Cyberscope

# Audit Report

# Seismic

November 2023

Network ETH

Address 0x6602d72a77235bd0666c141989831ad435b1552a

Audited by © cyberscope

# Analysis

Critical Medium Minor / Informative Pass

| Severity | Code | Description | Status |
|---|---|---|---|
| ● | ST | Stops Transactions | Unresolved |
| ● | 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 |
|---|---|---|---|
| ● | L04 | Conformance to Solidity Naming Conventions | Unresolved |

# Table of Contents

# Review

| | |
|---|---|
| **Contract Name** | SCB |
| **Compiler Version** | v0.8.17+commit.8df45f5f |
| **Optimization** | 200 runs |
| **Explorer** | https://etherscan.io/address/0x6602d72a77235bd0666c141989831ad435b1552a |
| **Address** | 0x6602d72a77235bd0666c141989831ad435b1552a |
| **Network** | ETH |
| **Symbol** | SCB |
| **Decimals** | 18 |
| **Total Supply** | 10,000,000 |

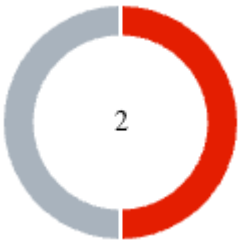
## Audit Updates

| | |
|---|---|
| **Initial Audit** | 16 Mar 2023 https://github.com/cyberscope-io/audits/blob/main/seismic/v1/audit.pdf |
| **Corrected Phase 2** | 20 Mar 2023 https://github.com/cyberscope-io/audits/tree/main/seismic/v2/audit.pdf |
| **Corrected Phase 3** | 20 November 2023 |

## Source Files

| Filename | SHA256 |
| --- | --- |
| **contracts/token.sol** | 0232a4b63bd8abce256bfdd8460a84ca7f5ba10592033cf5eef9bdb51064dfce |
| **@openzeppelin/contracts/utils/Context.sol** | 1458c260d010a08e4c20a4a517882259a23a4baa0b5bd9add9fb6d6a1549814a |
| **@openzeppelin/contracts/utils/math/SafeMath.sol** | fc16aa4564878e1bb65740239d0c1422451cd32136306626ac37f5d5e0606a7b |
| **@openzeppelin/contracts/token/ERC20/IERC20.sol** | 7ebde70853ccafcf1876900dad458f46eb9444d591d39bfc58e952e2582f5587 |
| **@openzeppelin/contracts/token/ERC20/ERC20.sol** | d20d52b4be98738b8aa52b5bb0f88943f62128969b33d654fbca731539a7fe0a |
| **@openzeppelin/contracts/token/ERC20/extensions/IERC20Metadata.sol** | af5c8a77965cc82c33b7ff844deb9826166689e55dc037a7f2f790d057811990 |
| **@openzeppelin/contracts/access/Ownable.sol** | a8e4e1ae19d9bd3e8b0a6d46577eec098c01fbaffd3ec1252fd20d799e73393b |

# Findings Breakdown




| Severity | Unresolved | Acknowledged | Resolved | Other |
|---|---|---|---|---|
| Critical | 1 | 0 | 0 | 0 |
| Medium | 0 | 0 | 0 | 0 |
| Minor / Informative | 1 | 0 | 0 | 0 |

## ST - Stops Transactions

| | |
|---|---|
| **Criticality** | Critical |
| **Location** | contracts/token.sol#L313 |
| **Status** | Unresolved |

### Description

The buy and sell transactions are initially disabled for all users. The owner can enable the transactions for all users. Once the transactions are enabled the owner will not be able to disable them again.

```
if (isBuy || isSell) {
    require(tradingStatus, "Trading is not enabled yet!");
```

### Recommendation

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. Some suggestions are:

- Introduce a multi-sign wallet so that many addresses will confirm the action.
- Introduce a governance model where users will vote about the actions.

