# 否っころし

# **Full Audit Report**

**Web3bay Security Assessment** 





Web3bay Security Assessment

#### **FULL AUDIT REPORT**

Security Assessment by SCRL on Friday, December 20, 2024

SCRL is deliver a security solution for Web3 projects by expert security researchers.

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## **Executive Summary**

For this security assessment, SCRL received a request on Tuesday, December 17, 2024

Client		Language	Audit Method	Confidential	Network Chain	Contract	
Web3bay		Solidity	Whitebox	Public	Ethereum	0xa567dB8e7a64CC81DbfD4B2832eb035F1C835	5e08
Report Vers	ion	Twitter		Telegram		Website	
1.1		https://x.com/v	veb3bayofficial	https://t.me/v	web3bayofficial	https://web3bay.io/	
Scoring:		Scoring				<del></del>	
		0	1 2	3 4	5 6 7	8 9 10	
Vulnera	bilit	ty Summary  1  Total Fin	dings Ur	1 presolved	<b>O</b> Resolved	O 1 O Decline	
	0	Critical				Critical severity is assigned to security vulnerabilities pose a severe threat to the smart contract and the e blockchain ecosystem.	
	0	High				High-severity issues should be addressed quickly to reduce the risk of exploitation and protect users' fun and data.	ıds
•	0	Medium				It's essential to fix medium-severity issues in a reasonable timeframe to enhance the overall securit the smart contract.	y of
	0	Low	-			While low-severity issues can be less urgent, it's still advisable to address them to improve the overall security posture of the smart contract.	
	0	Very Low				Very Low severity is used for minor security concern- that have minimal impact and are generally of low ri	sk.
•	1	Informational	1 unresolved			Used to categorize security findings that do not pose direct security threat to the smart contract or its use Instead, these findings provide additional informatio recommendations	rs.
•	0	Gas- optimization				Suggestions for more efficient algorithms or improvements in gas usage, even if the current code already secure.	is



#### **Audit Scope:**

File	SHA-1 Hash
WEB3BAY.sol	76b89fff2ddd025c1f80d01af3d7720d08dcb96e

#### **Audit Version History:**

Version	Date	Description
1.0	Wednesday, December 18, 2024	Preliminary Report
1.1	Friday, December 20, 2024	Full Audit Report

#### **Audit information:**

Request Date	Audit Date	Re-assessment Date
Tuesday, December 17, 2024	Friday, December 20, 2024	•

## **Smart Contract Audit Summary**



## **Security Assessment Author**

Auditor: Mark K. [Security Researcher | Redteam]
Kevin N. [Security Researcher | Web3 Dev]
Yusheng T. [Security Researcher | Incident Response]
Document Approval: Ronny C. CTO & Head of Security Researcher
Chinnakit J. CEO & Founder

**Digital Sign** 

ID: 88DD782B-58D8-4F5E-BD21-526945C05421 Reason: Digitally signed by <contact@scrl.io> December 20, 2024 06:43 PM +07



### Disclaimer

Regarding this security assessment, there are no guarantees about the security of the program instruction received from the client is hereinafter referred to as "Source code".

And **SCRL** hereinafter referred to as "**Service Provider**", the **Service Provider** will not be held liable for any legal liability arising from errors in the security assessment. The responsibility will be the responsibility of the **Client**, hereinafter referred to as "**Service User**" and the

Service User agrees not to be held liable to the service provider in any case. By contract Service Provider to conduct security assessments with integrity with professional ethics, and transparency to deliver security assessments to users The Service Provider has the right to postpone the delivery of the security assessment. If the security assessment is delayed whether caused by any reason and is not responsible for any delayed security assessments.

If the service provider finds a vulnerability The service provider will notify the service user via the Preliminary Report, which will be kept confidential for security. The service provider disclaims responsibility in the event of any attacks occurring whether before conducting a security assessment. Or happened later All responsibility shall be sole with the service user.

