



Cyberscope

Audit Report

Lucas the Lion

April 2024

Network SOL

Type Token 2022

Address 4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV

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
●	ITA	Initial Token Allocation	Unresolved
●	RWWA	Renounced Withdraw Withheld Authority	Unresolved

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Review

Network	SOL
Explorer	https://solscan.io/token/4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV
Fixed Supply	1,000,000,000
Token Address	4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV
Token name	Lucas the Lion (LUCAS)
Owner Program	Token 2022 Program
Transfer Fee	1%
Decimals	9
MintTokens Authority	Revoked
FreezeAccount Authority	None
Metadata File Type	JSON
Badge Eligibility	Yes

Audit Updates

Initial Audit	05 Apr 2024
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Source Files

Filename	JSON
Metadata/JSON	https://solscan.io/token/4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV#metadata

Overview

The `Lucas the Lion` token symbolized as `LUCAS`, is a distinguished token initialized using the `TokenzQdBNbLqP5VEhdkAS6EPFLC1PHnBqCXEpPxuEb` Token 2022 Program on the Solana blockchain, with a fixed supply of `1,000,000,000` tokens since the mint has been disabled. This ensures a stable and unchangeable total supply, enhancing its value proposition within the ecosystem. The token uses the URL <https://bafkreic4fjfs7rdph6ze5jcoy4wgxh4jstlixiltufyei665eglj76sii.ipfs.nftstorage.link>, which points to a decentralized storage service while the <https://bafybeidsmsvijz7dhwrc5wy6ski5qblxcwpou26kpxyjn7w6pq2g6agbkm.ipfs.nftstorage.link> image is used for visual identification of the token across various platforms and marketplaces. Overall, the project is a distinct entity within the Solana network, identifiable by its unique characteristics as outlined in its metadata. The contract's mint authority has been renounced. The information regarding the transaction can be accessed through the following link: <https://solscan.io/tx/2eo5RzDF8XjomMb6v9we4U9VU635VBbab7T948AjPLore4nATmh3q8kS5Q74wfouCAg1zRtATEb3MbaFX6iPkhQv>

Metadata

The Metaplex Metadata provides details of the characteristics of the `Lucas the Lion` token, a distinctive digital asset on the Solana blockchain tailored for utilizing the Metaplex Metadata. This metadata includes crucial information necessary for the asset's seamless integration and operation within the Solana ecosystem. The mint attribute specifies the account `4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV` authorized for the initial token mint. This detailed metadata structure offers a comprehensive overview of `Lucas the Lion` key features and its operational framework within the Metaplex ecosystem on Solana.

```
{
  "mint": "4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV",
  "updateAuthority": "",
  "data": {
    "name": "Lucas the Lion",
    "symbol": "LUCAS",
    "uri":
      "https://bafkreic4fjfss7rdph6ze5jcoy4wgxh4jstlixiltufyei665eglj76sii.ipfs.nfts
      torage.link"
  }
}
```

Extensions

Additionally to Metaplex Metadata, the token has extensions. Specifically, the asset imposes `100` basis points for transfer fee calculation (`transferFeeBasisPoints` : 100), which means that the transfer fee is 1%. Furthermore, the `maximumFee` is set to `268435456` , which is the maximum fee per transfer. The `transferFeeConfigAuthority` has been renounced and as a result, the fees configuration cannot change.


```
[
  {
    "extension": "metadataPointer",
    "state": {
      "authority": "AA98EkNqNWAgdb36Nb51KzLhKp3M6ecC2NpTXJSRq1uE",
      "metadataAddress": "4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV"
    }
  },
  {
    "extension": "transferFeeConfig",
    "state": {
      "newerTransferFee": {
        "epoch": 592,
        "maximumFee": 268435456,
        "transferFeeBasisPoints": 100
      },
      "olderTransferFee": {
        "epoch": 592,
        "maximumFee": 268435456,
        "transferFeeBasisPoints": 100
      },
      "transferFeeConfigAuthority": null,
      "withdrawWithheldAuthority": null,
      "withheldAmount": 0
    }
  },
  {
    "extension": "tokenMetadata",
    "state": {
      "additionalMetadata": [
        [
          "minting",
          "DEXLAB MINTING LAB - https://www.dexlab.space"
        ],
        [
          "image",
          "https://bafybeidsmsvijz7dhwrc5wy6ski5qblxcwpou26kpxyjn7w6ppq2g6agbkm.ipfs.nfts
          torage.link"
        ]
      ],
      "mint": "4Rko5UGhDZio3cbeaJvbWjmiGbuax626QSQF3r6nQ3MV",
      "name": "Lucas the Lion",
      "symbol": "LUCAS",
      "updateAuthority": null,
      "uri":
        "https://bafkreic4fjfss7rdph6ze5jcoy4wgxh4jstlixiltufyfei665eglj76sii.ipfs.nfts
        torage.link"
    }
  }
]
```

