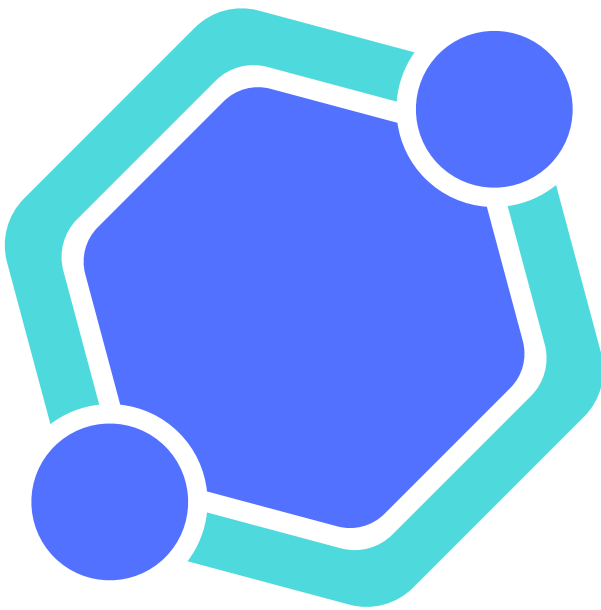


# AUDIT REPORT

August 2023



Audit conducted by  
RICARDO PONTES

## Summary

<b>Auditing Firm</b>	Crypto Hub
<b>Architecture</b>	Crypto Hub Auditing Standard
<b>Smart Contract Audit Approved By</b>	Ricardo   Blockchain Dev at Crypto Hub
<b>Platform</b>	Solidity
<b>Mandatory Audit Check</b>	Static, Software & Manual Analysis
<b>Consultation Request Date</b>	August 2, 2023
<b>Report Date</b>	August 2, 2023

### **Audit Summary**

Crypto Hub team has performed a line-by-line manual analysis and automated review of the smart contract. The smart contract was analyzed mainly for common smart contract vulnerabilities, exploits, and manipulation hacks. According to the smart contract audit:

- ★ Galaxy Fox smart contract source code has **LOW RISK SEVERITY**.
- ★ Galaxy Fox has **PASSED** the smart contract audit.

For the detailed understanding of risk severity, source code vulnerability, and functional test, kindly refer to the audit.

✅ Verify the authenticity of this report on Crypto Hub Website:

<https://www.cryptohub.agency/>



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## Project Overview

Crypto Hub was consulted by Galaxy Fox to conduct the smart contract security audit of their solidity source code.

Project	Galaxy Fox
Blockchain	Ethereum Mainnet
Language	Solidity
Contracts	0x72b2fd2a6964aaa6233336751996a28a9568a40d
Website:	<a href="https://galaxyfox.io/">https://galaxyfox.io/</a>

Public logo:



**Solidity Source Code On Blockchain (Verified Contract Source Code)**

<https://etherscan.io/token/0x3c9554cd41290b7e660e2b21f0e815ecf34ce406#code>

**Contract Name: Galaxy Fox**

**Compiler Version: v0.8.18**

**Optimization Enabled: yes**

**SHA-1 Hash**

**Solidity source code is audited at hash**

**#3cc94e24e0768ce7c1cdfdbce6e90a1d918aa553**



## Audit Scope & Methodology

The scope of this report is to audit the above smart contract source code and Crypto Hub has scanned the contract and reviewed the project for common vulnerabilities, exploits, hacks, and back-doors. Below is the list of commonly known smart contract vulnerabilities, exploits, and hacks:

### Smart Contract Vulnerabilities

- ☐ Re-entrancy
- ☐ Unhandled Exceptions
- ☐ Transaction Order Dependency
- ☐ Integer Overflow
- ☐ Unrestricted Action
- ☐ Incorrect Inheritance Order
- ☐ Typographical Errors
- ☐ Requirement Violation

### Source Code Review

- ☐ Ownership Takeover
- ☐ Gas Limit and Loops
- ☐ Deployment Consistency
- ☐ Repository Consistency
- ☐ Data Consistency
- ☐ Token Supply Manipulation