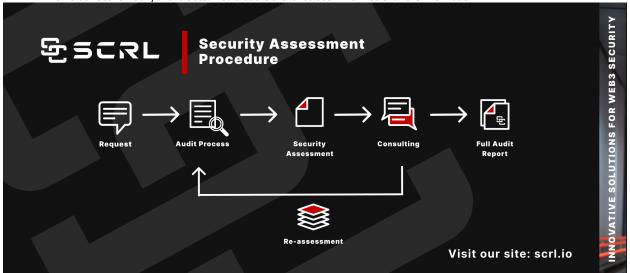
Security Assessment Is Not Financial/Investment Advice Any loss arising from any investment in any project is the responsibility of the investor.

SCRL disclaims any liability incurred. Whether it's Rugpull, Abandonment, Soft Rugpull, Exploit, Exit Scam.

## **Security Assessment Procedure**

- Request The client must submit a formal request and follow the procedure. By submitting the source code and agreeing to the terms of service.
- 2. Audit Process

  Check for vulnerabilities and vulnerabilities from source code obtained by experts using formal verification methods, including using powerful tools such as Static Analysis, SWC Registry, Dynamic Security Analysis, Automated Security Tools, CWE, Syntax & Parameter Check with AI, WAS (Warning Avoidance System a python script tools powered by SCRL).
- 3. Security Assessment Deliver Preliminary Security Assessment to clients to acknowledge the risks and vulnerabilities.
- 4. **Consulting**Discuss on risks and vulnerabilities encountered by clients to apply to their source code to mitigate risks.
  - a. **Re-assessment** Reassess the security when the client implements the source code improvements and if the client is satisfied with the results of the audit. We will proceed to the next step.
- 5. **Full Audit Report** SCRL provides clients with official security assessment reports informing them of risks and vulnerabilities. Officially and it is assumed that the client has been informed of all the information.





## **Risk Rating**

Risk rating using this commonly defined:  $Risk\ rating = impact * confidence$ Impact

The severity and potential impact of an attacker attack

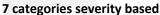
**Confidence** Ensuring that attackers expose and use this vulnerability

Confidence	Low	Medium	High
Impact [Likelihood]			
Low	Very Low	Low	Medium
Medium	Low	Medium	High
High	Medium	High	Critical

**Severity** is a risk assessment It is calculated from the Impact and Confidence values using the following calculation methods,

 $Risk\ rating = impact * confidence$ 

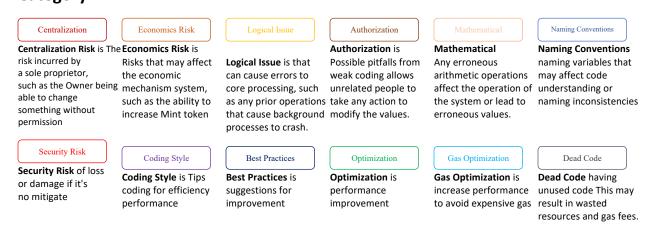
It is categorized into





For Informational & Non-class/Optimization/Best-practices will not be counted as severity

## Category





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## **Source Units in Scope**

Source Units Analyzed: 1

Source Units in Scope: 1 (100%)

Ty pe	File	Logi c Cont racts	Inter face s	Li ne s	nLi ne s	nS LO C	Com men t Line s	Com plex. Scor e	Capa bilitie s
	src/Coin Token.so	3	2	35 2	28 1	125	168	96	<b>Š</b> ♣
	Totals	3	2	35 2	28 1	125	168	96	<b>Š</b> ♣

#### Legend: [-]

- Lines: total lines of the source unit
- nLines: normalized lines of the source unit (e.g. normalizes functions spanning multiple lines)
- nSLOC: normalized source lines of code (only source-code lines; no comments, no blank lines)
- Comment Lines: lines containing single or block comments
- **Complexity Score**: a custom complexity score derived from code statements that are known to introduce code complexity (branches, loops, calls, external interfaces, ...)



