SAFUAUDIT
SMART CONTRACT AUDITING

WEB3 SHIB

SMART CONTRACT AUDIT

March 20, 2022

INTRODUCTION

Client	WEB3 SHIB (WEB3SHIB)
Language	Solidity
Contract address	0x4fE67C34E9C4Ac85596a728AA12BcD2cf2A2043A
Decimals	18
Supply	100,000,000
Platform	Binance Smart Chain
Compiler	v0.8.4+commit.c7e474f2
Optimization	Yes, with 200 runs
Website	https://www.web3shib.com/
Telegram	https://t.me/Web3Shib
Twitter	https://twitter.com/ShibWeb3

Description

WEB3 SHIB is a multi-source rewards token, developed to offer its investors rewards through diversified pipelines implemented in WEB3 SHIB token. Revenues are offered by increasing rewards through incorporation of P2E Gaming (multiple games), Multi-Investing(APY Staking, NFTs, direct investments) & rewards via standard trading activity (taxes) in WEB3 SHIB.

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Approach

Audit Details

Our comprehensive audit report provides a full overview of the audited system's architecture, smart contract codebase, and details on any vulnerabilities found within the system.

Audit Goals

The audit goal is to ensure that the project is built to protect investors and users, preventing potentially catastrophic vulnerabilities after launch, that lead to scams and rugpulls.

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Code Quality

Our analysis includes both automatic tests and manual code analysis for the following aspects:

- Exploits
- Back-doors
- Vulnerability
- Accuracy
- Readability

Tools

- Remix IDE
- MythX, Mythril
- SWC Registry
- Open Zeppelin Code Analyzer
- Solidity Code Complier

RISK CLASSIFICATION

CRITICAL

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

MEDIUM

Issues on this level could potentially bring problems and should eventually be fixed.

MINOR

Issues on this level are minor details and warning that can remain unfixed but would be better fixed at some point in the future

INFORMATIONAL

Information level is to offer suggestions for improvement of efficacity or security for features with a risk free factor.

ABSTRACT

Fees	Ownership	Mint function
Buy Fees: 11% Sell Fees: 11% *at audit time	Owned	No mint function found

Owner can set fees	Max Tx amount	Pause
Owner can set fees up to 100%	Owner can set max Tx amount	Owner can't pause trading

Vulnerabilities Test

SWC ID	Description	
SWC-100	Function Default Visibility	Passed
SWC-101	Integer Overflow and Underflow	Passed
SWC-102	Outdated Compiler Version	Passed
SWC-103	Floating Pragma	Minor
SWC-104	Unchecked Call Return Value	Passed
SWC-105	Unprotected Ether Withdrawal	Passed
SWC-106	Unprotected SELF-DESTRUCT Instruction	Passed
SWC-107	Re-entrancy	Passed
SWC-108	State Variable Default Visibility	Minor
SWC-109	Uninitialized Storage Pointer	Passed
SWC-110	Assert Violation	Passed
SWC-111	Use of Deprecated Solidity Functions	Passed
SWC-112	Delegate Call 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**
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**
SWC-124	Write to Arbitrary Storage Location	**Passed**
SWC-125	Incorrect Inheritance Order	**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 Length Arguments	**Passed**
SWC-134	Message call with the hardcoded gas amount	**Passed**
SWC-135	Code With No Effects (Irrelevant/Dead Code)	**Passed**
SWC-136	Unencrypted Private Data On-Chain	**Passed**

MANUAL ANALYSIS

The contract is verified to check if functions do and work as they should and malicious code is not inserted.

