



Cyberscope

Audit Report

Roshi

May 2023

Network BSC

Address 0x3aBAF10607c4D9032ceFfd38affA04276E221bba

Audited by © cyberscope

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Review

| | |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contract Name | DividendToken |
| Compiler Version | v0.8.16+commit.07a7930e |
| Optimization | 10000 runs |
| Explorer | https://bscscan.com/address/0x3abaf10607c4d9032ceffd38affa04276e221bba |
| Address | 0x3abaf10607c4d9032ceffd38affa04276e221bba |
| Network | BSC |
| Symbol | ROSHI |
| Decimals | 9 |
| Total Supply | 1,000,000,000 |

Audit Updates

| | |
|---------------|-------------|
| Initial Audit | 20 May 2023 |
|---------------|-------------|

Source Files

| | |
|----------------------------------------------------------------|----------------------------------------------------------------------|
| Filename | SHA256 |
| contracts/tokens/dividendToken/dividendToken/DividendToken.sol | 53c1af3e7f04048251199735731725fa63df f56d58fea7a26d1084a1eb8fc6d6 |

Findings Breakdown

| | |
|-----------------------|---|
| ● Critical | 0 |
| ● Medium | 0 |
| ● Minor / Informative | 0 |

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

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 |

Functions Analysis

| Contract | Type | Bases | | |
|--------------------|---------------|------------|------------|-----------|
| | Function Name | Visibility | Mutability | Modifiers |
| | | | | |
| 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 | | |
| | | | | |
| SafeMathInt | Library | | | |
| | mul | Internal | | |
| | div | Internal | | |

| | | | | |
|---------------------------|--------------------------|------------------------------------------------------------------------------------------|---|-------------|
| | sub | Internal | | |
| | add | Internal | | |
| | abs | Internal | | |
| | toUint256Safe | Internal | | |
| | | | | |
| SafeMathUint | Library | | | |
| | toInt256Safe | Internal | | |
| | | | | |
| 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 | ✓ | |
| | | | | |
| OwnableUpgradable | Implementation | Initializable, ContextUpgradable | | |
| | __Ownable_init | Internal | ✓ | initializer |
| | __Ownable_init_unchained | Internal | ✓ | initializer |
| | owner | Public | | - |
| | renounceOwnership | Public | ✓ | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |

| | | | | |
|---------------------------------------------|----------------------------|---------------------------------------------------------------------------------------------------------|---|-------------|
| | _setOwner | Private | ✓ | |
| | | | | |
| DividendPayingTokenInterface | Interface | | | |
| | dividendOf | External | | - |
| | withdrawDividend | External | ✓ | - |
| | | | | |
| DividendPayingTokenOptionalInterface | Interface | | | |
| | withdrawableDividendOf | External | | - |
| | withdrawnDividendOf | External | | - |
| | accumulativeDividendOf | External | | - |
| | | | | |
| DividendPayingToken | Implementation | ERC20Upgradable, 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 | ✓ | |
| | | | | |
| IterableMapping | Library | | | |
| | get | Public | | - |
| | getIndexOfKey | Public | | - |
| | getKeyAtIndex | Public | | - |
| | size | Public | | - |
| | set | Public | ✓ | - |
| | remove | Public | ✓ | - |
| | | | | |
| DividendTracker | Implementation | OwnableUpgradable, DividendPayingToken | | |
| | initialize | External | ✓ | initializer |
| | _transfer | Internal | | |
| | withdrawDividend | Public | | - |
| | excludeFromDividends | External | ✓ | onlyOwner |
| | isExcludedFromDividends | Public | | - |
| | updateClaimWait | External | ✓ | onlyOwner |
| | updateMinimumTokenBalanceForDividends | External | ✓ | onlyOwner |

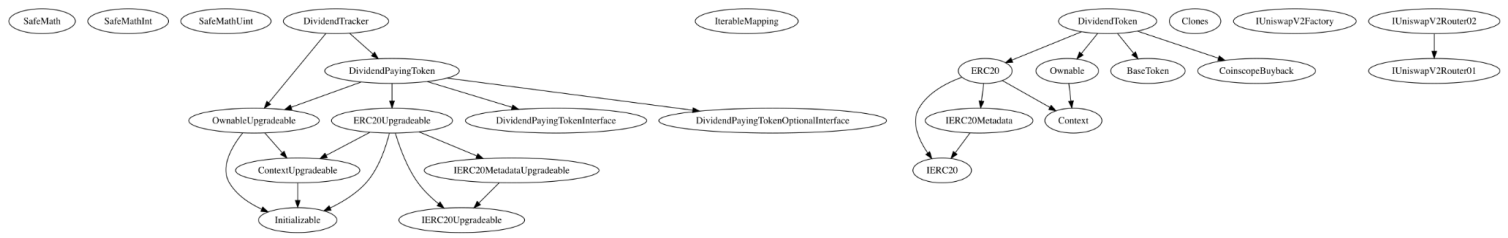
| | | | | |
|----------------|-------------------------|-------------------------------------------|---|-----------|
| | getLastProcessedIndex | External | | - |
| | getNumberOfTokenHolders | External | | - |
| | getAccount | Public | | - |
| | getAccountAtIndex | Public | | - |
| | canAutoClaim | Private | | |
| | setBalance | External | ✓ | onlyOwner |
| | process | Public | ✓ | - |
| | processAccount | Public | ✓ | onlyOwner |
| | | | | |
| Context | Implementation | | | |
| | _msgSender | Internal | | |
| | _msgData | Internal | | |
| | | | | |
| ERC20 | Implementation | Context, IERC20, IERC20Meta data | | |
| | | 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 | ✓ | |
| | | | | |
| Ownable | Implementation | Context | | |
| | | Public | ✓ | - |
| | owner | Public | | - |
| | renounceOwnership | Public | ✓ | onlyOwner |
| | transferOwnership | Public | ✓ | onlyOwner |
| | _setOwner | Private | ✓ | |
| | | | | |
| Clones | Library | | | |
| | clone | Internal | ✓ | |
| | | | | |
| | | | | |
| BaseToken | Implementation | | | |
| | | | | |
| CoinscopeBuyback | Implementation | | | |

