



# Cyberscope

## Audit Report

# **SHIT EGOISTICAL COMMISSION**

June 2023

Network    BSC

Address    0x6B9Ada18C05655A8552B212B4CE378B3e3B812aD

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
●	MAP	Misleading Admin Permission	Unresolved
●	CR	Code Repetition	Unresolved
●	MVN	Misleading Variables Naming	Unresolved
●	AFI	Accumulated Fees Inconsistency	Unresolved
●	RSW	Redundant Storage Writes	Unresolved
●	IDI	Immutable Declaration Improvement	Unresolved
●	L02	State Variables could be Declared Constant	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L13	Divide before Multiply Operation	Unresolved
●	L18	Multiple Pragma Directives	Unresolved
●	L19	Stable Compiler Version	Unresolved
●	L20	Succeeded Transfer Check	Unresolved

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## Review

Contract Name	Sec
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	99999 runs
Explorer	<a href="https://bscscan.com/address/0x6b9ada18c05655a8552b212b4ce378b3e3b812ad">https://bscscan.com/address/0x6b9ada18c05655a8552b212b4ce378b3e3b812ad</a>
Address	0x6b9ada18c05655a8552b212b4ce378b3e3b812ad
Network	BSC
Symbol	SEC
Decimals	18
Total Supply	15.000.000.000

## Audit Updates

Initial Audit	10 Jun 2023
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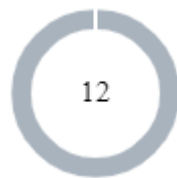
## Source Files

Filename	SHA256
@openzeppelin/contracts/access/AccessControl.sol	0ab66c9c0b45fca5efad935058e889bd5b b5599eb95b0d17ec924f64ebcaf38f
@openzeppelin/contracts/access/IAccessControl.sol	d03c1257f2094da6c86efa7aa09c1c07ebd 33dd31046480c5097bc2542140e45
@openzeppelin/contracts/token/ERC20/extensions/IERC20Metadata.sol	af5c8a77965cc82c33b7ff844deb9826166 689e55dc037a7f2f790d057811990
@openzeppelin/contracts/token/ERC20/IERC20.sol	94f23e4af51a18c2269b355b8c7cf4db800 3d075c9c541019eb8dcf4122864d5
@openzeppelin/contracts/utils/Context.sol	1458c260d010a08e4c20a4a517882259a2 3a4baa0b5bd9add9fb6d6a1549814a
@openzeppelin/contracts/utils/introspection/ERC165.sol	8806a632d7b656cadb8133ff82acae4405 b3a64d8709d93b0fa6a216a8a6154
@openzeppelin/contracts/utils/introspection/IERC165.sol	701e025d13ec6be09ae892eb029cd83b30 64325801d73654847a5fb11c58b1e5
@openzeppelin/contracts/utils/Strings.sol	8597c62818dcbcb6cf85c21179b90b714fb 4f70a4347ca2eed23e88c87b08b8a1
@uniswap/v2-core/contracts/interfaces/IUniswapV2Factory.sol	51d056199e3f5e41cb1a9f11ce581aa3e19 0cc982db5771ffeef8d8d1f962a0d
@uniswap/v2-periphery/contracts/interfaces/IUniswapV2Router01.sol	0439ffe0fd4a5e1f4e22d71ddbda76d63d6 1679947d158cba4ee0a1da60cf663
@uniswap/v2-periphery/contracts/interfaces/IUniswapV2Router02.sol	a2900701961cb0b6152fc073856b972564f 7c798797a4a044e83d2ab8f0e8d38
contracts/interfaces/ISecDistribution.sol	4543370ec7260ebbfe082e406ea3db655d 15b62267bc72819aa6053b0af20647

<b>contracts/Sec.sol</b>	8b9564101558ea8e30cfc7b8e4dec5e6ac 5b22c58cbf78fd9ff74b5089a8e7ee
<b>contracts/SecDistribution.sol</b>	1da0714b47ebd0b8ebad883a9b75f42fbe 549d95793a194f68eba27fa58ce2fe



## Findings Breakdown



● Critical	0
● Medium	0
● Minor / Informative	12

Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	0
● Medium	0	0	0	0
● Minor / Informative	12	0	0	0

## MAP - Misleading Admin Permission

Criticality	Minor / Informative
Location	contracts/Sec.sol#L22,107
Status	Unresolved

### Description

The contract has a variable named `owner` that is initialized to zero address, creating ambiguity regarding the ownership structure. As a result, one might assume that the contract ownership is renounced. However, the contract uses an access control library that includes an admin role serving as the default owner.

