Cyberscope

# Audit Report

# Reward Nowar

August 2022

| | |
|---|---|
| Type | BEP20 |
| Network | BSC |
| Address | 0xb5ff1680e54bcb25093865d40c101d8c536a036a |
| Audited by | © cyberscope |

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# Contract Review

| | |
|---|---|
| **Contract Name** | BABYTOKEN |
| **Compiler Version** | v0.8.4+commit.c7e474f2 |
| **Optimization** | 200 runs |
| **Licence** | MIT |
| **Explorer** | https://bscscan.com/token/0xb5ff1680e54bcb25093865d40c101d8c536a036a |
| **Symbol** | Rnowar |
| **Decimals** | 18 |
| **Total Supply** | 10,000,000,000 |
| **Domain** | https://nowars.site/index/#Rnowar-economy |

# Source Files

| Filename | SHA256 |
|---|---|
| **contract.sol** | 610203b5ffcb749ab1dbe1f60aec6d1bc39148eb0ea77ce69bd935137ad22fe7 |

# Audit Updates

| | |
|---|---|
| **Initial Audit** | 30th August 2022 |
| **Corrected** | |

# Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

| Severity | Code | Description | Status |
|---|---|---|---|
| ● | ST | Stops Transactions | Passed |
| ● | OCTD | Transfers Contract's Tokens | Passed |
| ● | OTUT | Transfers User's Tokens | Passed |
| ● | ELFM | Exceeds Fees Limit | Passed |
| ● | ULTW | Transfers Liquidity to Team Wallet | Passed |
| ● | MT | Mints Tokens | Passed |
| ● | BT | Burns Tokens | Passed |
| ● | BC | Blacklists Addresses | Passed |

# Contract Diagnostics

Critical Medium Minor / Informative

| Severity | Code | Description | Status |
|---|---|---|---|
| ● | L01 | Public Function could be Declared External | Unresolved |
| ● | L04 | Conformance to Solidity Naming Conventions | Unresolved |
| ● | L05 | Unused State Variable | Unresolved |
| ● | L07 | Missing Events Arithmetic | Unresolved |
| ● | L09 | Dead Code Elimination | Unresolved |
| ● | L12 | Using Variables before Declaration | Unresolved |
| ● | L14 | Uninitialized Variables in Local Scope | Unresolved |
| ● | L15 | Local Scope Variable Shadowing | Unresolved |

# L01 - Public Function could be Declared External

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L1487,2830,2116,1931,291,1946,2870,1764,553,1399,228,2168,1935,338,211,254,319,1407,2874,1515,1954,561,2724,2319,203,1469,1534,1756,2749,2882,1424,235,2804,273,2771,1458,2469,2336,2187,2421,2894,1450,262 |
| **Status** | Unresolved |

## Description

Public functions that are never called by the contract should be declared external to save gas.

```
transferFrom
updateGasForProcessing
distributeCAKEDividends
get
getKeyAtIndex
isExcludedFromFees
transferOwnership
renounceOwnership
name
...
```

## Recommendation

Use the external attribute for functions never called from the contract.

# L04 - Conformance to Solidity Naming Conventions

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L2108,1328,2372,1798,1725,1815,2107,2086,1774,1797,1391,1386,1319,1693,2168,2187,2601,2109,2175,1730,931,2201,1315,2106 |
| **Status** | Unresolved |

## Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
_name
__gap
_account
PERMIT_TYPEHASH
__Ownable_init
MINIMUM_LIQUIDITY
_rewardToken
magnitude
DOMAIN_SEPARATOR
...
```

## Recommendation

Follow the Solidity naming convention.
https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions.

# L05 - Unused State Variable

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L1843,1774 |
| **Status** | Unresolved |

## Description

There are segments that contain unused state variables.

```
MAX_INT256
__gap
```

## Recommendation

Remove unused state variables.

# L07 - Missing Events Arithmetic

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L2720,2798,2792,2786 |
| **Status** | Unresolved |

## 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.

```
swapTokensAtAmount = amount
marketingFee = value
liquidityFee = value
totalFees = tokenRewardsFee.add(liquidityFee).add(marketingFee)
```

## Recommendation

Emit an event for critical parameter changes.

# L09 - Dead Code Elimination

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L879,1889,859,416,1558,845,2220,1315 |
| **Status** | Unresolved |

## Description

Functions that are not used in the contract, and make the code's size bigger.

