransfer:
 - Multiple external calls could be exploited.
 - Recommendation: Implement reentrancy guards.
- Lack of Detailed Documentation:
 - Insufficient comments and documentation.
 - Recommendation: Add detailed comments and documentation.

- Hardcoded Addresses:
 - Addresses like the dead wallet are hardcoded.
 - Recommendation: Use configurable variables.
- Potential Gas Inefficiency in `_update`:
 - The `_update` function could be optimized.
 - Recommendation: Review and optimize for gas efficiency.
- Lack of Unit Tests:
 - No unit tests provided.
 - Recommendation: Develop comprehensive unit tests.
- No Mechanism to Pause Contract:
 - No emergency pause mechanism.
 - Recommendation: Implement a pause mechanism.
- Potential Overflow in `_update`:
 - Uses unchecked arithmetic.
 - Recommendation: Use SafeMath or Solidity 0.8's built-in checks.
- Inconsistent Naming Conventions:
 - Inconsistent naming conventions.
 - Recommendation: Standardize naming conventions.
- Potential for Front-Running Attacks:
 - Tax reduction mechanism could be exploited.
 - Recommendation: Implement measures to mitigate front-

running risks.!

- Overall Classification: Medium Risk
- Score: 85/100
- Conclusion: The GoodTrouble contract is generally well-structured and includes several important features such as dynamic tax rates and liquidity management. However, there are notable areas for improvement, particularly

Auditor Score =85 Audit Passed



Appendix

Finding Categories

Centralization / Privilege

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

Gas Optimization

Gas Optimization findings do not affect the functionality of the code but generate different, more optimal EVM 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 how `block.timestamp` works.

Control Flow

Control Flow findings concern the access control imposed on functions, such as owner-only functions being 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 may result in a vulnerability.

Coding Style

Coding Style findings usually do not affect the generated byte-code but rather comment on how to make the 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 setter function.

Coding Best Practices

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

Disclaimer

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