## Visibility, Mutability, Modifier function testing

## Components

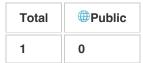
Contracts	<b>E</b> Libraries	Interfaces	Abstract
1	0	0	0

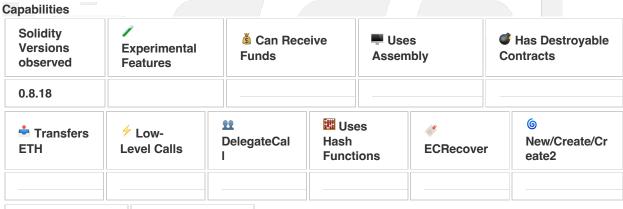
#### **Exposed Functions**

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.



#### **StateVariables**





## Dependencies / External Imports

TryCatch

Dependency / Import Path	Count
@openzeppelin/contracts/access/Ownable.sol	1
@openzeppelin/contracts/token/ERC20/ERC20.sol	1

Σ Unchecked



## **Vulnerability Findings**

ID	Vulnerability Detail	Severity	Category	Status
CEN-01	Centralization Risk (Token Distribution)	Informational	Centralization	Acknowledge





## **CEN-01:** Centralization Risk (Token Distribution)

Vulnerability Detail	Severity	Location	Category	Status
Centralization Risk (Token Distribution)	Informational	Check on finding	Centralization	Acknowledge

## Finding:

Despite the Token Contract <u>not containing any malicious functions</u> that can be executed by the Owner, But, it has been identified that token contracts do not adequately define token distribution, with only one token holder **owning 95% as of Wednesday, December 18, 2024**. This presents a significant risk of centralization, and all potential participants must give careful consideration to this matter.

We strongly urge all participants **always promptly to verify token holdings** at <a href="https://gopluslabs.io/token-security/1/0xa567dB8e7a64CC81DbfD4B2832eb035F1C835e08">https://gopluslabs.io/token-security/1/0xa567dB8e7a64CC81DbfD4B2832eb035F1C835e08</a> or <a href="https://etherscan.io/token/0xa567dB8e7a64CC81DbfD4B2832eb035F1C835e08#balances">https://etherscan.io/token/0xa567dB8e7a64CC81DbfD4B2832eb035F1C835e08#balances</a>

Address	Quantity	Percentage
0xF02D7B4023c1193205ef0BD18f118A4D1A477c49	4,750,000,000	95.0000%
0x29AEd81d274f94CEa037d05Bb61eB93223A48a77	250,000,000	5.0000%
[Pinklock 03]		

\*\*\*Note: Please note that SCRL is not responsible for any investments. And this document is not an investment recommendation document. If any project is in the pre-sale stage, please participate it at your own risk. https://chat.scrl.io/hc/scrl-help-center/articles/1717548722-understand-the-risk-of-de fi-web3



#### **Recommendation:**

We recommend creating a distribution token & liquidity lock contract to clearly define the distribution ratio for tokens such as Developer, Marketing, Liquidity, and further considerations below.

In terms of timeframes, there are three categories: short-term, long-term, and permanent.

For short-term solutions, a combination of timelock and multi-signature (2/3 or 3/5) can be used to mitigate risk by delaying sensitive operations and avoiding a single point of failure in key management. This includes implementing a timelock with a reasonable latency, such as 48 hours, for privileged operations; assigning privileged roles to multi-signature wallets to prevent private key compromise; and sharing the timelock contract and multi-signer addresses with the public via a medium/blog link.

For long-term solutions, a combination of timelock and DAO can be used to apply decentralization and transparency to the system. This includes implementing a timelock with a reasonable latency, such as 48 hours, for privileged operations; introducing a DAO/governance/voting module to increase transparency and user involvement; and sharing the timelock contract, multi-signer addresses, and DAO information with the public via a medium/blog link.

Finally, permanent solutions should be implemented to ensure the ongoing security and protection of the system.

Alleviation: Web3bay Team has acknoledge this issue.