```
predictDeterministicAddress
abs
_burn
_transfer
cloneDeterministic
__Context_init
```

## Recommendation

Remove unused functions.

# L12 - Using Variables before Declaration

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L3034,3036,3035 |
| **Status** | Unresolved |

## Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

```
iterations
lastProcessedIndex
claims
```

## Recommendation

The variables should be declared before any usage of them.

# L14 - Uninitialized Variables in Local Scope

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L3034,3036,3035 |
| **Status** | Unresolved |

## Description

The are variables that are defined in the local scope and are not initialized.

```
iterations
lastProcessedIndex
claims
```

## Recommendation

All the local scoped variables should be initialized.

# L15 - Local Scope Variable Shadowing

| | |
|---|---|
| **Criticality** | minor / informative |
| **Location** | contract.sol#L2108,2168,2187,2201,2109,2175 |
| **Status** | Unresolved |

## Description

The are variables that are defined in the local scope containing the same name from an upper scope.

```
_name
_owner
_symbol
```

## Recommendation

The local variables should have different names from the upper scoped variables.

# Contract Functions

| Contract | Type | Bases | | |
|---|---|---|---|---|
| | **Function Name** | **Visibility** | **Mutability** | **Modifiers** |
| | | | | |
| **IERC20** | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | transfer | External | ✓ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| **IERC20Metadata** | Interface | IERC20 | | |
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |
| | | | | |
| **Context** | Implementation | | | |
| | _msgSender | Internal | | |
| | _msgData | Internal | | |
| | | | | |
| **ERC20** | Implementation | Context, IERC20, IERC20Metadata | | |
| | <Constructor> | 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 | ✓ | |
| | _beforeTokenTransfer | Internal | ✓ | |
| | _afterTokenTransfer | Internal | ✓ | |
| | | | | |
| **Ownable** | Implementation | Context | | |
| | <Constructor> | Public | ✓ | - |
| | owner | Public | | - |
| | renounceOwnership | Public | ✓ | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |
| | _setOwner | Private | ✓ | |
| | | | | |
| **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 | | |
| | | | | |
| **Clones** | Library | | | |
| | clone | Internal | ✓ | |

| | | | | |
|---|---|---|---|---|
| | cloneDeterministic | Internal | ✓ | |
| | predictDeterministicAddress | Internal | | |
| | predictDeterministicAddress | Internal | | |
| | | | | |
| **IUniswapV2Factory** | Interface | | | |
| | feeTo | External | | - |
| | feeToSetter | External | | - |
| | getPair | External | | - |
| | allPairs | External | | - |
| | allPairsLength | External | | - |
| | createPair | External | ✓ | - |
| | setFeeTo | External | ✓ | - |
| | setFeeToSetter | External | ✓ | - |
| | | | | |
| **IUniswapV2Router01** | 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 | | - |