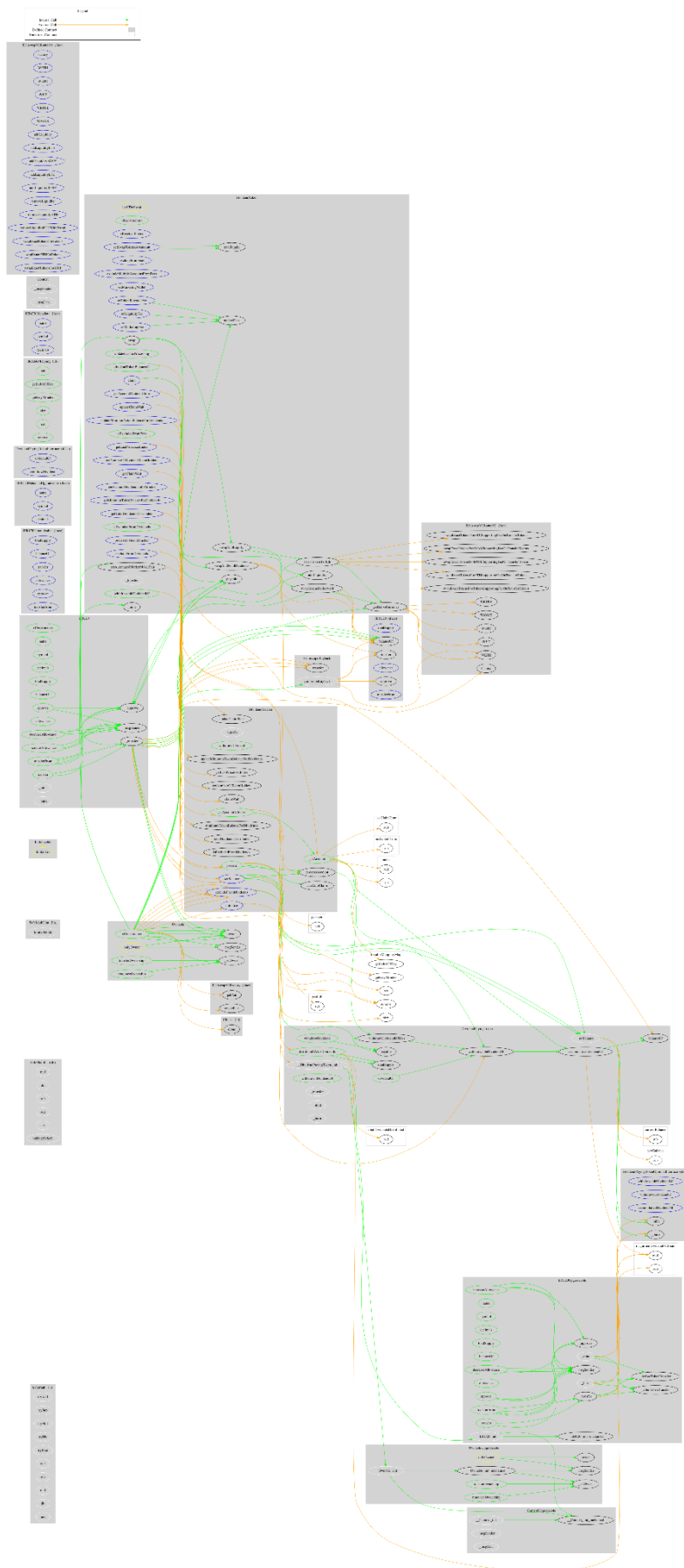
| | | | | |
|----------------------|---------------------------------------|------------------------------------------------------|---------|-----------|
| | coinscopeBuyback | Internal | ✓ | |
| | | | | |
| DividendToken | Implementation | ERC20, Ownable, BaseToken, CoinscopeBuyback | | |
| | | Public | Payable | ERC20 |
| | getNativeCurrency | Internal | | |
| | | External | Payable | - |
| | setSwapTokensAtAmount | External | ✓ | onlyOwner |
| | excludeFromFees | External | ✓ | onlyOwner |
| | excludeMultipleAccountsFromFees | External | ✓ | onlyOwner |
| | setMarketingWallet | External | ✓ | onlyOwner |
| | setTokenRewardsFee | External | ✓ | onlyOwner |
| | setLiquidityFee | External | ✓ | onlyOwner |
| | setMarketingFee | External | ✓ | onlyOwner |
| | updateFees | Internal | ✓ | |
| | _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 | ✓ | |
| | swap | Private | ✓ | lockTheSwap |
| | swapAndLiquify | Private | ✓ | |
| | swapTokensForEth | Private | ✓ | |
| | addLiquidity | Private | ✓ | |
| | swapTokensForReward | Private | ✓ | |
| | swapAndSendDividends | Private | ✓ | |

Inheritance Graph



Flow Graph



Summary

roshi contract implements a token mechanism. This audit investigates security issues, business logic concerns and potential improvements. roshi 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 20% 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

<https://www.cyberscope.io>