## L04 - Conformance to Solidity Naming Conventions

| | |
|---|---|
| **Criticality** | Minor / Informative |
| **Location** | contracts/token.sol#L38,67,102,140,149,158,167,176,186,187,200,201,213,222,233,234,246,266,267,273,406,417,431,450 |
| **Status** | 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.

```
function WETH() external pure returns (address);
uint256 private constant _totalSupply = 1e7 * 1e18
address public TreasuryWallet = 0x74Adf47aD22a9C95EE58A6D956FA58924D697E0F
address _newTreasury
uint256 _mb
uint256 _ms
uint256 _mt
uint256 _mx
uint256 _lpTax
uint256 _TreasuryTax
uint256 _sc
uint256 _db
uint256 _newAmount
address _wallet
...
```

## 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.

# Functions Analysis

| Contract | Type | Bases | | |
|---|---|---|---|---|
| | **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
| | | | | |
| **DexFactory** | Interface | | | |
| | createPair | External | ✓ | - |
| | | | | |
| **DexRouter** | Interface | | | |
| | factory | External | | - |
| | WETH | External | | - |
| | addLiquidityETH | External | Payable | - |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | | | | |
| **SCB** | Implementation | ERC20, Ownable | | |
| | | Public | ✓ | ERC20 |
| | enableTrading | External | ✓ | onlyOwner |
| | setTreasuryWallet | External | ✓ | onlyOwner |
| | setMaxBuy | External | ✓ | onlyOwner |
| | setMaxSell | External | ✓ | onlyOwner |
| | setMaxTx | External | ✓ | onlyOwner |
| | setMaxWallet | External | ✓ | onlyOwner |
| | setBuyTaxes | External | ✓ | onlyOwner |

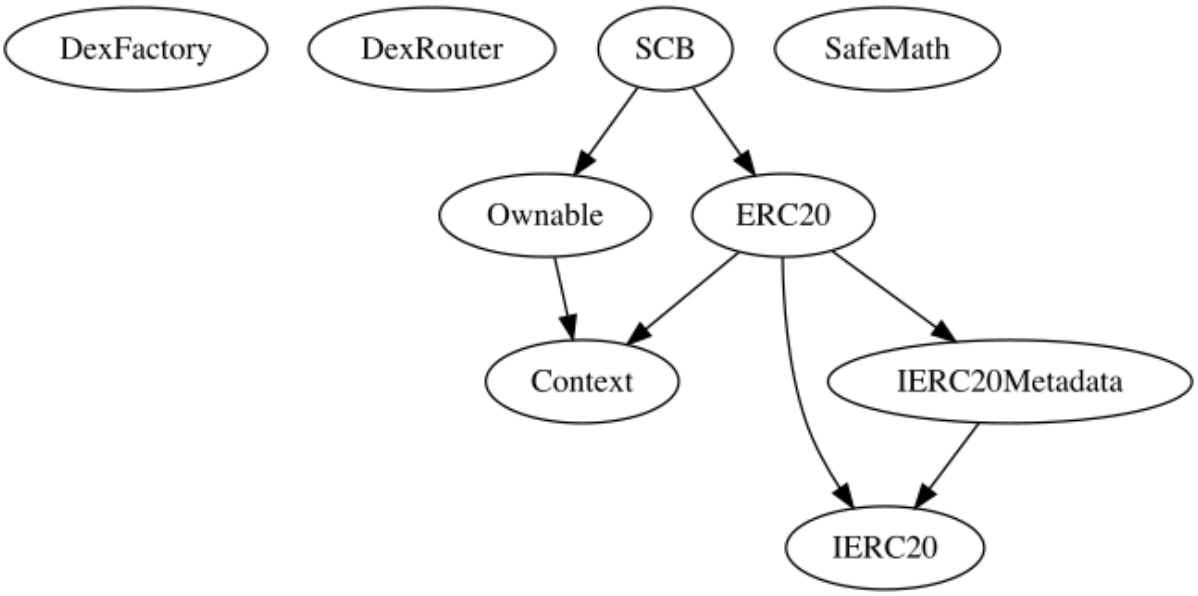
| | | | | |
|---|---|---|---|---|
| | setSellTaxes | External | ✓ | onlyOwner |
| | setSellCooldown | External | ✓ | onlyOwner |
| | setDeadBlocks | External | ✓ | onlyOwner |
| | setTransferFees | External | ✓ | onlyOwner |
| | setSwapTokensAtAmount | External | ✓ | onlyOwner |
| | toggleSellCooldown | External | ✓ | onlyOwner |
| | toggleSwapping | External | ✓ | onlyOwner |
| | setWhitelistStatus | External | ✓ | onlyOwner |
| | checkWhitelist | External | | - |
| | _takeTax | Internal | ✓ | |
| | _transfer | Internal | ✓ | |
| | internalSwap | Internal | ✓ | |
| | swapAndLiquify | Internal | ✓ | |
| | swapToETH | Internal | ✓ | |
| | addLiquidity | Private | ✓ | |
| | withdrawStuckETH | External | ✓ | onlyOwner |
| | withdrawStuckTokens | External | ✓ | onlyOwner |
| | | External | Payable | - |
| | | | | |
| **Context** | Implementation | | | |
| | _msgSender | Internal | | |
| | _msgData | Internal | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| **SafeMath** | Library | | | |
| | tryAdd | Internal | | |
| | trySub | Internal | | |
| | tryMul | Internal | | |
| | tryDiv | Internal | | |
| | tryMod | Internal | | |
| | add | Internal | | |
| | sub | Internal | | |
| | mul | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | sub | Internal | | |
| | div | Internal | | |
| | mod | Internal | | |
| | | | | |
| **IERC20** | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | transfer | External | ✓ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |

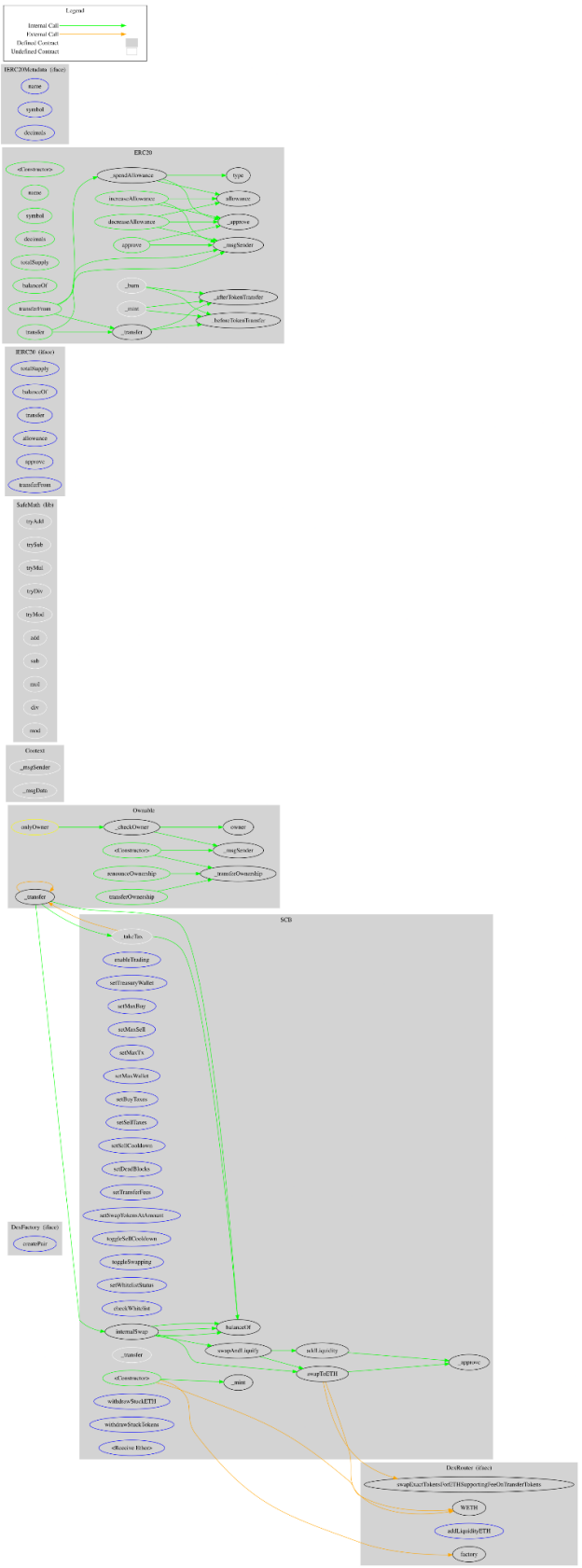
| | | | | |
|---|---|---|---|---|
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata | | |
| | | Public | ✓ | - |
| | name | Public | | - |
| | symbol | Public | | - |
| | decimals | Public | | - |
| | totalSupply | Public | | - |
| | balanceOf | Public | | - |
| | transfer | Public | ✓ | - |
| | allowance | Public | | - |
| | approve | Public | ✓ | - |
| | transferFrom | Public | ✓ | - |
| | increaseAllowance | Public | ✓ | - |
| | decreaseAllowance | Public | ✓ | - |
| | _transfer | Internal | ✓ | |
| | _mint | Internal | ✓ | |
| | _burn | Internal | ✓ | |
| | _approve | Internal | ✓ | |
| | _spendAllowance | Internal | ✓ | |
| | _beforeTokenTransfer | Internal | ✓ | |
| | _afterTokenTransfer | Internal | ✓ | |
| | | | | |
| **IERC20Metadata** | Interface | IERC20 | | |