| | | | | |
| **IUniswapV2Router02** | Interface | IUniswapV2Router01 | | |
| | removeLiquidityETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | removeLiquidityETHWithPermitSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactTokensForTokensSupportingFeeOnTransferTokens | External | ✓ | - |
| | swapExactETHForTokensSupportingFeeOnTransferTokens | External | Payable | - |
| | swapExactTokensForETHSupportingFeeOnTransferTokens | External | ✓ | - |
| | | | | |
| **IERC20Upgradeable** | Interface | | | |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | transfer | External | ✓ | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | | | | |
| **IERC20MetadataUpgradeable** | Interface | IERC20Upgradeable | | |
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |
| | | | | |
| **Initializable** | Implementation | | | |
| | | | | |
| **ContextUpgradeable** | Implementation | Initializable | | |
| | __Context_init | Internal | ✓ | initializer |
| | __Context_init_unchained | Internal | ✓ | initializer |
| | _msgSender | Internal | | |
| | _msgData | Internal | | |

| | | | | |
|---|---|---|---|---|
| **ERC20Upgradeable** | Implementation | Initializable, ContextUpgradeable, IERC20Upgradeable, IERC20MetadataUpgradeable | | |
| | __ERC20_init | Internal | ✓ | initializer |
| | __ERC20_init_unchained | Internal | ✓ | initializer |
| | 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 | ✓ | |
| | _beforeTokenTransfer | Internal | ✓ | |
| | _afterTokenTransfer | Internal | ✓ | |
| | | | | |
| **OwnableUpgradeable** | Implementation | Initializable, ContextUpgradeable | | |
| | __Ownable_init | Internal | ✓ | initializer |
| | __Ownable_init_unchained | Internal | ✓ | initializer |
| | owner | Public | | - |
| | renounceOwnership | Public | ✓ | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |
| | _setOwner | Private | ✓ | |

| | | | | |
|---|---|---|---|---|
| **IUniswapV2Pair** | Interface | | | |
| | name | External | | - |
| | symbol | External | | - |
| | decimals | External | | - |
| | totalSupply | External | | - |
| | balanceOf | External | | - |
| | allowance | External | | - |
| | approve | External | ✓ | - |
| | transfer | External | ✓ | - |
| | transferFrom | External | ✓ | - |
| | DOMAIN_SEPARATOR | External | | - |
| | PERMIT_TYPEHASH | External | | - |
| | nonces | External | | - |
| | permit | External | ✓ | - |
| | MINIMUM_LIQUIDITY | External | | - |
| | factory | External | | - |
| | token0 | External | | - |
| | token1 | External | | - |
| | getReserves | External | | - |
| | price0CumulativeLast | External | | - |
| | price1CumulativeLast | External | | - |
| | kLast | External | | - |
| | mint | External | ✓ | - |
| | burn | External | ✓ | - |
| | swap | External | ✓ | - |
| | skim | External | ✓ | - |
| | sync | External | ✓ | - |
| | initialize | External | ✓ | - |
| | | | | |
| **SafeMathInt** | Library | | | |
| | mul | Internal | | |
| | div | Internal | | |
| | sub | Internal | | |

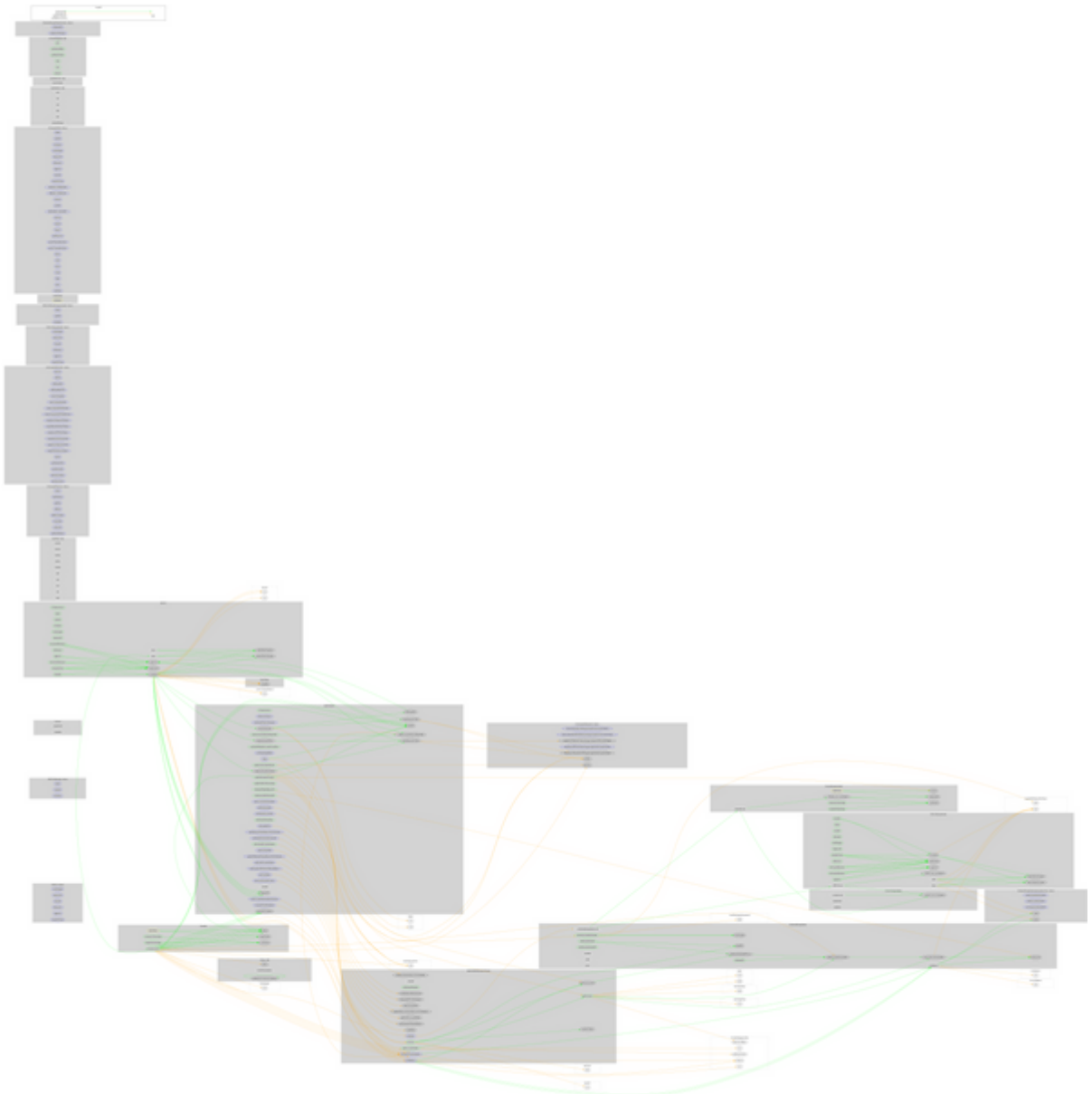
| | | | | |
|---|---|---|---|---|
