



Audit Report

ShiPlay

January 2022

Type BEP20

Network BSC

Address 0x40671E899e915d39036935F7cFFe35a5348E0a5c

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Table of Contents

Table of Contents	1
Contract Review	3
Audit Updates	3
Contract Analysis	4
ELFM - Exceed Limit Fees Manipulation	5
Description	5
Recommendation	5
Contract Diagnostics	6
L01 - Public Function could be Declared External	7
Description	7
Recommendation	7
L02 - State Variables could be Declared Constant	8
Description	8
Recommendation	8
L04 - Conformance to Solidity Naming Conventions	9
Description	9
Recommendation	9
L09 - Dead Code Elimination	10
Description	10
Recommendation	10
L07 - Missing Events Arithmetic	11
Description	11
Recommendation	11
L08 - Tautology or Contradiction	12
Description	12
Recommendation	12

Contract Functions	13
Contract Flow	18
Domain Info	19
Summary	20
Disclaimer	21
About Coinscope	22

Contract Review

Contract Name	Token
Compiler Version	v0.8.6+commit.11564f7e
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0x40671E899e915d39036935F7cFFe35a5348E0a5c
Symbol	SPLY
Decimals	18
Total Supply	1,000,000,000,000
Source	contract.sol
Domain	shipay.io

Audit Updates

Initial Audit	3rd January 2022
Corrected	

Contract Analysis

● Critical
 ● Medium
 ● Minor
 ● Pass

Severity	Code	Description
●	ST	Contract Owner is not able to stop or pause transactions
●	OCTD	Contract Owner is not able to transfer tokens from specific address
●	OTUT	Owner Transfer User's Tokens
●	ELFM	Contract Owner is not able to increase fees more than a reasonable percent (25%)
●	ULTW	Contract Owner is not able to increase the amount of liquidity taken by dev wallet more than a reasonable percent
●	MT	Contract Owner is not able to mint new tokens
●	BT	Contract Owner is not able to burn tokens from specific wallet
●	BC	Contract Owner is not able to blacklist wallets from selling

ELFM - Exceed Limit Fees Manipulation

Criticality	medium
Location	contract.sol#L932

Description

The contract owner has the authority to increase over the allowed limit of 25%. The owner may take advantage of it by calling the `setAllFeePercent` function with a high percentage value. There is an upper limit on the total fee since every fee has 10% maximum value. Hence, the maximum total fee can be 50%.

```
function setAllFeePercent(uint8 taxFee, uint8 liquidityFee, uint8 burnFee, uint8
walletFee, uint8 buybackFee) external onlyOwner() {
    require(taxFee >= 0 && taxFee <=maxTaxFee,"TF err");
    require(liquidityFee >= 0 && liquidityFee <=maxLiqFee,"LF err");
    require(burnFee >= 0 && burnFee <=maxBurnFee,"BF err");
    require(walletFee >= 0 && walletFee <=maxWalletFee,"WF err");
    require(buybackFee >= 0 && buybackFee <=maxBuybackFee,"BBF err");
    _taxFee = taxFee;
    _liquidityFee = liquidityFee;
    _burnFee = burnFee;
    _buybackFee = buybackFee;
    _walletFee = walletFee;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value. For instance, it could check if the sum of the fees is less than 25%.

The team should carefully manage the private keys of the owner's account. We strongly recommend a powerful security mechanism that will prevent a single user from accessing the contract admin functions. That risk can be prevented by temporarily locking the contract or renouncing ownership.

Contract Diagnostics

● Critical ● Medium ● Minor

Severity	Code	Description
●	L01	Public Function could be Declared External
●	L02	State Variables could be Declared Constant
●	L04	Conformance to Solidity Naming Conventions
●	L09	Dead Code Elimination
●	L07	Missing Events Arithmetic
●	L08	Tautology or Contradiction

L01 - Public Function could be Declared External

Criticality

minor

Location

contract.sol#L1325,L1068,L967 and 23 more

Description

Public functions that are never called by the contract should be declared external to save gas.

```
recoverBEP20  
isExcludedFromFee  
setSwapAndLiquifyEnabled  
...
```

Recommendation

Use the external attribute for functions never called from the contract

L02 - State Variables could be Declared Constant

Criticality

minor

Location

contract.sol#L722,L730,L711 and 7 more

Description

Constant state variables should be declared constant to save gas.