### Functional Assessment

- ☐ Access Control and Authorization
- ☐ Operations Trail and Event Generation
- ☐ Assets Manipulation
- ☐ Liquidity Access



## *Crypto Hub Audit Standard*

The aim of Crypto Hub standard is to analyze the smart contract and identify the vulnerabilities and the hacks in the smart contract. Mentioned are the steps used by ECHELON-1 to assess the smart contract:

### **1. Solidity smart contract source code reviewal:**

- ❖ Review of the specifications, sources, and instructions provided to Crypto Hub to make sure we understand the size, scope, and functionality of the smart contract.
- ❖ Manual review of code, which is the process of reading source code line-by-line to identify potential vulnerabilities.

### **2. Static, Manual, and Software analysis:**

- ❖ Test coverage analysis, which is the process of determining whether the test cases are covering the code and how much code is exercised when we run those test cases.
- ❖ Symbolic execution, which is analyzing a program to determine what inputs cause each part of a program to execute.

**3. Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.**

**4. Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts**

### **Automated 3P frameworks used to assess the smart contract vulnerabilities**

- ❖ Slither
- ❖ Consensys MythX
- ❖ Consensus Surya
- ❖ Open Zeppelin Code Analyzer
- ❖ Solidity Code Compiler



## Crypto Hub's Risk Classification

Smart contracts are generally designed to manipulate and hold funds denominated in ETH/BNB. This makes them very tempting attack targets, as a successful attack may allow the attacker to directly steal funds from the contract. Below are the typical risk levels of a smart contract: Vulnerable:

A contract is vulnerable if it has been flagged by a static analysis tool as such. As we will see later, this means that some contracts may be vulnerable because of a false-positive.

**Exploitable:** A contract is exploitable if it is vulnerable and the vulnerability could be exploited by an external attacker. For example, if the “vulnerability” flagged by a tool is in a function which requires to own the contract, it would be vulnerable but not exploitable.

**Exploited:** A contract is exploited if it received a transaction on the main network which triggered one of its vulnerabilities. Therefore, a contract can be vulnerable or even exploitable without having been exploited.

Risk severity	Meaning
! Critical	This level of vulnerability could be exploited easily, and can lead to asset loss, data loss, asset manipulation, or data manipulation. They should be fixed right away.
! High	This level vulnerabilities are hard to exploit but very important to fix, they carry an elevated risk of smart contract manipulation, which can lead to critical risk severity
! Medium	This level of vulnerabilities should be fixed, as they carry an inherent risk of future exploits, and hacks which may or may not impact the smart contract execution.
! Low	This level of vulnerability can be ignored. They are code style violations, and informational statements in the code. They may not affect the smart contract execution



# Smart Contract Risk Assessment

## Contract Snapshot

```
/**
 *Submitted for verification at Etherscan.io on 2023-07-28
 */

pragma solidity ^0.8.18;

//
// OpenZeppelin Contracts (last updated v4.6.0) (token/ERC20/IERC20.sol)
/**
 * @dev Interface of the ERC20 standard as defined in the EIP.
 */
interface IERC20 {
    /**
     * @dev Emitted when `value` tokens are moved from one account (`from`) to
     * another (`to`).
     *
     * Note that `value` may be zero.
     */
    event Transfer(address indexed from, address indexed to, uint256 value);

    /**
     * @dev Emitted when the allowance of a `spender` for an `owner` is set by
     * a call to {approve}. `value` is the new allowance.
     */
    event Approval(address indexed owner, address indexed spender, uint256 value);

    /**
     * @dev Returns the amount of tokens in existence.
     */
    function totalSupply() external view returns (uint256);

    /**
     * @dev Returns the amount of tokens owned by `account`.
     */
    function balanceOf(address account) external view returns (uint256);

    /**
     * @dev Moves `amount` tokens from the caller's account to `to`.
     *
     * Returns a boolean value indicating whether the operation succeeded.
     *
     * Emits a {Transfer} event.
     */
    function transfer(address to, uint256 amount) external returns (bool);
}
```





## Static / Quick Analysis

### Contract Security



#### Contract source code verified

This token contract is open source. You can check the contract code for details. Unsourced token contracts are likely to have malicious functions to defraud their users of their assets.



