



Security Assessment: Based Monsta TOKEN

December 18, 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	3%
 Sale Tax	3%
 Cannot Buy	Pass
 Cannot Sale	Pass
 Max Tax	3%
 Modify Tax	Yes
 Fee Check	Pass
 Is Honeypot?	Not Detected
 Trading Cooldown	Not Detected
 Can Pause Trade?	Pass
 Pause Transfer?	Not-Detected
 Max Tx?	Pass
 Is Anti Whale?	Not-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	
 Self Destruct?	Not Detected
 External Call?	Not-Detected
 Other?	Not Detected
 Holders	1
 Auditor Confidence	Medium
 KYC Present	No
 KYC URL	

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	
Name	Based Monsta
Token Tracker	Based Monsta (MONSTA)
Decimals	18
Supply	10,000,000,000
Platform	BNBCHAIN
compiler	v0.8.26+commit.8a97fa7a
Contract Name	MONSTA
Optimization	Yes with 200 runs
LicenseType	MIT
Language	Solidity
Codebase	https://bscscan.com/address/#code
Payment Tx	Corporate

Main Contract Assessed Contract Name

Name	Contract	Live
Based Monsta		Yes

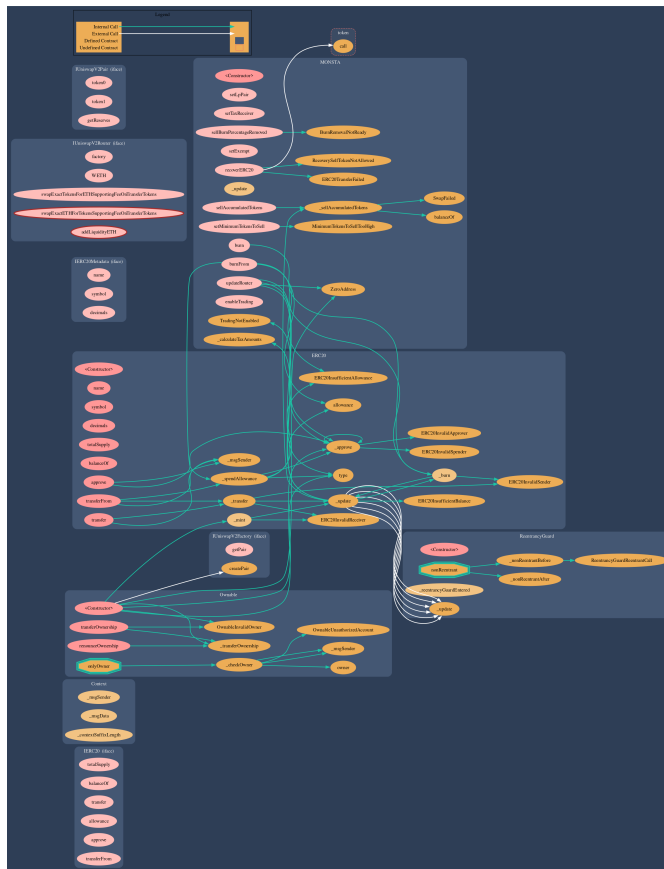
TestNet Contract was Not Assessed

Solidity Code Provided

SolidID	File Sha-1	FileName
MONSTA	c6a12c626a172479d804ed366e35bf8bfcf1db0f	MONSTA.sol
MONSTA		.sol
MONSTA		.sol
MONSTA		.sol
MONSTA		.sol
MONSTA		.sol