	Tested	Result
Transfer	Yes	**Passed**
Total Supply	Yes	**Passed**
Buy Back	Yes	**N/A**
Burn	Yes	**N/A**
Mint	Yes	**N/A**
Rebase	Yes	**N/A**
Pause	Yes	**N/A**
Blacklist	Yes	**N/A**
Lock	Yes	**N/A**
Max Transaction	Yes	**Passed**
Transfer Ownership	Yes	**Passed**
Renounce Ownership	Yes	**Passed**

MANUAL AUDIT

CONTRACT INSPECTION

IERC20	Interface			
└	totalSupply	External ❗		|NO❗
└	balanceOf	External ❗		|NO❗
└	transfer	External ❗	🛑	|NO❗
└	allowance	External ❗		|NO❗
└	approve	External ❗	🛑	|NO❗
└	transferFrom	External ❗	🛑	|NO❗
SafeMath	Library			
└	tryAdd	Internal 🔒			
└	trySub	Internal 🔒			
└	tryMul	Internal 🔒			
└	tryDiv	Internal 🔒			
└	tryMod	Internal 🔒			
└	add	Internal 🔒			
└	sub	Internal 🔒			
└	mul	Internal 🔒			
└	div	Internal 🔒			
└	mod	Internal 🔒			
└	sub	Internal 🔒			
└	div	Internal 🔒			
└	mod	Internal 🔒			
Context	Implementation			
└	_msgSender	Internal 🔒			
└	_msgData	Internal 🔒			
Address	Library			
└	isContract	Internal 🔒			
└	sendValue	Internal 🔒	🛑		
└	functionCall	Internal 🔒	🛑		
└	functionCall	Internal 🔒	🛑		
└	functionCallWithValue	Internal 🔒	🛑		
└	functionCallWithValue	Internal 🔒	🛑		
└	functionStaticCall	Internal 🔒			
└	functionStaticCall	Internal 🔒			
└	functionDelegateCall	Internal 🔒	🛑		
└	functionDelegateCall	Internal 🔒	🛑		
└	_verifyCallResult	Private 🔐			

Ownable	Implementation	Context		
└	<Constructor>	Public ❗	🛑	NO❗
└	owner	Public ❗		NO❗
└	renounceOwnership	Public ❗	🛑	onlyOwner
└	transferOwnership	Public ❗	🛑	onlyOwner
IUniswapV2Factory	Interface			
└	feeTo	External ❗		NO❗
└	feeToSetter	External ❗		NO❗
└	getPair	External ❗		NO❗
└	allPairs	External ❗		NO❗
└	allPairsLength	External ❗		NO❗
└	createPair	External ❗	🛑	NO❗
└	setFeeTo	External ❗	🛑	NO❗
└	setFeeToSetter	External ❗	🛑	NO❗
IUniswapV2Pair	Interface			
└	name	External ❗		NO❗
└	symbol	External ❗		NO❗
└	decimals	External ❗		NO❗
└	totalSupply	External ❗		NO❗
└	balanceOf	External ❗		NO❗
└	allowance	External ❗		NO❗
└	approve	External ❗	🛑	NO❗
└	transfer	External ❗	🛑	NO❗
└	transferFrom	External ❗	🛑	NO❗
└	DOMAIN_SEPARATOR	External ❗		NO❗
└	PERMIT_TYPEHASH	External ❗		NO❗
└	nonces	External ❗		NO❗
└	permit	External ❗	🛑	NO❗
└	MINIMUM_LIQUIDITY	External ❗		NO❗
└	factory	External ❗		NO❗
└	token0	External ❗		NO❗
└	token1	External ❗		NO❗
└	getReserves	External ❗		NO❗
└	price0CumulativeLast	External ❗		NO❗
└	price1CumulativeLast	External ❗		NO❗
└	kLast	External ❗		NO❗
└	mint	External ❗	🛑	NO❗
└	burn	External ❗	🛑	NO❗