#### No proxy

There is no proxy in the contract. The proxy contract means contract owner can modify the function of the token and possibly effect the price.



#### No mint function

Mint function is transparent or non-existent. Hidden mint functions may increase the amount of tokens in circulation and effect the price of the token.



#### No function found that retrieves ownership

If this function exists, it is possible for the project owner to regain ownership even after relinquishing it



#### Owner can't change balance

The contract owner is not found to have the authority to modify the balance of tokens at other addresses.



#### No hidden owner

No hidden owner address was found for the token. For contract with a hidden owner, developer can still manipulate the contract even if the ownership has been abandoned.



#### This token can not self destruct

No self-destruct function found. If this function exists and is triggered, the contract will be destroyed, all functions will be unavailable, and all related assets will be erased.



#### No external call risk found

External calls would cause this token contract to be highly dependent on other contracts, which may be a potential risk.



## Honeypot Risk

Buy Tax: **unknown**   Sell Tax: **unknown**



### **This does not appear to be a honeypot.**

We are not aware of any malicious code.



### **Functions that can suspend trading**

If a suspendable code is included, the token maybe neither be bought nor sold (honeypot risk).



### **The token can be bought**

Generally, these unbuyable tokens would be found in Reward Tokens. Such Tokens are issued as rewards for some on-chain applications and cannot be bought directly by users.



### **No trading cooldown function**

The token contract has no trading cooldown function. If there is a trading cooldown function, the user will not be able to sell the token within a certain time or block after buying.



### **No anti\_whale(Unlimited number of transactions)**

There is no limit to the number of token transactions. The number of scam token transactions may be limited (honeypot risk).



### **Anti whale can not be modified**

The maximum trading amount or maximum position can not be modified.



### **Tax can be modified**

The contract owner may contain the authority to modify the transaction tax. If the transaction tax is increased to more than 49%, the tokens will not be able to be traded (honeypot risk).



### **No blacklist**

The blacklist function is not included. If there is a blacklist, some addresses may not be able to trade normally (honeypot risk).



### **No whitelist**

The whitelist function is not included. If there is a whitelist, some addresses may not be able to trade normally (honeypot risk).