| | add | Internal | | |
| | abs | Internal | | |
| | toUint256Safe | Internal | | |
| | | | | |
| **SafeMathUint** | Library | | | |
| | toInt256Safe | Internal | | |
| | | | | |
| **IterableMapping** | Library | | | |
| | get | Public | | - |
| | getIndexOfKey | Public | | - |
| | getKeyAtIndex | Public | | - |
| | size | Public | | - |
| | set | Public | ✓ | - |
| | remove | Public | ✓ | - |
| | | | | |
| **DividendPayingTokenInterface** | Interface | | | |
| | dividendOf | External | | - |
| | withdrawDividend | External | ✓ | - |
| | | | | |
| **DividendPayingTokenOptionalInterface** | Interface | | | |
| | withdrawableDividendOf | External | | - |
| | withdrawnDividendOf | External | | - |
| | accumulativeDividendOf | External | | - |
| | | | | |
| **DividendPayingToken** | Implementation | ERC20Upgradeable, OwnableUpgradeable, DividendPayingTokenInterface, DividendPayingTokenOptionalInterface | | |

| | | | | |
|---|---|---|---|---|
| | __DividendPayingToken_init | Internal | ✓ | initializer |
| | distributeCAKEDividends | Public | ✓ | onlyOwner |
| | withdrawDividend | Public | ✓ | - |
| | _withdrawDividendOfUser | Internal | ✓ | |
| | dividendOf | Public | | - |
| | withdrawableDividendOf | Public | | - |
| | withdrawnDividendOf | Public | | - |
| | accumulativeDividendOf | Public | | - |
| | _transfer | Internal | ✓ | |
| | _mint | Internal | ✓ | |
| | _burn | Internal | ✓ | |
| | _setBalance | Internal | ✓ | |
| | | | | |
| **BABYTOKENDividendTracker** | Implementation | OwnableUpgradeable, DividendPayingToken | | |
| | initialize | External | ✓ | initializer |
| | _transfer | Internal | | |
| | withdrawDividend | Public | | - |
| | excludeFromDividends | External | ✓ | onlyOwner |
| | isExcludedFromDividends | Public | | - |
| | updateClaimWait | External | ✓ | onlyOwner |
| | updateMinimumTokenBalanceForDividends | External | ✓ | onlyOwner |
| | getLastProcessedIndex | External | | - |
| | getNumberOfTokenHolders | External | | - |
| | getAccount | Public | | - |
| | getAccountAtIndex | Public | | - |
| | canAutoClaim | Private | | |
| | setBalance | External | ✓ | onlyOwner |
| | process | Public | ✓ | - |
| | processAccount | Public | ✓ | onlyOwner |
| | | | | |
| **BaseToken** | Implementation | | | |
| | | | | |

| | | | | |
|---|---|---|---|---|
| **BABYTOKEN** | Implementation | ERC20, Ownable, BaseToken | | |
| | <Constructor> | Public | Payable | ERC20 |
| | <Receive Ether> | External | Payable | - |
| | setSwapTokensAtAmount | External | ✓ | onlyOwner |
| | updateDividendTracker | Public | ✓ | onlyOwner |
| | updateUniswapV2Router | Public | ✓ | onlyOwner |
| | excludeFromFees | Public | ✓ | onlyOwner |
| | excludeMultipleAccountsFromFees | Public | ✓ | onlyOwner |
| | setMarketingWallet | External | ✓ | onlyOwner |
| | setTokenRewardsFee | External | ✓ | onlyOwner |
| | setLiquiditFee | External | ✓ | onlyOwner |
| | setMarketingFee | External | ✓ | onlyOwner |
| | setAutomatedMarketMakerPair | Public | ✓ | onlyOwner |
| | _setAutomatedMarketMakerPair | Private | ✓ | |