└	swap	External ❗	🛑	NO❗
└	skim	External ❗	🛑	NO❗
└	sync	External ❗	🛑	NO❗
└	initialize	External ❗	🛑	NO❗
IUniswapV2Router01	Interface				
└	factory	External ❗		NO❗
└	WETH	External ❗		NO❗
└	addLiquidity	External ❗	🛑	NO❗
└	addLiquidityETH	External ❗	💵	NO❗
└	removeLiquidity	External ❗	🛑	NO❗
└	removeLiquidityETH	External ❗	🛑	NO❗
└	removeLiquidityWithPermit	External ❗	🛑	NO❗
└	removeLiquidityETHWithPermit	External ❗	🛑	NO❗
└	swapExactTokensForTokens	External ❗	🛑	NO❗
└	swapTokensForExactTokens	External ❗	🛑	NO❗
└	swapExactETHForTokens	External ❗	💵	NO❗
└	swapTokensForExactETH	External ❗	🛑	NO❗
└	swapExactTokensForETH	External ❗	🛑	NO❗
└	swapETHForExactTokens	External ❗	💵	NO❗
└	quote	External ❗		NO❗
└	getAmountOut	External ❗		NO❗
└	getAmountIn	External ❗		NO❗
└	getAmountsOut	External ❗		NO❗
└	getAmountsIn	External ❗		NO❗
IUniswapV2Router02	Interface	IUniswapV2Router01			
└	removeLiquidityETHSupportingFeeOnTransferTokens	External ❗	🛑	NO❗
└	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External ❗	🛑	NO❗
└	swapExactTokensForTokensSupportingFeeOnTransferTokens	External ❗	🛑	NO❗
└	swapExactETHForTokensSupportingFeeOnTransferTokens	External ❗	💵	NO❗
└	swapExactTokensForETHSupportingFeeOnTransferTokens	External ❗	🛑	NO❗
WEB3SHIB	Implementation	Context, IERC20, Ownable			
└	<Constructor>	Public ❗	🛑	NO❗
└	name	Public ❗		NO❗
└	symbol	Public ❗		NO❗
└	decimals	Public ❗		NO❗
└	totalSupply	Public ❗		NO❗
└	balanceOf	Public ❗		NO❗

└	transfer	Public ❗	🛑	NO❗
└	allowance	Public ❗		NO❗
└	approve	Public ❗	🛑	NO❗
└	transferFrom	Public ❗	🛑	NO❗
└	increaseAllowance	Public ❗	🛑	NO❗
└	decreaseAllowance	Public ❗	🛑	NO❗
└	isExcludedFromReward	Public ❗		NO❗
└	totalFees	Public ❗		NO❗
└	deliver	Public ❗	🛑	NO❗
└	reflectionFromToken	Public ❗		NO❗
└	tokenFromReflection	Public ❗		NO❗
└	excludeFromReward	Public ❗	🛑	onlyOwner
└	includeInReward	External ❗	🛑	onlyOwner
└	_transferBothExcluded	Private 🔐	🛑	
└	excludeFromFee	Public ❗	🛑	onlyOwner
└	includeInFee	Public ❗	🛑	onlyOwner
└	setTaxFeePercent	External ❗	🛑	onlyOwner
└	setDevelopmentFeePercent	External ❗	🛑	onlyOwner
└	setLiquidityFeePercent	External ❗	🛑	onlyOwner
└	setMaxTxPercent	External ❗	🛑	onlyOwner
└	setSwapAndLiquifyEnabled	Public ❗	🛑	onlyOwner
└	<Receive Ether>	External ❗	💵	NO❗
└	_reflectFee	Private 🔐	🛑	
└	_getValues	Private 🔐		
└	_getTValues	Private 🔐		
└	_getRValues	Private 🔐		
└	_getRate	Private 🔐		
└	_getCurrentSupply	Private 🔐		
└	_takeLiquidity	Private 🔐	🛑	
└	_takeDevelopment	Private 🔐	🛑	
└	calculateTaxFee	Private 🔐		
└	calculateDevelopmentFee	Private 🔐		
└	calculateLiquidityFee	Private 🔐		
└	removeAllFee	Private 🔐	🛑	
└	restoreAllFee	Private 🔐	🛑	
└	isExcludedFromFee	Public ❗		NO❗
└	_approve	Private 🔐	🛑	
└	_transfer	Private 🔐	🛑	