This leads to confusion and misunderstanding about the actual owner of the contract.

```
address public owner = address(0);
_setupRole(DEFAULT_ADMIN_ROLE, msg.sender);
```

### Recommendation

It is recommended to remove the redundant `owner` variable and clearly document the usage of the access control library to define and manage ownership in the contract.

## CR - Code Repetition

Criticality	Minor / Informative
Location	contracts/Sec.sol#L189,272,292,318
Status	Unresolved

### Description

The contract contains repetitive code segments. There are potential issues that can arise when using code segments in Solidity. Some of them can lead to issues like gas efficiency, complexity, readability, security, and maintainability of the source code. It is generally a good idea to try to minimize code repetition where possible.

```
require(_rewardSwapReceivers.length == _rewardSwapReceiversRate.length,
"size");

uint256 _totalRate = 0;
for (uint256 _i = 0; _i < _rewardSwapReceiversRate.length; _i++) {
    _totalRate += _rewardSwapReceiversRate[_i];
}
require(_totalRate == 10000, "rate");
```

### Recommendation

The team is advised to avoid repeating the same code in multiple places, which can make the contract easier to read and maintain. The authors could try to reuse code wherever possible, as this can help reduce the complexity and size of the contract. For instance, the contract could reuse the common code segments in an internal function in order to avoid repeating the same code in multiple places.

## MVN - Misleading Variables Naming

Criticality	Minor / Informative
Location	contracts/Sec.sol#L41,393
Status	Unresolved

### Description

Variables can have misleading names if their names do not accurately reflect the value they contain or the purpose they serve. The contract uses some variable names that are too generic or do not clearly convey the information stored in the variable. Misleading variable names can lead to confusion, making the code more difficult to read and understand.

```
uint256 public burnFeeBuyRate;
uint256 public burnFeeSellRate;
uint256 public burnFeeTransferRate;
address[] public burnFeeReceivers;
uint256[] public burnFeeReceiversRate;
...
for (uint256 _i = 0; _i < burnFeeReceivers.length; _i++) {
    _transferAmount(_from, burnFeeReceivers[_i], _calcFee(_burnFeeRes,
burnFeeReceiversRate[_i]));
}
```

### Recommendation

It's always a good practice for the contract to contain variable names that are specific and descriptive. The team is advised to keep in mind the readability of the code.

## AFI - Accumulated Fees Inconsistency

Criticality	Minor / Informative
Location	contracts/Sec.sol#L222,311,337
Status	Unresolved

### Description

The contract resets the accumulated fees variables without performing a distribution of the accumulated rewards. This creates an inconsistency between the actual accumulated tokens from the fees, as the reset effectively clears the stored values without properly accounting for their distribution.

```
function resetRewardsAmount() external onlyRole(DEFAULT_ADMIN_ROLE) {
    rewardSellAmount = 0;
    rewardBuyAmount = 0;

    emit RewardsAmountReseted();
}
function resetLiquidityFee() external onlyRole(DEFAULT_ADMIN_ROLE) {
    liquidityFeeAmount = 0;

    emit LiquidityFeeReseted();
}
function resetSwapFee() external onlyRole(DEFAULT_ADMIN_ROLE) {
    swapFeeAmount = 0;

    emit SwapFeeReseted();
}
```

### Recommendation

The team is advised to perform proper distribution of the accumulated rewards before resetting the accumulated variables. This ensures that users receive their deserved rewards based on their interactions with the contract.

## RSW - Redundant Storage Writes

<b>Criticality</b>	Minor / Informative
<b>Location</b>	contracts/Sec.sol#L177,183,537
<b>Status</b>	Unresolved

### Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

The contract modifies the state of certain variables even if their current state is the same as the one passed as an argument. As a result, the contract performs redundant storage writes.

```
excludedFromFee[_address] = _isExcludedFromFee;  
excludedFromSwap[_address] = _isExcludedFromSwap;  
token1 = _token1;
```

### Recommendation

The team is advised to take these segments into consideration and rewrite them so the runtime will be more performant. That way it will improve the efficiency and performance of the source code and reduce the cost of executing it.

## IDI - Immutable Declaration Improvement

<b>Criticality</b>	Minor / Informative
<b>Location</b>	contracts/Sec.sol#L104,105,111
<b>Status</b>	Unresolved

### Description

The contract declares state variables that their value is initialized once in the constructor and are not modified afterwards. The `immutable` is a special declaration for this kind of state variables that saves gas when it is defined.

```
name
symbol
distribution
```

### Recommendation

By declaring a variable as immutable, the Solidity compiler is able to make certain optimizations. This can reduce the amount of storage and computation required by the contract, and make it more gas-efficient.

