Cyberscope

Audit Report

HRA Coin

April 2025

Network BSC

Address 0x5e64326ce6df66cdfa62f8b154097bf536233451

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
	MEE	Missing Events Emission	Unresolved
	MC	Missing Check	Unresolved
	L20	Succeeded Transfer Check	Unresolved

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Risk Classification

The criticality of findings in Cyberscope's smart contract audits is determined by evaluating multiple variables. The two primary variables are:

1. **Likelihood of Exploitation**: This considers how easily an attack can be executed, including the economic feasibility for an attacker.
2. **Impact of Exploitation**: This assesses the potential consequences of an attack, particularly in terms of the loss of funds or disruption to the contract's functionality.

Based on these variables, findings are categorized into the following severity levels:

1. **Critical**: Indicates a vulnerability that is both highly likely to be exploited and can result in significant fund loss or severe disruption. Immediate action is required to address these issues.
2. **Medium**: Refers to vulnerabilities that are either less likely to be exploited or would have a moderate impact if exploited. These issues should be addressed in due course to ensure overall contract security.
3. **Minor**: Involves vulnerabilities that are unlikely to be exploited and would have a minor impact. These findings should still be considered for resolution to maintain best practices in security.
4. **Informative**: Points out potential improvements or informational notes that do not pose an immediate risk. Addressing these can enhance the overall quality and robustness of the contract.

Severity	Likelihood / Impact of Exploitation
Critical	Highly Likely / High Impact
Medium	Less Likely / High Impact or Highly Likely/ Lower Impact
Minor / Informative	Unlikely / Low to no Impact

Review

Contract Name	HRACoin
Compiler Version	v0.8.27+commit.40a35a09
Optimization	200 runs
Explorer	https://bscscan.com/address/0x5e64326ce6df66cdfa62f8b154097bf536233451
Address	0x5e64326ce6df66cdfa62f8b154097bf536233451
Network	BSC
Symbol	HRA
Decimals	18
Total Supply	1.000.000.000

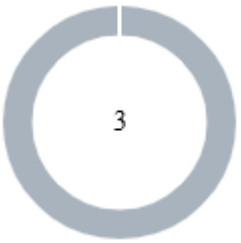
Audit Updates

Initial Audit	30 Mar 2025

Source Files

Filename	SHA256
contracts/HRACoin.sol	801a85953794f13fcf2d635636c91ac0a4723eba879ec1a642c2aa507bd69754

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

MEE - Missing Events Emission

Criticality	Minor / Informative
Location	contracts/HRACoin.sol#L18,23
Status	Unresolved

Description

The contract performs actions and state mutations from external methods that do not result in the emission of events. Emitting events for significant actions is important as it allows external parties, such as wallets or dApps, to track and monitor the activity on the contract. Without these events, it may be difficult for external parties to accurately determine the current state of the contract.

```
function withdrawEther(uint256 amount) external onlyOwner
{/*...*/}
function withdrawERC20Token(address tokenAddress, uint256
amount) external onlyOwner {/*...*/}
```

Recommendation

It is recommended to include events in the code that are triggered each time a significant action is taking place within the contract. These events should include relevant details such as the user's address and the nature of the action taken. By doing so, the contract will be more transparent and easily auditable by external parties. It will also help prevent potential issues or disputes that may arise in the future.

MC - Missing Check

Criticality	Minor / Informative
Location	contracts/HRACoin.sol#L18,23
Status	Unresolved

Description

The contract is processing variables that have not been properly sanitized and checked that they form the proper shape. These variables may produce vulnerability issues.

Specifically, in `withdrawEther` and `withdrawERC20Token` a check is missing to ensure that the `amount` added as parameter is above 0.

```
function withdrawEther(uint256 amount) external onlyOwner
{/*...*/}
function withdrawERC20Token(address tokenAddress, uint256
amount) external onlyOwner {/*...*/}
```

Recommendation

The team is advised to properly check the variables according to the required specifications.

