

Audit Report Cuphead

June 2024

Network SOL

Type SPL-Token

Address 7x4Hw9UQQD3NxjMVtVxZBZm3NukaMuB7GZ32gRMDYeu6

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Analysis

CriticalMediumMinor / InformativePass

Severity	Code	Description	Status
•	ST	Stops Transactions	Passed
•	OTUT	Transfers User's Tokens	Passed
•	ELFM	Exceeds Fees Limit (Transfer Fee Authority)	Passed
•	MT	Mints Tokens (Mint Authority)	Passed
•	ВТ	Burns Tokens	Passed
•	ВС	Blacklists Addresses (Freeze Authority)	Passed

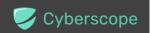
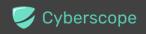


Table of Contents

Analysis	1
Table of Contents	2
Review	3
Audit Updates	3
Overview	4
Metadata	5
Findings Breakdown	8
MT - Mint Tokens (Mint Authority)	9
Description	9
BC - Blacklists Addresses (Freeze Authority)	10
Description	10
Summary	11
Disclaimer	12
About Cyberscope	13



Review

Network	SOL
Explorer	https://solscan.io/token/7x4Hw9UQQD3NxjMVtVxZBZm3Nuka MuB7GZ32gRMDYeu6
Fixed Supply	200,000,000.00
Token Address	7x4Hw9UQQD3NxjMVtVxZBZm3NukaMuB7GZ32gRMDYeu6
Token name	Cuphead (SCUP)
Owner Program	<u>Token Program</u>
Decimals	9
Metadata File Type	JSON
Badge Eligibility	Yes

Audit Updates

Initial Audit 03 Jun 2024	
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Overview

The Cuphead token symbolized as SCUP, is a distinguished SPL (Solana Program Library) token initialized using the TokenkegQfeZyiNwAJbNbGKPFXCWuBvf9Ss623VQ5DA Token Program on the Solana blockchain, with a supply of 200,000,000 tokens. The token uses the URL

https://ipfs.io/ipfs/bafkreify4m3phftuj7d2qwnbp3begygtzq5w2eo3db6nspjhnu2b3dhxba, which points to a decentralized storage service, while the image https://ipfs.io/ipfs/bafybeifssjrpz4ivoi67eadawvej6edcinglzelizmdwj4xf5j6vtppvgm is used for visual identification of the token across platforms and marketplaces. Overall, the solana token is a distinct entity within the Solana network, identifiable by its unique characteristics as outlined in its metadata.



Metadata

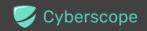
The Metaplex Metadata provides details of the characteristics of the Cuphead token, a distinctive digital asset on the Solana blockchain tailored for utilizing the Metaplex Metadata. This metadata includes crucial information necessary for the asset's seamless integration and operation within the Solana ecosystem. Specifically, the metadata was initiated by declaring the Entjq9J88ZxcpSkyWw4jKowDWFpwxrqH1fTF6ZfWrhsr as the update authority attribute, which points to the account authorized to modify the metadata. The mint attribute specified the account

7x4Hw9UQQD3NxjMVtVxZBZm3NukaMuB7GZ32gRMDYeu6 authorized for the initial token mint. The asset imposes sellerFeeBasisPoints of 0 basis points, indicating no transaction fee for trading is set. The metadata indicates that the asset has not yet undergone its primary sale as indicated by the primarySaleHappened value set to 0, and is marked as immutable since isMutable is 0, not allowing for future changes to the metadata. The editionNonce of 253 signifies a unique edition, while the tokenStandard of 2, aligns with a specified token standard within the Solana blockchain, ensuring its compatibility and standardization across the network. This detailed metadata structure offers a comprehensive overview of the token's key features and its operational framework within the Metaplex ecosystem on Solana.

```
{
  "key": 4,
  "updateAuthority": "Entjq9J88ZxcpSkyWw4jKowDWFpwxrqH1fTF6ZfWrhsr",
  "mint": "7x4Hw9UQQD3NxjMVtVxZBZm3NukaMuB7GZ32gRMDYeu6",
  "data": {
      "name": "Cuphead",
      "symbol": "SCUP",
      "uri":
  "https://ipfs.io/ipfs/bafkreify4m3phftuj7d2qwnbp3begygtzq5w2eo3db6nspjhnu2b3dhxba",
      "sellerFeeBasisPoints": 0
  },
   "primarySaleHappened": 0,
  "isMutable": 0,
  "editionNonce": 253,
  "tokenStandard": 2
}
```