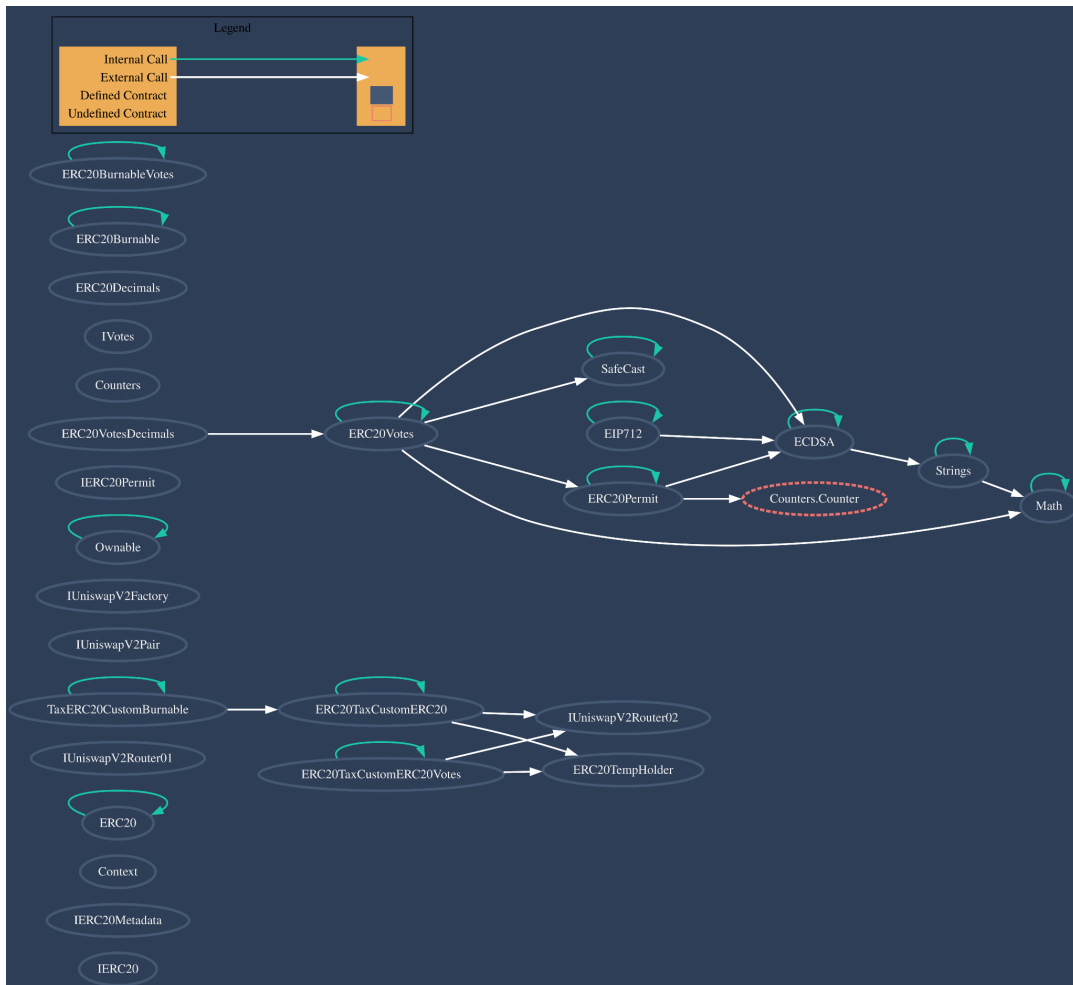
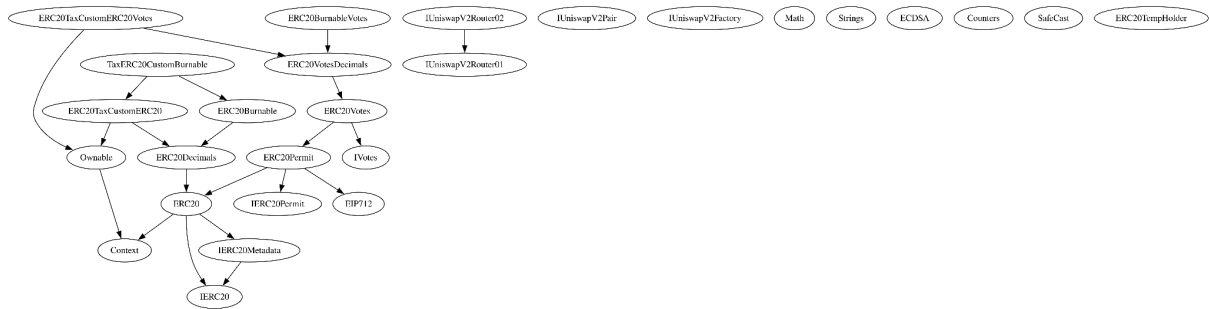