```
router  
mintedByMudra  
minMxWalletPercentage  
...
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L759,L758,L748 and 11 more

Description

Solidity defines a naming convention that should be followed. Rule exceptions:

- Allow constant variable name/symbol/decimals to be lowercase.
- Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
_maxWalletAmount  
_maxTxAmount  
_buybackFee  
...
```

Recommendation

Follow the Solidity naming convention.

<https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions>

L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L227,L211,L399 and 13 more

Description

Functions that are not used in the contract, and make the code's size bigger.

```
mod
safeTransferFrom
safeTransfer
...
```

Recommendation

Remove unused functions.

L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L960,L953,L949 and 1 more

Description

Detected missing events for critical arithmetic parameters. There are functions that have no event emitted, so it is difficult to track off-chain changes.

```
_maxWalletAmount = _tTotal.mul(maxWalletPercent).div(10 ** 2)
_maxTxAmount = _tTotal.mul(maxTxPercent).div(10 ** 2)
buyBackUpperLimit = buyBackLimit * 10 ** 18
...
```

Recommendation

Emit an event for critical parameter changes.

L08 - Tautology or Contradiction

Criticality

minor

Location

contract.sol#L932 and 2 more

Description

Detects expressions that are tautologies or contradictions. For instance, an uint variable will always be greater than or equal to zero.