## L02 - State Variables could be Declared Constant

<b>Criticality</b>	Minor / Informative
<b>Location</b>	contracts/Sec.sol#L22
<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.

```
address public owner = address(0)
```

### 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>	contracts/SecDistribution.sol#L14contracts/Sec.sol#L125,129,134,138,143,153,158,167,176,182,188,208,215,229,239,249,265,271,291,317,343
<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.

```
address _token
uint256 _amount
address _to
address _account
address _recipient
address _spender
address _owner
address _sender
uint256 _addedValue
uint256 _subtractedValue
address _lpToken
bool _lp
bool _isExcludedFromFee
address _address

...
```

## 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>.

## L13 - Divide before Multiply Operation

Criticality	Minor / Informative
Location	contracts/Sec.sol#L418,447
Status	Unresolved

### Description

It is important to be aware of the order of operations when performing arithmetic calculations. This is especially important when working with large numbers, as the order of operations can affect the final result of the calculation. Performing divisions before multiplications may cause loss of precision.

```
uint256 _liquidityFeeHalf = liquidityFeeAmount / 2
uint256 _liquidityFeeToken1Amount = _calcFee(_token1Balance,
_liquidityFeeHalf * 10000 / _amountToSwap)
```

### Recommendation

To avoid this issue, it is recommended to carefully consider the order of operations when performing arithmetic calculations in Solidity. It's generally a good idea to use parentheses to specify the order of operations. The basic rule is that the multiplications should be prior to the divisions.

## L18 - Multiple Pragma Directives

<b>Criticality</b>	Minor / Informative
<b>Location</b>	contracts/SecDistribution.sol#L2contracts/Sec.sol#L2
<b>Status</b>	Unresolved

### Description

If the contract includes multiple conflicting pragma directives, it may produce unexpected errors. To avoid this, it's important to include the correct pragma directive at the top of the contract and to ensure that it is the only pragma directive included in the contract.

```
pragma solidity >=0.5.0;  
pragma solidity >=0.6.2;
```

### Recommendation

It is important to include only one pragma directive at the top of the contract and to ensure that it accurately reflects the version of Solidity that the contract is written in.

By including all required compiler options and flags in a single pragma directive, the potential conflicts could be avoided and ensure that the contract can be compiled correctly.

## L19 - Stable Compiler Version

<b>Criticality</b>	Minor / Informative
<b>Location</b>	contracts/SecDistribution.sol#L2contracts/Sec.sol#L2
<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 ^0.8.2;
```

### 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.

## L20 - Succeeded Transfer Check

<b>Criticality</b>	Minor / Informative
<b>Location</b>	contracts/SecDistribution.sol#L15
<b>Status</b>	Unresolved

### Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