Findings Breakdown



● Critical	0
● Medium	0
● Minor / Informative	2

Severity	Unresolved	Acknowledged	Resolved	Other
● Critical	0	0	0	0
● Medium	0	0	0	0
● Minor / Informative	2	0	0	0

ITA - Initial Token Allocation

Criticality	Minor / Informative
Status	Unresolved

Description

The token account `73KJ5eiiH3fL9pFkMg5ZDZJenGCkm6qG5dNkYf2dJaAX`, holds a large portion of total supply. Consequently, at the time of the report, this address owns 59.9999% of the entire token supply, amounting to 599,999,999.73 `LUCAS`. This concentration of almost the entire token supply in one address raises significant concerns about centralization within the token's ecosystem. Such a scenario creates a risk of market manipulation and could lead to other adverse effects, potentially undermining the token's decentralized nature and the overall health of its ecosystem.

Token Account	Quantity	Percentage
73KJ5eiiH3fL9pFkMg5ZDZJenGCkm6qG5dNkYf2dJaAX	599,999,999.73	59.9999%

Recommendation

It is recommended to distribute the tokens more broadly to achieve a more decentralized token holding structure. This can mitigate the risks associated with centralization and ensure a more stable and secure ecosystem for all participants. If the new address consists of a team's wallet address, then the team should carefully manage the private keys of that account. We strongly recommend implementing a robust security mechanism to prevent a single user from accessing the contract admin functions, such as a multi-sign wallet so that many addresses will confirm the action.

RWWA - Renounced Withdraw Withheld Authority

Criticality	Minor / Informative
Status	Unresolved

Description

The `TransferFeeConfig` extension is designed to facilitate the collection of fees, where every token transfer incurs a fee. The `transferFeeConfigAuthority` has been renounced, meaning that the configuration of fees cannot change. Additionally, the `withdrawWithheldAuthority` has been renounced. The renouncement of the `withdrawWithheldAuthority` effectively nullifies the ability to withdraw any accumulated transfer fees. The lack of authority to manage fee withdrawals could imply, that the fees accumulated would remain perpetually locked within the system. This configuration could inadvertently undermine the intended utility of the transfer fees.

```
{
  "extension": "transferFeeConfig",
  "state": {
    "newerTransferFee": {
      "epoch": 592,
      "maximumFee": 268435456,
      "transferFeeBasisPoints": 100
    },
    "olderTransferFee": {
      "epoch": 592,
      "maximumFee": 268435456,
      "transferFeeBasisPoints": 100
    },
    "transferFeeConfigAuthority": null,
    "withdrawWithheldAuthority": null,
    "withheldAmount": 0
  }
}
```

Recommendation

it is recommended to reassess the token's economic models to ensure they align with the intended utility and long-term viability of the token, that revolves around the renouncement of the `withdrawWithheldAuthority`.

Summary

The "Lucas the Lion" token, built on the Solana network, implements a robust smart contract structure that was initialized using the Token program, with analysis revealing 2 minor/informative issues.

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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>