| | updateGasForProcessing | Public | ✓ | onlyOwner |
| | updateClaimWait | External | ✓ | onlyOwner |
| | getClaimWait | External | | - |
| | updateMinimumTokenBalanceForDividends | External | ✓ | onlyOwner |
| | getMinimumTokenBalanceForDividends | External | | - |
| | getTotalDividendsDistributed | External | | - |
| | isExcludedFromFees | Public | | - |
| | withdrawableDividendOf | Public | | - |
| | dividendTokenBalanceOf | Public | | - |
| | excludeFromDividends | External | ✓ | onlyOwner |
| | isExcludedFromDividends | Public | | - |
| | getAccountDividendsInfo | External | | - |
| | getAccountDividendsInfoAtIndex | External | | - |
| | processDividendTracker | External | ✓ | - |
| | claim | External | ✓ | - |
| | getLastProcessedIndex | External | | - |
| | getNumberOfDividendTokenHolders | External | | - |
| | _transfer | Internal | ✓ | |

| | | | | |
|---|---|---|---|---|
| | swapAndSendToFee | Private | ✓ | |
| | swapAndLiquify | Private | ✓ | |
| | swapTokensForEth | Private | ✓ | |
| | swapTokensForCake | Private | ✓ | |
| | addLiquidity | Private | ✓ | |
| | swapAndSendDividends | Private | ✓ | |

# Contract Flow



# Domain Info

| | |
|---|---|
| **Domain Name** | nowars.site |
| **Registry Domain ID** | D302588140-CNIC |
| **Creation Date** | 2022-06-11T19:00:27+00:00 |
| **Updated Date** | 2022-06-16T19:02:08+00:00 |
| **Registry Expiry Date** | 2023-06-11T23:59:59+00:00 |
| **Registrar WHOIS Server** | whois.gabia.com |
| **Registrar URL** | |
| **Registrar** | Gabia, Inc. |
| **Registrar IANA ID** | 244 |

The domain was created 3 months before the creation of the audit. It will expire in 10 months.

There is no public billing information, the creator is protected by the privacy settings.

# Summary

Reward Nowar Token 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 25% fees.

# Disclaimer

All the content provided in this document is for general information only and should not be used as financial advice or a reason to buy any investment.

Cyberscope team provides no guarantees against the sale of team tokens or the removal of liquidity by the project audited in this document. Always Do your own research and protect yourselves from being scammed.

The Cyberscope team has audited this project for general information and only expresses their opinion based on similar projects and checks from popular diagnostic tools. Under no circumstances did Cyberscope receive a payment to manipulate those results or change the awarding badge that we will be adding in our website.

Always Do your own research and protect yourselves from scams. This document should not be presented as a reason to buy or not buy any particular token.

The Cyberscope team disclaims any liability for the resulting losses.

# About Cyberscope

Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

Coinscope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provide all the essential tools to assist users draw their own conclusions.



The Cyberscope team

https://www.cyberscope.io