```
IERC20(_token).transfer(_to, _amount)
```

### Recommendation

The contract should check if the result of the transfer methods is successful. The team is advised to check the SafeERC20 library from the [Openzeppelin library](#).

## Functions Analysis

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
<b>AccessControl</b>	Implementation	Context, IAccessControl, ERC165		
	supportsInterface	Public		-
	hasRole	Public		-
	_checkRole	Internal		
	_checkRole	Internal		
	getRoleAdmin	Public		-
	grantRole	Public	✓	onlyRole
	revokeRole	Public	✓	onlyRole
	renounceRole	Public	✓	-
	_setupRole	Internal	✓	
	_setRoleAdmin	Internal	✓	
	_grantRole	Internal	✓	
	_revokeRole	Internal	✓	
<b>IAccessControl</b>	Interface			
	hasRole	External		-
	getRoleAdmin	External		-

	grantRole	External	✓	-
	revokeRole	External	✓	-
	renounceRole	External	✓	-
<b>IERC20Metadata</b>	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
<b>IERC20</b>	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
<b>Context</b>	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
<b>ERC165</b>	Implementation	IERC165		
	supportsInterface	Public		-



<b>IERC165</b>	Interface			
	supportsInterface	External		-
<b>Strings</b>	Library			
	toString	Internal		
	toHexString	Internal		
	toHexString	Internal		
<b>IUniswapV2Factory</b>	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
<b>IUniswapV2Router01</b>	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-

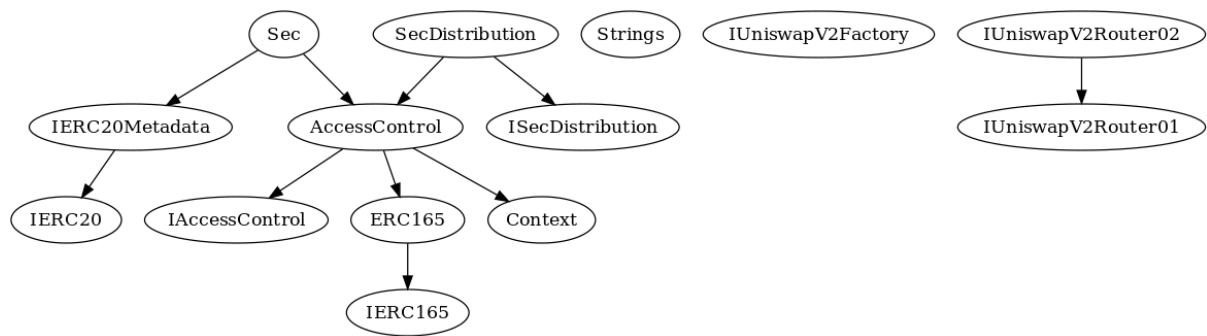
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
<b>IUniswapV2Router02</b>	Interface	IUniswapV2Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-

	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
<b>ISecDistribution</b>	Interface			
	recoverTokensFor	External	✓	-
<b>Sec</b>	Implementation	IERC20Metadata, AccessControl		
		Public	✓	-
	balanceOf	Public		-
	transfer	External	✓	-
	allowance	Public		-
	approve	External	✓	-
	transferFrom	External	✓	-
	increaseAllowance	External	✓	-
	decreaseAllowance	External	✓	-
	setLpToken	External	✓	onlyRole
	setExcludedFromFee	Public	✓	onlyRole
	setExcludedFromSwap	Public	✓	onlyRole
	setRewardSwapReceivers	External	✓	onlyRole
	setRewardSellRate	External	✓	onlyRole
	setRewardBuyRate	External	✓	onlyRole
	resetRewardsAmount	External	✓	onlyRole
	updateBuyRates	External	✓	onlyRole

	updateSellRates	External	✓	onlyRole
	updateTransferRates	External	✓	onlyRole
	resetCounter	External	✓	onlyRole
	setLimit	External	✓	onlyRole
	updateBurnFeeReceivers	External	✓	onlyRole
	updateLiquidityFeeReceivers	External	✓	onlyRole
	resetLiquidityFee	External	✓	onlyRole
	updateSwapFeeReceivers	External	✓	onlyRole
	resetSwapFee	External	✓	onlyRole
	setEnabledSwapForSell	External	✓	onlyRole
	_transfer	Internal	✓	
	_takeFees	Internal	✓	
	_transferAmount	Internal	✓	
	_mint	Internal	✓	
	_approve	Internal	✓	
	_setRouterAndPair	Internal	✓	
	_calcFee	Internal		
	_isSell	Internal		
	_isBuy	Internal		
	_swapTokensForToken1	Internal	✓	lockTheSwap
	_addLiquidity	Internal	✓	lockTheSwap
<b>SecDistribution</b>	Implementation	ISecDistribut ion,		

		AccessContr ol		
		Public	✓	-
	recoverTokensFor	External	✓	onlyRole

# Inheritance Graph



[illegible]

## Summary

SHIT EGOISTICAL COMMISSION contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. SHIT EGOISTICAL COMMISSION 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. There is also a limit of max 9% fees. Additionally, the contract has a fee limit mechanism. Lastly, it appears that the contract is falsely represented as being renounced, however, it has not undergone the renouncement process.



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Blockchain technology and cryptographic assets present a high level of ongoing risk. Cyberscope's position is that each company and individual are responsible for their own due diligence and continuous security. Cyberscope's goal is to help reduce the attack vectors and the high level of variance associated with utilizing new and consistently changing technologies and in no way claims any guarantee of security or functionality of the technology we agree to analyze. The assessment services provided by Cyberscope are subject to dependencies and are under continuing development. You agree that your access and/or use including but not limited to any services reports and materials will be at your sole risk on an as-is where-is and as-available basis. Cryptographic tokens are emergent technologies and carry with them high levels of technical risk and uncertainty. The assessment reports could include false positives, false negatives and other unpredictable results. The services may access and depend upon multiple layers of third parties.

## 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>