## **SWC Findings**

ID	Title	Scanning	Result
SWC-100	Function Default Visibility	Complete	No risk
SWC-101	Integer Overflow and Underflow	Complete	No risk
SWC-102	Outdated Compiler Version	Complete	No risk
SWC-103	Floating Pragma	Complete	No risk
SWC-104	Unchecked Call Return Value	Complete	No risk
SWC-105	Unprotected Ether Withdrawal	Complete	No risk
SWC-106	Unprotected SELFDESTRUCT Instruction	Complete	No risk
SWC-107	Reentrancy	Complete	No risk
SWC-108	State Variable Default Visibility	Complete	No risk
SWC-109	Uninitialized Storage Pointer	Complete	No risk
SWC-110	Assert Violation	Complete	No risk
SWC-111	Use of Deprecated Solidity Functions	Complete	No risk
SWC-112	Delegatecall to Untrusted Callee	Complete	No risk
SWC-113	DoS with Failed Call	Complete	No risk
SWC-114	Transaction Order Dependence	Complete	No risk



			ı
SWC-115	Authorization through tx.origin	Complete	No risk
SWC-116	Block values as a proxy for time	Complete	No risk
SWC-117	Signature Malleability	Complete	No risk
SWC-118	Incorrect Constructor Name	Complete	No risk
SWC-119	Shadowing State Variables	Complete	No risk
SWC-120	Weak Sources of Randomness from Chain Attributes	Complete	No risk
SWC-121	Missing Protection against Signature Replay Attacks	Complete	No risk
SWC-122	Lack of Proper Signature Verification	Complete	No risk
SWC-123	Requirement Violation	Complete	No risk
SWC-124	Write to Arbitrary Storage Location	Complete	No risk
SWC-125	Incorrect Inheritance Order	Complete	No risk
SWC-126	Insufficient Gas Griefing	Complete	No risk
SWC-127	Arbitrary Jump with Function Type Variable	Complete	No risk
SWC-128	DoS With Block Gas Limit	Complete	No risk
SWC-129	Typographical Error	Complete	No risk
SWC-130	Right-To-Left-Override control character (U+202E)	Complete	No risk



SWC-131	Presence of unused variables	Complete	No risk
SWC-132	Unexpected Ether balance	Complete	No risk
SWC-133	Hash Collisions With Multiple Variable Length Arguments	Complete	No risk
SWC-134	Message call with hardcoded gas amount	Complete	No risk
SWC-135	Code With No Effects	Complete	No risk
SWC-136	Unencrypted Private Data On-Chain	Complete	No risk





## Contracts Description Table

Contract	Туре	Bases		
L	Function Name	Visibility	Mutability	Modifiers
WEB3BAY	Implementation	ERC20, Ownable		
L		Public !		ERC20
L	decimals	Public !		NO!

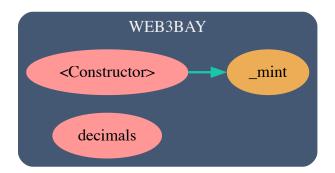
## Legend

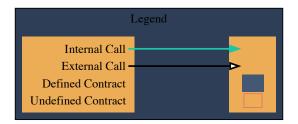
Symbol	Meaning
	Function can modify state
	Function is payable



FRIDAY, DECEMBER 20, 2024 Web3bay Security Assessment

## **Call Graph**









## **UML Class Diagram**

WEB3BAY.sol

Private:

\_decimals: uint8

Public:

constructor(\_name: string, \_symbol: string, \_\_decimals: uint8, \_totalSupply: uint256)

decimals(): uint8





## **About SCRL**

SCRL (Previously name SECURI LAB) was established in 2020, and its goal is to deliver a security solution for Web3 projects by expert security researchers. To verify the security of smart contracts, they have developed internal tools and KYC solutions for Web3 projects using industry-standard technology. SCRL was created to solve security problems for Web3 projects. They focus on technology for conciseness in security auditing. They have developed Python-based tools for their internal use called WAS and SCRL. Their goal is to drive the crypto industry in Thailand to grow with security protection technology.

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## Support ALL EVM L1 - L2

## Smart Contract Audit

Our top-tier security strategy combines static analysis, fuzzing, and a custom detector for maximum efficiency.

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