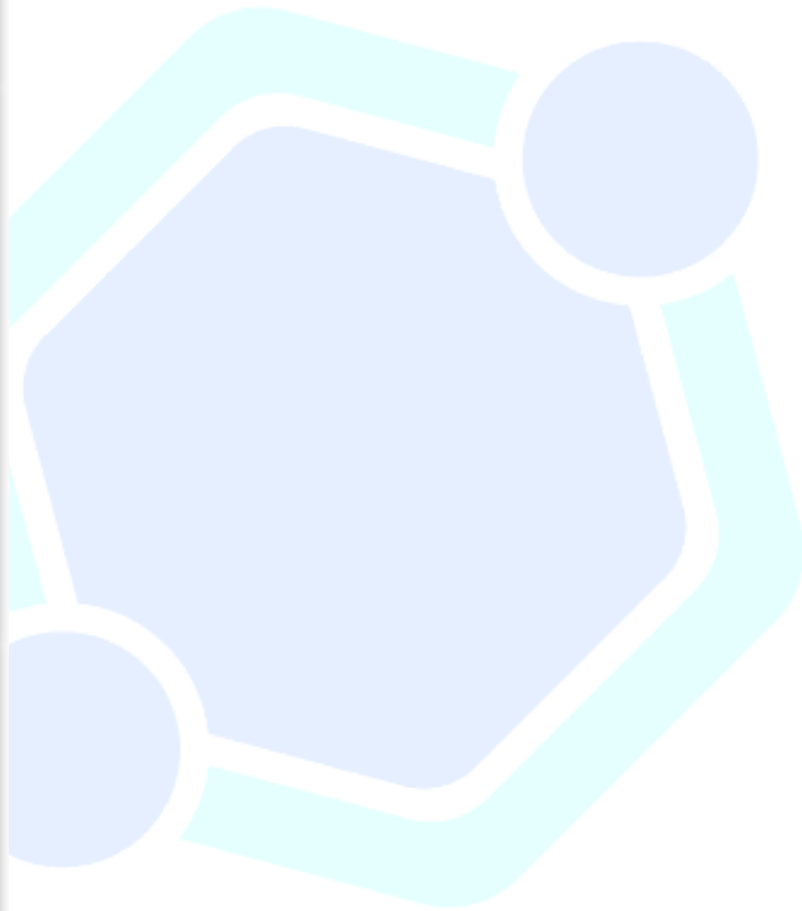
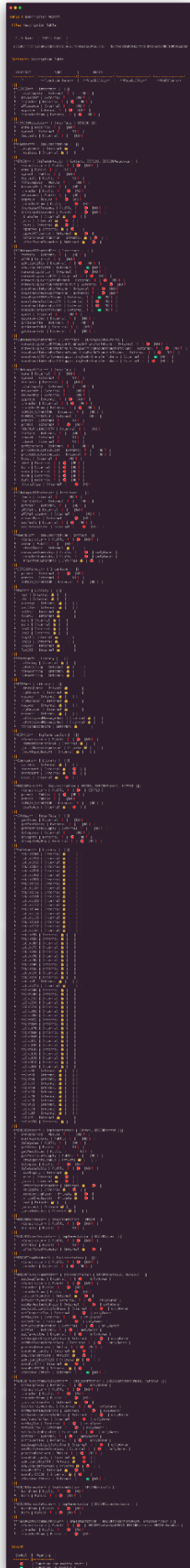
### **No tax changes found for personal addresses**

No tax changes were found for every assigned address. If it exists, the contract owner may set a very outrageous tax rate for assigned address to block it from trading.