└	swapAndLiquify	Private 🔐	🛑	lockTheSwap
└	swapTokensForEth	Private 🔐	🛑	
└	addLiquidity	Private 🔐	🛑	
└	_tokenTransfer	Private 🔐	🛑	
└	_transferStandard	Private 🔐	🛑	
└	_transferToExcluded	Private 🔐	🛑	
└	_transferFromExcluded	Private 🔐	🛑	

Symbol	Meaning
🛑	Function can modify state
💵	Function is payable
🔐	Private function
🔒	Internal function
NO❗	Function has no modifier

INHERITANCE TREE

Inheritance is a feature of the object-oriented programming language. It is a way of extending the functionality of a program, used to separate the code, reduces the dependency, and increases the re-usability of the existing code. Solidity supports inheritance between smart contracts, where multiple contracts can be inherited into a single contract.

Important Snippets

Owner can set buy/sell fees up to 100%

```
function setTaxFeePercent(uint256 taxFee) external onlyOwner() {
    _taxFee = taxFee;
}
function setDevelopmentFeePercent(uint256 developmentFee) external onlyOwner() {
    _developmentFee = developmentFee;
}
function setLiquidityFeePercent(uint256 liquidityFee) external onlyOwner() {
    _liquidityFee = liquidityFee;
}
```

Owner can set max Tx limit

```
function setMaxTxPercent(uint256 maxTxPercent) external onlyOwner() {
    _maxTxAmount = _tTotal.mul(maxTxPercent).div(
        10**3
    );
}
```

Owner can exclude from fees

```
function excludeFromFee(address account) public onlyOwner {
_isExcludedFromFee[account] = true;
}
function includeInFee(address account) public onlyOwner {
    _isExcludedFromFee[account] = false;
}
```

Owner can exclude from rewards

```
function excludeFromReward(address account) public onlyOwner() {
    require(!_isExcluded[account], "Account is already excluded");
    if(_rOwned[account] > 0) {
        _tOwned[account] = tokenFromReflection(_rOwned[account]);
    }
    _isExcluded[account] = true;
    _excluded.push(account);
}
```

GOOD PRACTICES

- The owner cannot mint new tokens
- The owner cannot stop or pause the smart contract
- The smart contract utilizes "SafeMath" to prevent overflows

```
library SafeMath {
    function tryAdd(uint256 a, uint256 b) internal pure returns (bool, uint256) {
        unchecked {
            uint256 c = a + b;
            if (c < a) return (false, 0);
            return (true, c);
        }
    }
    function trySub(uint256 a, uint256 b) internal pure returns (bool, uint256) {
        unchecked {
            if (b > a) return (false, 0);
            return (true, a - b);
        }
    }
    function tryMul(uint256 a, uint256 b) internal pure returns (bool, uint256) {
        unchecked {
            if (a == 0) return (true, 0);
            uint256 c = a * b;
            if (c / a != b) return (false, 0);
            return (true, c);
        }
    }
    function tryDiv(uint256 a, uint256 b) internal pure returns (bool, uint256) {
        unchecked {
            if (b == 0) return (false, 0);
            return (true, a / b);
        }
    }
    function tryMod(uint256 a, uint256 b) internal pure returns (bool, uint256) {
        unchecked {
            if (b == 0) return (false, 0);
            return (true, a % b);
        }
    }
    function add(uint256 a, uint256 b) internal pure returns (uint256) {
        return a + b;
    }
    function sub(uint256 a, uint256 b) internal pure returns (uint256) {
        return a - b;
    }
    function mul(uint256 a, uint256 b) internal pure returns (uint256) {
        return a * b;
    }
    function div(uint256 a, uint256 b) internal pure returns (uint256) {
        return a / b;
    }
    function mod(uint256 a, uint256 b) internal pure returns (uint256) {
        return a % b;
    }
```

WEBSITE

Website	https://www.web3shib.com/
Domain Registry	http://ionos.com
Domain Expiry Date	2023-02-11
Response Code	200
SSL Checker and HTTPS Test	Passed
Deprecated HTML tags	Passed
Robots.txt	Passed
Sitemap Test	Passed
SEO Friendly URL	Passed
Responsive Test	Medium
JS Error Test	Passed
Console Errors Test	Passed
Site Loading Speed Test	2.3 seconds - Passed
HTTP2 Test	Passed
Safe Browsing Test	Passed

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The purpose of the audit is to analyse the on-chain smart contract source code, and to provide basic overview of the project.