L20 - Succeeded Transfer Check

Criticality	Minor / Informative
Location	contracts/HRACoin.sol#L31
Status	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.

```
ERC20(tokenAddress).transfer(owner(), amount)
```

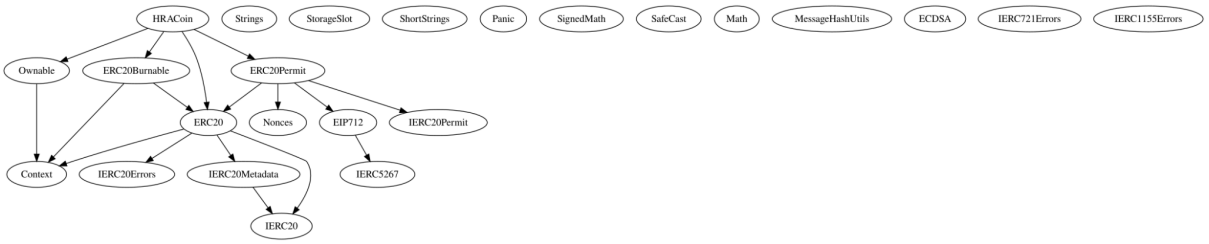
Recommendation

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.

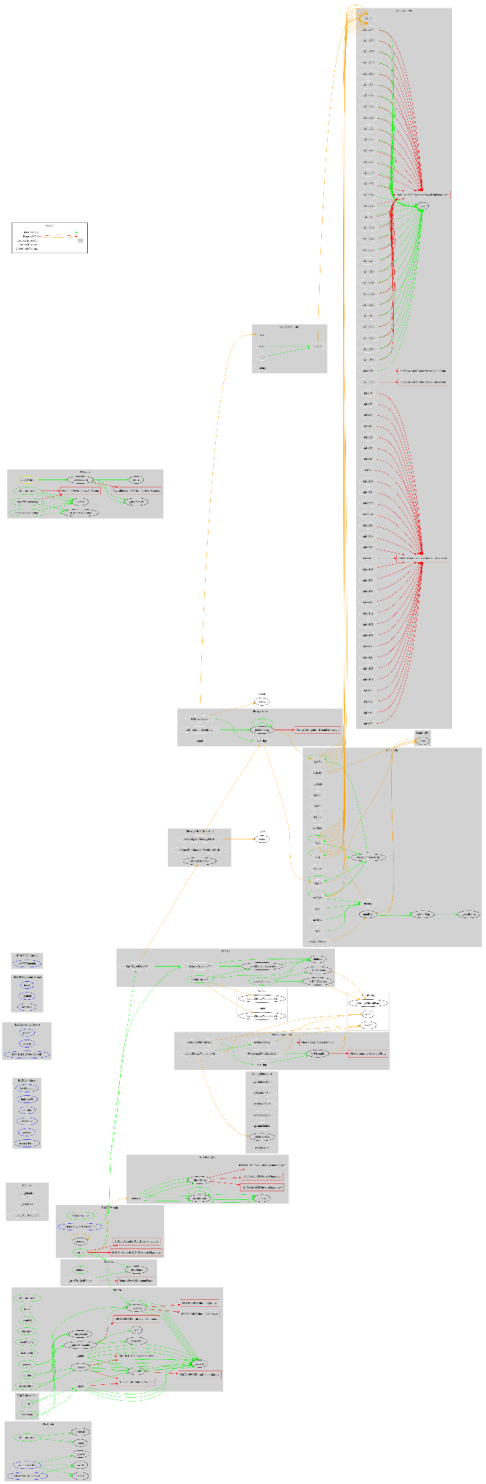
Functions Analysis

Contract	Type	Bases		
	Function Name	**Visibility**	**Mutability**	**Modifiers**
HRACoin	Implementation	ERC20, ERC20Burnable, ERC20Permit, Ownable		
		Public	✓	ERC20 ERC20Permit Ownable
	withdrawEther	External	✓	onlyOwner
	withdrawERC20Token	External	✓	onlyOwner

Inheritance Graph



Flow Graph



Summary

HRA Coin contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. HRA Coin 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. The contract does not implement any fees.

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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

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