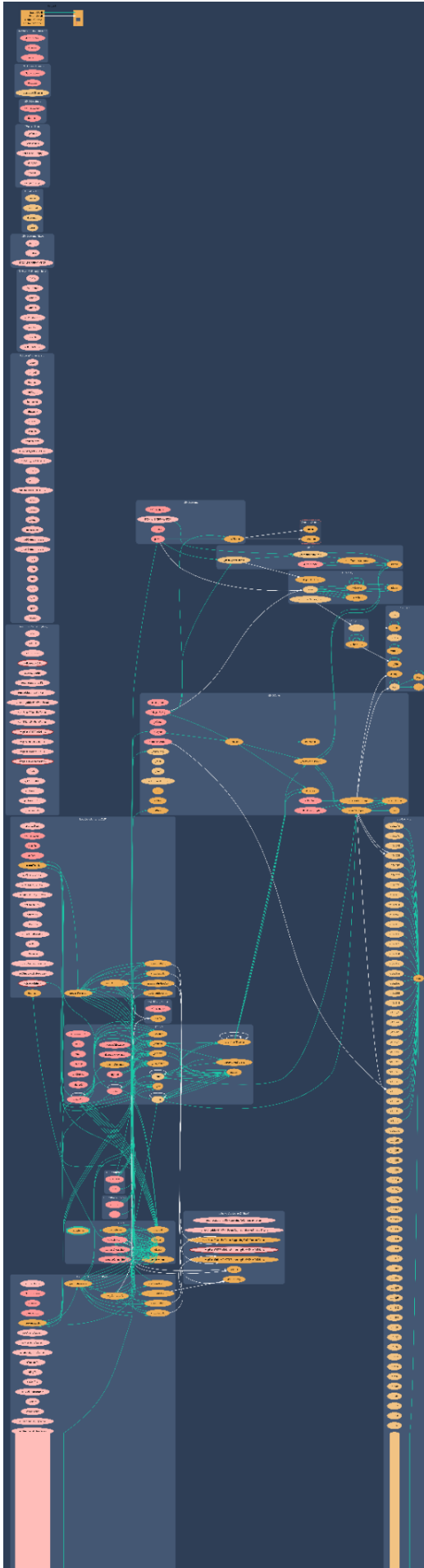
## Software Analysis





Address	Function Signature
00000000	__init__(self, address, add_mask=0x1, port=1)
00000001	__del__(self)
00000002	__str__(self)
00000003	__repr__(self)
00000004	__eq__(self, other)
00000005	__ne__(self, other)
00000006	__lt__(self, other)
00000007	__gt__(self, other)
00000008	__le__(self, other)
00000009	__ge__(self, other)
0000000A	__hash__(self)
0000000B	__getitem__(self, index)
0000000C	__setitem__(self, index, value)
0000000D	__delitem__(self, index)
0000000E	__len__(self)
0000000F	__iter__(self)
00000010	__next__(self)
00000011	__call__(self)
00000012	__getattr__(self, name)
00000013	__setattr__(self, name, value)
00000014	__delattr__(self, name)
00000015	__copy__(self)
00000016	__deepcopy__(self, memo)
00000017	__reduce__(self)
00000018	__reduce_ex__(self, protocol)
00000019	__getstate__(self)
0000001A	__setstate__(self, state)
0000001B	__sizeof__(self)
0000001C	__dir__(self)
0000001D	__format__(self, format_spec)
0000001E	__bool__(self)
0000001F	__nonzero__(self)
00000020	__abs__(self)
00000021	__add__(self, other)
00000022	__radd__(self, other)
00000023	__sub__(self, other)
00000024	__rsub__(self, other)
00000025	__mul__(self, other)
00000026	__rmul__(self, other)
00000027	__div__(self, other)
00000028	__rdiv__(self, other)
00000029	__mod__(self, other)
0000002A	__rmod__(self, other)
0000002B	__divmod__(self, other)
0000002C	__rdivmod__(self, other)
0000002D	__pow__(self, other, mod)
0000002E	__rpow__(self, other, mod)
0000002F	__neg__(self)
00000030	__pos__(self)
00000031	__abs__(self)
00000032	__invert__(self)
00000033	__lshift__(self, other)
00000034	__rshift__(self, other)
00000035	__and__(self, other)
00000036	__rand__(self, other)
00000037	__xor__(self, other)
00000038	__rxor__(self, other)
00000039	__or__(self, other)
0000003A	__ror__(self, other)
0000003B	__xor__(self, other)
0000003C	__rxor__(self, other)
0000003D	__or__(self, other)
0000003E	__ror__(self, other)
0000003F	__xor__(self, other)
00000040	__rxor__(self, other)
00000041	__or__(self, other)
00000042	__ror__(self, other)
00000043	__xor__(self, other)
00000044	__rxor__(self, other)
00000045	__or__(self, other)
00000046	__ror__(self, other)
00000047	__xor__(self, other)
00000048	__rxor__(self, other)
00000049	__or__(self, other)
0000004A	__ror__(self, other)
0000004B	__xor__(self, other)
0000004C	__rxor__(self, other)
0000004D	__or__(self, other)
0000004E	__ror__(self, other)
0000004F	__xor__(self, other)
00000050	__rxor__(self, other)
00000051	__or__(self, other)
00000052	__ror__(self, other)
00000053	__xor__(self, other)
00000054	__rxor__(self, other)
00000055	__or__(self, other)
00000056	__ror__(self, other)
00000057	__xor__(self, other)
00000058	__rxor__(self, other)
00000059	__or__(self, other)
0000005A	__ror__(self, other)
0000005B	__xor__(self, other)
0000005C	__rxor__(self, other)
0000005D	__or__(self, other)
0000005E	__ror__(self, other)
0000005F	__xor__(self, other)
00000060	__rxor__(self, other)
00000061	__or__(self, other)
00000062	__ror__(self, other)
00000063	__xor__(self, other)
00000064	__rxor__(self, other)
00000065	__or__(self, other)
00000066	__ror__(self, other)
00000067	__xor__(self, other)
00000068	__rxor__(self, other)
00000069	__or__(self, other)
0000006A	__ror__(self, other)
0000006B	__xor__(self, other)
0000006C	__rxor__(self, other)
0000006D	__or__(self, other)
0000006E	__ror__(self, other)
0000006F	__xor__(self, other)
00000070	__rxor__(self, other)
00000071	__or__(self, other)
00000072	__ror__(self, other)
00000073	__xor__(self, other)
00000074	__rxor__(self, other)
00000075	__or__(self, other)
00000076	__ror__(self, other)
00000077	__xor__(self, other)
00000078	__rxor__(self, other)
00000079	__or__(self, other)
0000007A	__ror__(self, other)
0000007B	__xor__(self, other)
0000007C	__rxor__(self, other)
0000007D	__or__(self, other)
0000007E	__ror__(self, other)
0000007F	__xor__(self, other)
00000080	__rxor__(self, other)
00000081	__or__(self, other)
00000082	__ror__(self, other)
00000083	__xor__(self, other)
00000084	__rxor__(self, other)
00000085	__or__(self, other)
00000086	__ror__(self, other)
00000087	__xor__(self, other)
00000088	__rxor__(self, other)
00000089	__or__(self, other)
0000008A	__ror__(self, other)
0000008B	__xor__(self, other)
0000008C	__rxor__(self, other)
0000008D	__or__(self, other)
0000008E	__ror__(self, other)
0000008F	__xor__(self, other)
00000090	__rxor__(self, other