| | | | | |
|---|---|---|---|---|
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |
| | | | | |
| **Ownable** | Implementation | Context | | |
| | | Public | ✓ | - |
| | owner | Public | | - |
| | _checkOwner | Internal | | |
| | renounceOwnership | Public | ✓ | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |
| | _transferOwnership | Internal | ✓ | |

# Inheritance Graph



# Flow Graph


Legend
Internal Call
External Call
Defined Contract
Undefined Contract
IERC20Metadata (iface)
name
symbol
decimals
ERC20
<Constructor>
name
symbol
decimals
totalSupply
balanceOf
transferFrom
transfer
_spendAllowance
increaseAllowance
decreaseAllowance
approve
type
allowance
_approve
_msgSender
_burn
_mint
_transfer
_afterTokenTransfer
_beforeTokenTransfer
IERC20 (iface)
totalSupply
balanceOf
transfer
allowance
approve
transferFrom
SafeMath (lib)
tryAdd
trySub
tryMul
tryDiv
tryMod
add
sub
mul
div
mod
Context
_msgSender
_msgData
Ownable
onlyOwner
_checkOwner
owner
<Constructor>
renounceOwnership
transferOwnership
_msgSender
_transferOwnership
_transfer
SCB
takeTax
enableTrading
setTreasuryWallet
setMaxBuy
setMaxSell
setMaxTx
setMaxWallet
setBuyTaxes
setSellTaxes
setSellCooldown
setDeadBlocks
setTransferFees
setSwapTokensAtAmount
toggleSellCooldown
toggleSwapping
setWhitelistStatus
checkWhitelist
internalSwap
_transfer
<Constructor>
withdrawStuckETH
withdrawStuckTokens
<Receive Ether>
balanceOf
swapAndLiquify
swapToETH
addLiquidity
_approve
_mint
DexFactory (iface)
createPair
DexRouter (iface)
swapExactTokensForETHSupportingFeeOnTransferTokens
WETH
addLiquidityETH
factory

# Summary

Seismic contract implements a token mechanism. This audit investigates security issues, business logic concerns, and potential improvements. Seismic is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler errors 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. There is also a limit of max 22% buy/sell fees and 11% transfer fees.

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# About Cyberscope

Cyberscope is a blockchain cybersecurity company that was founded with the vision to make web3.0 a safer place for investors and developers. Since its launch, it has worked with thousands of projects and is estimated to have secured tens of millions of investors' funds.

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