Field	Value	Description
key	4	Account discriminator that identifies the type of metadata account
updateAuthority	Entjq9J88ZxcpSkyWw4jKow DWFpwxrqH1fTF6ZfWrhsr	The public key that is allowed to update this account
mint	7x4Hw9UQQD3NxjMVtVxZB Zm3NukaMuB7GZ32gRMDY eu6	The public key of the Mint Account it derives from
name	Cuphead	The on-chain name of the token
symbol	SCUP	The on-chain symbol of the token
uri	https://ipfs.io/ipfs/bafkreify4 m3phftuj7d2qwnbp3begygtz q5w2eo3db6nspjhnu2b3dhx ba	The URI to the external metadata. This URI points to an off-chain JSON file that contains additional data following a certain standard
sellerFeeBasisPoints	0	The royalties shared by the creators in basis points — This field is used by most NFT marketplaces, it is not enforced by the Token Metadata program itself
primarySaleHappened	0	A boolean indicating if the token has already been sold at least once. Once flipped to True, it cannot ever be False again. This field can affect the way royalties are distributed
isMutable	0	A boolean indicating if the metadata account can be updated. Once

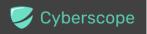


		flipped to False, it cannot ever be True again
editionNonce	253	Unique identifier for this edition
tokenStandard	2	The standard of the token



Findings Breakdown

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



MT - Mint Tokens (Mint Authority)

Criticality	Passed
Status	Resolved

Description

The token has a fixed supply of tokens, as the mint authority has been revoked, ensuring a stable and unchangeable total supply. This key characteristic enhances its value proposition within the ecosystem by eliminating the possibility of future inflation of the token value through additional minting. This creates a predictable environment for investors and users, contributing to a perception of increased trustworthiness and security. This decision aligns with the best practices aiming to preserve the token's integrity and value, fostering a more sustainable and confident market presence.

The information regarding the revoke transaction of the mint authority can be accessed through the following link:

https://solscan.io/tx/2YYnJJotGMTCJQ8vNL7GsvyHMEvNoHr47G7Y4yXpo9S9phoKq6QNZ9jZ9Srvnoksci8M7mdkPTiF8LYLmaCK5Sf7



BC - Blacklists Addresses (Freeze Authority)

Criticality	Passed
Status	Resolved

Description

The freeze authority of the token has been revoked, permanently disabling the ability to freeze and thaw accounts. This action signals a definitive stance on account management within the token's ecosystem, emphasizing the permanence of account statuses. Removing the possibility of altering account states, establishes a more secure environment for token holders, reinforcing the network's commitment to stability and reliability. This decision reflects adherence to best security practices, aiming to solidify investor confidence and enhance the token's value by ensuring consistent operational integrity.

The information regarding the revoke transaction of the freeze authority can be accessed through the following link:

https://solscan.io/tx/57Co2268K5JjGNfAVxyhzNx8aqnGQQiwn31vNLQJt9D4jb28xMxZ9ASBB4efNcyEtySDktwYcvZR1XbYhv8bm5kZ



Summary

The Cuphead token, built on the Solana network, leverages a solid architecture initiated via the Token program. This audit rigorously evaluates its performance, security, and compliance with best practices. The investigation aims to identify and address any operational vulnerabilities, performance bottlenecks, and areas for optimization, ensuring the token's robustness and reliability in the Solana ecosystem. The token program analysis reported no compiler errors or critical 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