While we have used all the information available to us for this straightforward investigation, you should not rely on this report only — we recommend proceeding with several independent audits Be aware that smart contracts deployed on a blockchain aren't secured enough against 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, SafuAudit 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.

AUDIT RESULTS

CRITICAL

No critical severity issues have been found.

MEDIUM

- Owner can set fees up to 100%, it should be restricted beyond a certain range
- Owner can set maxTx amount, if it is set to 0, transfers are blocked

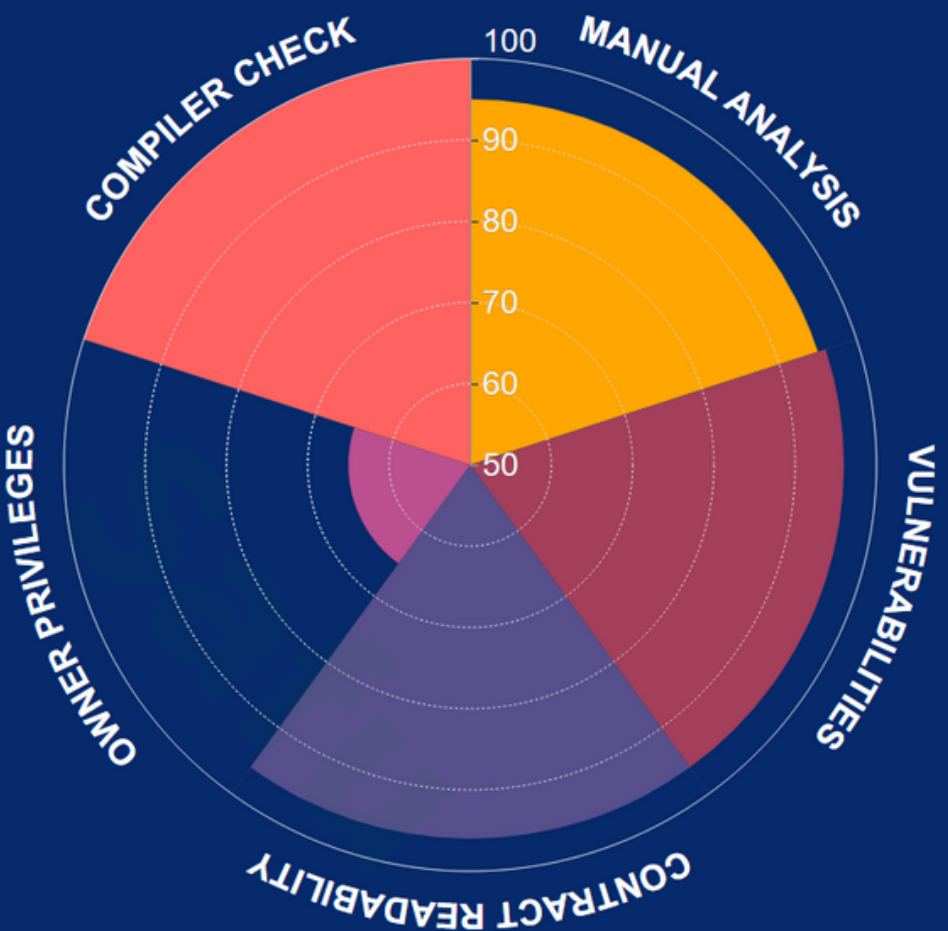
MINOR

- A floating pragma is set. It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.
- State variable visibility is not set. It is best practice to set the visibility of state variables explicitly. The default visibility for "inSwapAndLiquify" is internal.

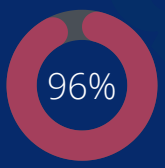
INFORMATIONAL

The standard audit model does not offer suggestions and consulting for improvements of efficacity.