## SWC Attacks

The following table contains an overview of the SWC registry. Each row consists of an SWC identifier (ID), weakness title, CWE parent and list of related code samples.

The auditor used a MythX tool, A static analyzer that parses the Solidity AST, a symbolic analyzer that detects possible vulnerable states, and a greybox fuzzer that detects vulnerable execution paths.

ID	Description	Status
SWC - 100	Function Default Visibility	✓ Passed
SWC - 101	Integer Overflow and Underflow	✓ Passed
SWC - 102	Outdated Compiler Version	✓ Passed
SWC - 103	Floating Pragma	✓ Passed
SWC - 104	Unchecked Call Return Value	✓ Passed
SWC - 105	Unprotected Ether Withdrawal	✓ Passed
SWC - 106	Unprotected SELFDESTRUCT Instruction	✓ Passed
SWC - 107	Reentrancy Passed	✓ Passed
SWC - 108	State Variable Default Visibility	✓ Passed
SWC - 109	Uninitialized Storage Pointer	✓ Passed
SWC - 110	Assert Violation Passed	✓ Passed
SWC - 111	Use of Deprecated Solidity Functions	✓ Passed
SWC - 112	Delegatecall to Untrusted Callee	✓ Passed
SWC - 113	DoS with Failed Call	✓ Passed
SWC - 114	Transaction Order Dependence	✓ Passed
SWC - 115	Authorization through tx.origin	✓ Passed
SWC - 116	Block values as a proxy for time	✓ Passed
SWC - 117	Signature Malleability	✓ Passed



ID	Description	Status
SWC - 118	Incorrect Constructor Name	✓ Passed

SWC - 119	Shadowing State Variables	✓ Passed
SWC - 120	Weak Sources of Randomness from Chain Attributes	✓ Passed
SWC - 121	Missing Protection against Signature Replay Attacks	✓ Passed
SWC - 122	Lack of Proper Signature Verification	✓ Passed
SWC - 123	Requirement Violation Passed	✓ Passed
SWC - 124	Write to Arbitrary Storage Location	✓ Passed
SWC - 125	Incorrect Inheritance Order Passed	✓ Passed
SWC - 126	Insufficient Gas Griefing	✓ Passed
SWC - 127	Arbitrary Jump with Function Type Variable	✓ Passed
SWC - 128	DoS With Block Gas Limit	✓ Passed
SWC - 129	Typographical Error	✓ Passed
SWC - 130	Right-To-Left-Override control character (U+202E)	✓ Passed
SWC - 131	Presence of unused variables	✓ Passed
SWC - 132	Unexpected Ether balance	✓ Passed
SWC - 133	Hash Collisions With Multiple Variable Arguments	✓ Passed