Call Graph

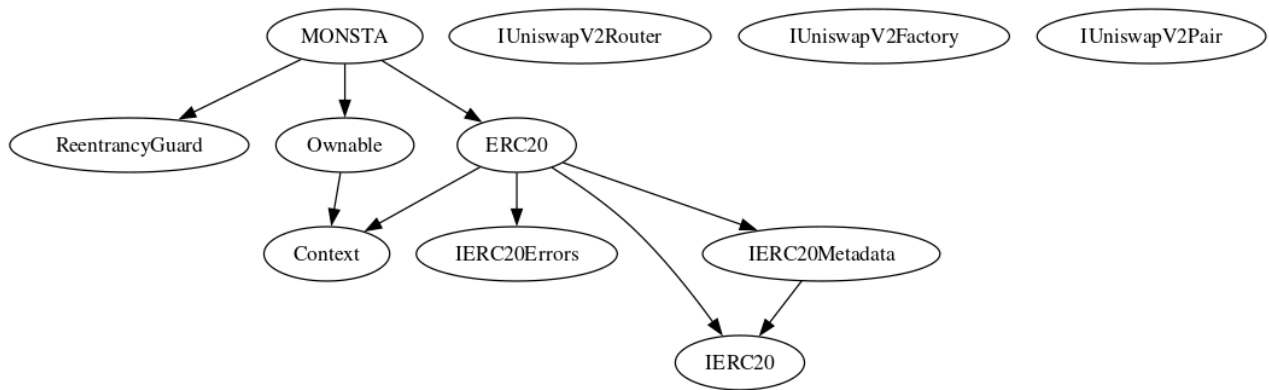
The contract for Based Monsta has the following call graph structure.



Inheritance

The contract for Based Monsta has the following inheritance structure.

The Project has a Total Supply of 10,000,000,000





Privileged Functions (onlyOwner)

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

Function Name	Parameters	Visibility
renounceOwnership		Public
transferOwnership		Public
setLpPair		External
setTaxReceiver		External
sellBurnPercentageRe moved		External
setExempt		External
recoverERC20		External
sellAccumulatedTokens		External
updateRouter		External
enableTrading		External
setMinimumTokensToS ell		External

MONSTA-03 | Lack of Input Validation.

Category	Severity	Location	Status
Volatile Code	 Low	MONSTA.sol: L: 342 C: 12, L: 350 C: 12, L: 847 C: 12, L: 852 C: 12, L: 857 C: 12, L: 865 C: 12, L: 948 C: 12, L: 962 C: 12, L: 991 C: 12, L: 1004 C: 12, L: 1012 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..

MONSTA-05 | Missing Event Emission.

Category	Severity	Location	Status
Volatile Code	 Low	MONSTA.sol: L: 342 C: 12, L: 350 C: 12, L: 948 C: 12, L: 962 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.

MONSTA-18 | Stop Transactions by using Enable Trade.

Category	Severity	Location	Status
Logical Issue	 Critical	MONSTA.sol: L: 1004 C: 14	 Detected

Description



Enable Trade is present on the following contract and when combined with Exclude from fees it can be considered a whitelist process, this will allow anyone to trade before others and can represent an issue for the holders.

Remediation

We recommend the project owner to carefully review this function and avoid problems when performing both actions.

Project Action

MONSTA-19 | Centralization Privileges of.

Category	Severity	Location	Status
	 Medium	MONSTA.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	1	1	0
 High	0	0	0
 Medium	1	1	0
 Low	2	2	0
 Informational	0	0	0
Total	4	4	0

Social Media Checks

Social Media	URL	Result
Twitter		Fail
Other		N/A
Website		Fail
Telegram		Fail

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	85/100
Auditor Score	85/100
Review by Section	Score
Manual Scan Score	28
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 must 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:

- Reentrancy Protection: ReentrancyGuard is used for `_sellAccumulatedTokens`. Ensure no reentrant calls in other functions.␣
- Access Control: `onlyOwner` modifier is used for critical functions. Verify ownership transfer and renouncement logic.␣
- Trading and Tax Logic: Trading must be enabled before any transfers. Tax calculations are hardcoded; ensure correctness.␣
- Token Recovery: `recoverERC20` prevents recovery of MONSTA tokens. Ensure no loopholes in token recovery logic.␣
- Router and Pair Management: `setLpPair` and `updateRouter` functions need proper validation. Ensure correct router and pair addresses are set.␣
- Burn Functionality: Verify burn logic, especially with `burnEnabled` flag. Ensure burn removal timing is accurate.␣
- Exemption List: `isExempt` allows bypassing trading checks. Ensure list is managed securely.␣
- Event Emissions: Ensure all state changes emit appropriate events.␣
- Gas Optimization: Consider optimizing storage and function calls for gas efficiency.␣
- Testing: Conduct thorough testing on trading, tax, and exemption logic.

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 requirements 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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