SCORE

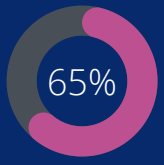


Manual Analysis



Vulnerabilities

Contract Readability



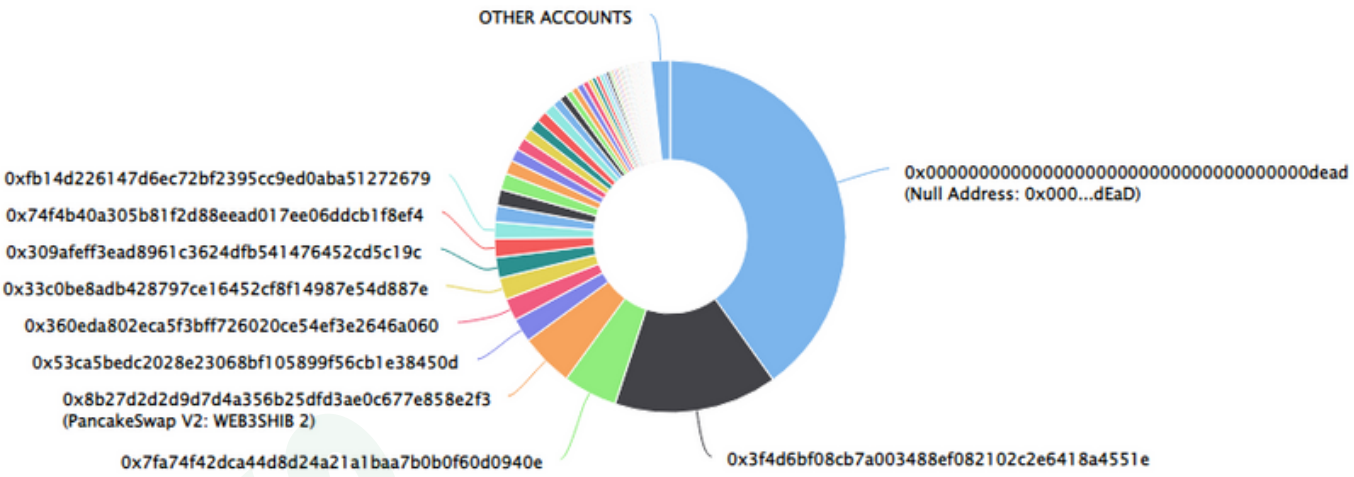
Owner Privileges

Compiler Check

Final Score:90.4

SUMMARY

Top 10 holders



Rank	Address	Quantity (Token)	Percentage
1	Null Address: 0x000...dEaD	40,089,340.96759514429982	40.0893%
2	0x3f4d6bf08cb7a003488ef082102c2e6418a4551e	15,000,000	15.0000%
3	0x7fa74f42dca44d8d24a21a1baa7b0b0f60d0940e	4,996,339.474681057335277423	4.9963%
4	PancakeSwap V2: WEB3SHIB 2	4,889,898.991590561086367735	4.8899%
5	0x53ca5bedc2028e23068bf105899f56cb1e38450d	2,200,000	2.2000%
6	0x360eda802eca5f3bff726020ce54ef3e2646a060	2,025,694.695029409829972356	2.0257%
7	0x33c0be8adb428797ce16452cf8f14987e54d887e	2,000,000	2.0000%
8	0x309afeff3ead8961c3624dfb541476452cd5c19c	1,917,854.493793251925032395	1.9179%
9	0x74f4b40a305b81f2d88eead017ee06ddcb1f8ef4	1,696,792.892006931805686361	1.6968%
10	0xfb14d226147d6ec72bf2395cc9ed0aba51272679	1,522,156.287419592051835172	1.5222%

Conclusion

Project Web3Shib does not contain any severe issues. Owner privileges are medium to high: can set fees up to 100% and maxTX limit without a minimum limit.

SafuAudit has tested the security based on manual and automated tests.

Please note that we don't offer any warranties for business model.

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