SWC - 134	Message call with hardcoded gas amount	✓ Passed
SWC - 135	Code With No Effects	✓ Passed
SWC - 136	Unencrypted Private Data On-Chain	✓ Passed





## Manual Analysis

No Risks Detected

## Risk Status

Risk severity	Meaning
! Critical	None critical severity issues identified
! High	None high severity issues identified
! Medium	None medium severity issues identified
! Low	None low severity issues identified
Verified	9 functions and instances verified and checked
Safety Score	91 out of 100

## Report Summary

Crypto Hub team has performed a line-by-line manual analysis and automated review of the smart contract. The smart contract was analyzed mainly for common smart contract vulnerabilities, exploits, and manipulation hacks.

Galaxy Fox smart contract source code has **LOW RISK SEVERITY**.

Galaxy Fox has **PASSED** the smart contract audit.



### **Note for stakeholders:**

Be aware that active smart contract owner privileges constitute an elevated impact on smart contract's safety and security.

Make sure that the project team's KYC/identity is verified by an independent firm, e.g., Crypto Hub.

Always check if the contract's liquidity is locked. A longer liquidity lock plays an important role in the project's longevity. It is recommended to have multiple liquidity providers.

Examine the unlocked token supply in the owner, developer, or team's private wallets. Understand the project's tokenomics, and make sure the tokens outside of the LP Pair are vested or locked for a longer period of time.

Ensure that the project's official website is hosted on a trusted platform, and is using an active SSL certificate. The website's domain should be registered for a longer period of time.



## Audit & KYC Certificates

We hereby certificate Galaxy Fox smart contract as an audited project under the Crypto Hub enterprise umbrella. And to represent it as such we issued the following certificate:



# Legal Advisory

## *Important Disclaimer*

Crypto Hub provides contract auditing and project verification services for blockchain projects. The purpose of the audit is to analyze the on-chain smart contract source code, and to provide a basic overview of the project. This report should not be transmitted, disclosed, referred to, or relied upon by any person for any purposes without Crypto Hub prior written consent.

Crypto Hub provides the easy-to-understand assessment of the project, and the smart contract (otherwise known as the source code). The audit makes no statements or warranties on the security of the code. It also cannot be considered as an adequate assessment regarding the utility and safety of the code, bug-free status, or any other statements of the contract. While we have used all the data at our disposal to provide the transparent analysis, it is important to note that you should not rely on this report only — we recommend proceeding with several independent audits and a public bug bounty program to ensure the security of smart contracts. Be aware that smart contracts deployed on a blockchain aren't resistant from external vulnerability, or a hack. Be aware that active smart contract owner privileges constitute an elevated impact to smart contract's safety and security. Therefore, Crypto Hub does not guarantee the explicit security of the audited smart contract.

The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

This report should not be considered as an endorsement or disapproval of any project or team. The information provided in this report does not constitute investment advice, financial advice, trading advice, or any other sort of advice and you should not treat any of the report's content as such. Do conduct your own due diligence and consult your financial advisor before making any investment decisions.



## *About Crypto Hub*

Crypto Hub provides intelligent blockchain solutions. Crypto Hub is developing an ecosystem that is seamless and responsive. Some of our services: Blockchain Security, Token Launchpad, NFT Marketplace, etc. Crypto Hub's mission is to interconnect multiple services like Blockchain Security, DeFi, Gaming, and Marketplace under one ecosystem that is seamless, multi-chain compatible, scalable, secure, fast, responsive, and easy-to-use.

Crypto Hub is built by a decentralized team of UI experts, contributors, engineers, and enthusiasts from all over the world. Our team currently consists of 3+ core team members, and 6+ casual contributors. Crypto Hub provides manual, static, and automatic smart contract analysis, to ensure that the project is checked against known attacks and potential vulnerabilities.

