



Cyberscope

# Audit Report

# **TETHEREUM**

January 2024

Network    BSC

Address    0xe9a5c635c51002fa5f377f956a8ce58573d63d91

Audited by    © cyberscope

# Analysis

● Critical   ● Medium   ● Minor / Informative   ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

## Diagnostics

● Critical   ● Medium   ● Minor / Informative

Severity	Code	Description	Status
●	L02	State Variables could be Declared Constant	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L19	Stable Compiler Version	Unresolved

# Table of Contents

<b>Analysis</b>	<b>1</b>
<b>Diagnostics</b>	<b>2</b>
<b>Table of Contents</b>	<b>3</b>
<b>Review</b>	<b>4</b>
Audit Updates	4
Source Files	4
<b>Findings Breakdown</b>	<b>6</b>
L02 - State Variables could be Declared Constant	7
Description	7
Recommendation	7
L04 - Conformance to Solidity Naming Conventions	8
Description	8
Recommendation	8
L19 - Stable Compiler Version	9
Description	9
Recommendation	9
<b>Functions Analysis</b>	<b>10</b>
<b>Inheritance Graph</b>	<b>11</b>
<b>Flow Graph</b>	<b>12</b>
<b>Summary</b>	<b>13</b>
<b>Disclaimer</b>	<b>14</b>
<b>About Cyberscope</b>	<b>15</b>

## Review

Contract Name	ENMT
Compiler Version	v0.8.1+commit.df193b15
Optimization	200 runs
Explorer	<a href="https://bscscan.com/address/0xe9a5c635c51002fa5f377f956a8ce58573d63d91">https://bscscan.com/address/0xe9a5c635c51002fa5f377f956a8ce58573d63d91</a>
Address	0xe9a5c635c51002fa5f377f956a8ce58573d63d91
Network	BSC
Symbol	T99
Decimals	18
Total Supply	9,999,999,999
Badge Eligibility	Yes

## Audit Updates

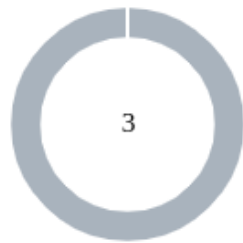
Initial Audit	08 Jan 2024
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## Source Files

Filename	SHA256
IERC20.sol	7d2a6a7c516b1ee659cbba418661ea002e6436c81e1aa1f7f31cc9dbac505605
ERC20.sol	3bf9d6a7f30b9e63099f5d52180e4ae2239c191d71ea7ae8ddc23c26feb9cfb3

<b>ENMT.sol</b>	26184d8387ff9ea1c5fda134079006e4dd7040aab76f8ef1f1a378b3e46e e945
<b>Context.sol</b>	8eb8a77f3ef90eb4391cfd3a1937a2198d60cba90155fd017c5a66a7b7fc a938

## Findings Breakdown



● Critical	0
● Medium	0
● Minor / Informative	3

Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	0
● Medium	0	0	0	0
● Minor / Informative	3	0	0	0

## L02 - State Variables could be Declared Constant

<b>Criticality</b>	Minor / Informative
<b>Location</b>	ENMT.sol#L20
<b>Status</b>	Unresolved

### Description

State variables can be declared as constant using the constant keyword. This means that the value of the state variable cannot be changed after it has been set. Additionally, the constant variables decrease gas consumption of the corresponding transaction.

```
uint256 public TOKEN_TYPE = 1
```

### Recommendation

Constant state variables can be useful when the contract wants to ensure that the value of a state variable cannot be changed by any function in the contract. This can be useful for storing values that are important to the contract's behavior, such as the contract's address or the maximum number of times a certain function can be called. The team is advised to add the constant keyword to state variables that never change.



## L04 - Conformance to Solidity Naming Conventions

<b>Criticality</b>	Minor / Informative
<b>Location</b>	ENMT.sol#L20,27
<b>Status</b>	Unresolved

### Description

The Solidity style guide is a set of guidelines for writing clean and consistent Solidity code. Adhering to a style guide can help improve the readability and maintainability of the Solidity code, making it easier for others to understand and work with.

The followings are a few key points from the Solidity style guide:

1. Use camelCase for function and variable names, with the first letter in lowercase (e.g., myVariable, updateCounter).
2. Use PascalCase for contract, struct, and enum names, with the first letter in uppercase (e.g., MyContract, UserStruct, ErrorEnum).
3. Use uppercase for constant variables and enums (e.g., MAX\_VALUE, ERROR\_CODE).
4. Use indentation to improve readability and structure.
5. Use spaces between operators and after commas.
6. Use comments to explain the purpose and behavior of the code.
7. Keep lines short (around 120 characters) to improve readability.

```
uint256 public TOKEN_TYPE = 1
TokenInfo public INFO
```

### Recommendation

By following the Solidity naming convention guidelines, the codebase increased the readability, maintainability, and makes it easier to work with.

Find more information on the Solidity documentation

<https://docs.soliditylang.org/en/v0.8.17/style-guide.html#naming-convention>.

## L19 - Stable Compiler Version

<b>Criticality</b>	Minor / Informative
<b>Location</b>	ENMT.sol#L12
<b>Status</b>	Unresolved

### Description

The `^` symbol indicates that any version of Solidity that is compatible with the specified version (i.e., any version that is a higher minor or patch version) can be used to compile the contract. The version lock is a mechanism that allows the author to specify a minimum version of the Solidity compiler that must be used to compile the contract code. This is useful because it ensures that the contract will be compiled using a version of the compiler that is known to be compatible with the code.

```
pragma solidity ^0.8.0;
```

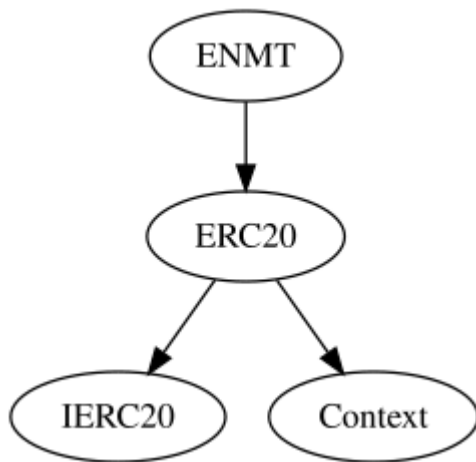
### Recommendation

The team is advised to lock the pragma to ensure the stability of the codebase. The locked pragma version ensures that the contract will not be deployed with an unexpected version. An unexpected version may produce vulnerabilities and undiscovered bugs. The compiler should be configured to the lowest version that provides all the required functionality for the codebase. As a result, the project will be compiled in a well-tested LTS (Long Term Support) environment.

## Functions Analysis

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
ENMT	Implementation	ERC20		
		Public	✓	ERC20
	decimals	Public		-
	burn	Public	✓	-

## Inheritance Graph



# Flow Graph



## Summary

TETHEREUM contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. TETHEREUM is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error or critical issues. The contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions.

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Cyberscope is one of the leading smart contract audit firms in the crypto space and has built a high-profile network of clients and partners.



**The Cyberscope team**

<https://www.cyberscope.io>