



Cyberscope

Audit Report

GAG Coin

October 2024

Network SOL

Address 5ngkHefpoWk4BFFQeK5PjBcQe2onUAeDN2vVNRmBzW1o

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Analysis

● Critical ● Medium ● Minor / Informative ● Pass

| Severity | Code | Description | Status |
|----------|------|------------------|------------|
| ● | STMA | Mint Authority | Passed |
| ● | STFA | Freeze Authority | Passed |
| ● | STUA | Update Authority | 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

| | |
|--------------------|---|
| Network | Solana |
| Address | 5ngkHefpaWk4BFFQeK5PjBcQe2onUAeDN2vVNRmBzW1o |
| Explorer | https://solscan.io/address/5ngkHefpaWk4BFFQeK5PjBcQe2onUAeDN2vVNRmBzW1o |
| Name | GAG Coin |
| Symbol | GAG |
| Decimals | 9 |
| Total Supply | 9,995,463,074 |
| Metadata File Type | JSON |
| Owner Program | https://solscan.io/address/TokenkegQfeZyiNwAJbNbGKPFXCWuBvf9Ss623VQ5DA |
| Badge Eligibility | Yes |

Audit Updates

| | |
|---------------|-------------|
| Initial Audit | 14 Oct 2024 |
|---------------|-------------|

Overview

The GAG Coin token symbolized as GAG, is a distinguished SPL (Solana Program Library) token initialized using the `TokenkegQfeZyiNwAJbNbGKPFXCWuBvf9Ss623VQ5DA` Token Program on the Solana blockchain, with a supply of 9,995,463,074 tokens. The token uses the URL <https://ipfs.io/ipfs/bafkreibk7o7krdc7rn674czme6t5xw5ulnmuatzkglp3ra45n2kepdnew4>, which points to a decentralized storage service, while the image <https://ipfs.io/ipfs/QmWa4AafCbD3VXFPXichX5Yay7X1DG156xgnZUD25WiJ9j> 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.

| Field | Value | Description |
|----------------------|---|--|
| updateAuthority | AMHXJHN4VC4wo69NKrT1zP3tqF5hwGk26KzCBv8omQVC | The public key that is allowed to update this account |
| mint | 5ngkHefpaWk4BFFQeK5PjBcQe2onUAeDN2vVNRmBzW1o | The public key of the Mint Account it derives from |
| name | GAG Coin | The on-chain name of the token |
| symbol | GAG | The on-chain symbol of the token |
| uri | https://ipfs.io/ipfs/bafkreibk7o7krdc7rn674czme6t5xw5ulnmuatzkglp3ra45n2kepdnew4 | 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 | false | 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 | true | A boolean indicating if the metadata account can be updated. Once flipped to False, it cannot ever be True again |
| editionNonce | 251 | Unique identifier for this edition |
| tokenStandard | 2 | The standard of the token |

Metadata

The Metaplex Metadata provides details of the characteristics of the `GAG Coin 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 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 it is mutable since `isMutable` is true, allowing future changes to the metadata. The `editionNonce` of 251 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.


```
{
  "name": "GAG Coin",
  "symbol": "GAG",
  "image":
  "https://ipfs.io/ipfs/QmWa4AafCbD3VXFpXichX5Yay7X1DG156xgnZUD25WiJ9j",
  "description": "🚀 GAGCOIN: Turning LOLs into $$$! 😂💎 Not just a
  coin, but a laughter party with profit perks. Join the fun and let's
  make 'gag'ging gains together! 🤪💰",
  "extensions": {
    "website": "https://gagcoin.xyz/",
    "twitter": "https://x.com/GAGC0in",
    "telegram": "https://t.me/gagcoinempire"
  },
  "tags": [
    "Meme",
    "Solana",
    "GAG",
    "1000x",
    "BABY"
  ],
  "creator": {
    "name": "GAG TEAM",
    "site": "https://gagcoin.xyz/"
  }
}
```

Findings Breakdown



| | |
|-----------------------|---|
| ● Critical | 0 |
| ● Medium | 1 |
| ● Minor / Informative | 0 |

| Severity | Unresolved | Acknowledged | Resolved | Other |
|-----------------------|------------|--------------|----------|-------|
| ● Critical | 0 | 0 | 0 | 0 |
| ● Medium | 1 | 0 | 0 | 0 |
| ● Minor / Informative | 0 | 0 | 0 | 0 |

STMA - 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.

STFA - 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.

STUA - Update Authority

| | |
|-------------|------------|
| Criticality | Medium |
| Status | Unresolved |

Description

The contract is set up in a way that grants the update authority, with the address `AMHXJHN4VC4wo69NKrT1zP3tqF5hwGk26KzCBv8omQVC`, continued access to alter key metadata fields. This situation leaves the token exposed to potential hazards, as this address has the power to adjust critical attributes such as the token's name, symbol, and image. Without revoking these privileges from the update authority, there's a risk of unauthorized or harmful changes that could undermine the token's integrity and its intended use.

Recommendation

It is recommended to revoke the update authority privileges. This action would ensure a consistent security posture across the contract's operational aspects, eliminating the discrepancy that currently allows for undue modification privileges. Implementing this recommendation would align the contract's security measures, providing a more robust defense against unauthorized changes and enhancing the overall security of the contract's operational environment.

How to revoke the Update Authority:

<https://www.quicknode.com/guides/solana-development/anchor/how-to-make-immutable-solana-programs#remove-the-update-authority-of-a-solana-program>

Summary

The GAG Coin 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 that the update authority of the token has not yet been revoked. This situation leaves the token's operations regarding updating action, open to modifications. Consequently, this critical operation remains exposed to potential adjustments by the owner.

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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

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