```
require(bool,string)(buybackFee >= 0 && buybackFee <= maxBuybackFee,BBF err)
require(bool,string)(taxFee >= 0 && taxFee <= maxTaxFee,TF err)
require(bool,string)(walletFee >= 0 && walletFee <= maxWalletFee,WF err)
...
```

Recommendation

Fix the incorrect comparison by changing the value type or the comparison.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
SafeMath	Library			
	add	Internal		
	sub	Internal		
	sub	Internal		
	mul	Internal		
	div	Internal		
	div	Internal		
	mod	Internal		
	mod	Internal		
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Address	Library			
	isContract	Internal		
	sendValue	Internal	✓	
	functionCall	Internal	✓	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	✓	

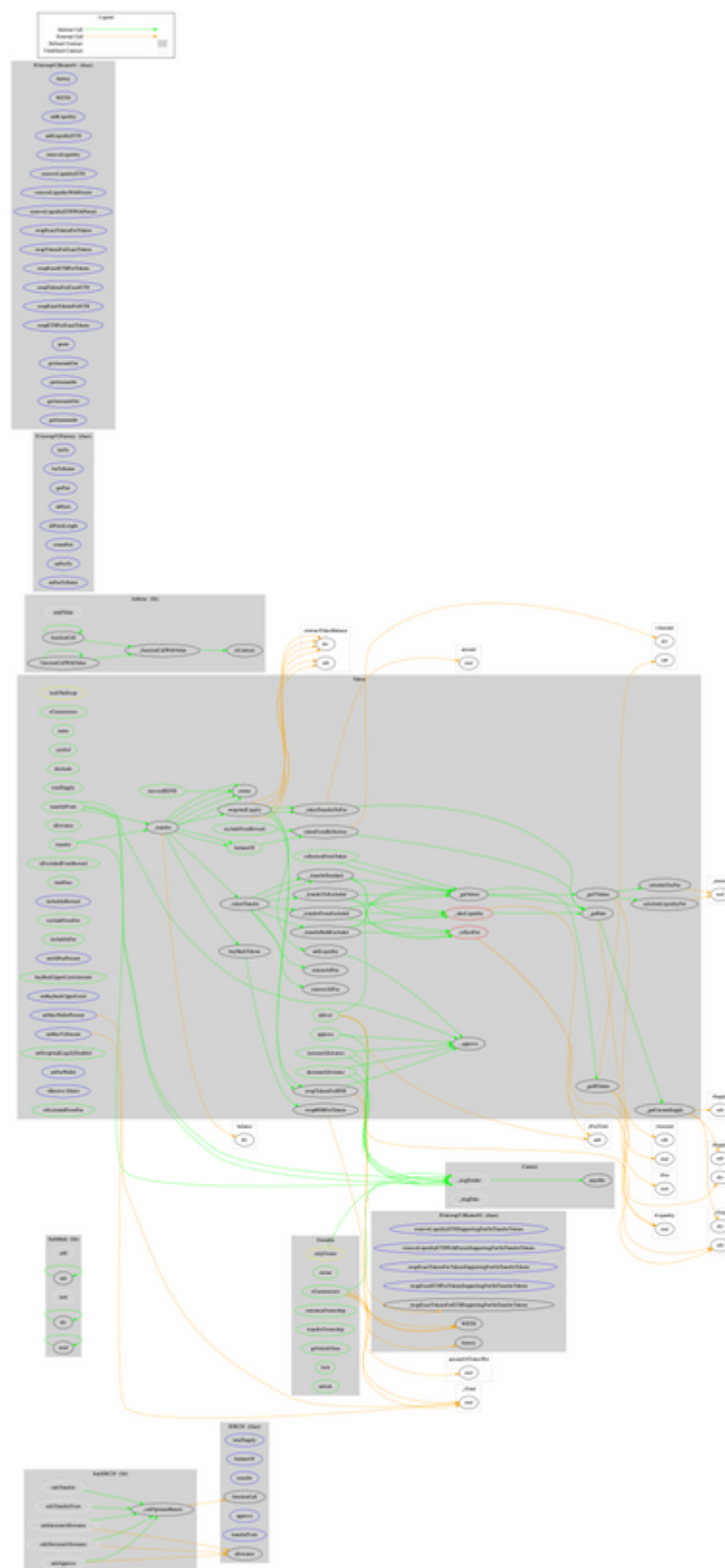
	_functionCallWithValue	Private	✓	
SafeERC20	Library			
	safeTransfer	Internal	✓	
	safeTransferFrom	Internal	✓	
	safeApprove	Internal	✓	
	safeIncreaseAllowance	Internal	✓	
	safeDecreaseAllowance	Internal	✓	
	_callOptionalReturn	Private	✓	
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	getUnlockTime	Public		-
	lock	Public	✓	onlyOwner
	unlock	Public	✓	-
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
IUniswapV2Router01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-

	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	removeLiquidityETHWithPermit	External	✓	-
	swapExactTokensForTokens	External	✓	-
	swapTokensForExactTokens	External	✓	-
	swapExactETHForTokens	External	Payable	-
	swapTokensForExactETH	External	✓	-
	swapExactTokensForETH	External	✓	-
	swapETHForExactTokens	External	Payable	-
	quote	External		-
	getAmountOut	External		-
	getAmountIn	External		-
	getAmountsOut	External		-
	getAmountsIn	External		-
IUniswapV2Router02	Interface	IUniswapV2Router01		
	removeLiquidityETHSupportingFeeOnTransferTokens	External	✓	-
	removeLiquidityETHWithPermitSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
Token	Implementation	Context, IERC20, Ownable		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-

	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-
	isExcludedFromReward	Public		-
	totalFees	Public		-
	deliver	Public	✓	-
	reflectionFromToken	Public		-
	tokenFromReflection	Public		-
	excludeFromReward	Public	✓	onlyOwner
	includeInReward	External	✓	onlyOwner
	excludeFromFee	Public	✓	onlyOwner
	includeInFee	Public	✓	onlyOwner
	setAllFeePercent	External	✓	onlyOwner
	buyBackUpperLimitAmount	Public		-
	setBuybackUpperLimit	External	✓	onlyOwner
	setMaxTxPercent	External	✓	onlyOwner
	setMaxWalletPercent	External	✓	onlyOwner
	setSwapAndLiquifyEnabled	Public	✓	onlyOwner
	setFeeWallet	External	✓	onlyOwner
	<Receive Ether>	External	Payable	-
	_reflectFee	Private	✓	
	_getValues	Private		
	_getTValues	Private		
	_getRValues	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	_takeLiquidity	Private	✓	
	calculateTaxFee	Private		
	calculateLiquidityFee	Private		
	removeAllFee	Private	✓	
	restoreAllFee	Private	✓	
	isExcludedFromFee	Public		-

	_approve	Private	✓	
	_transfer	Private	✓	
	swapAndLiquify	Private	✓	lockTheSwap
	buyBackTokens	Private	✓	lockTheSwap
	swapTokensForBNB	Private	✓	
	swapBNBForTokens	Private	✓	
	addLiquidity	Private	✓	
	_tokenTransfer	Private	✓	
	_transferStandard	Private	✓	
	_transferToExcluded	Private	✓	
	_transferFromExcluded	Private	✓	
	_transferBothExcluded	Private	✓	
	_tokenTransferNoFee	Private	✓	
	recoverBEP20	Public	✓	onlyOwner

Contract Flow



Domain Info

Domain Name	shipay.io
Registry Domain ID	ae92d81361884f35967fbac7032d786d-DONUTS
Creation Date	2021-12-27T01:56:30Z
Updated Date	2022-01-01T01:57:19Z
Registry Expiry Date	2022-12-27T01:56:30Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://www.namecheap.com/
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

The domain has been created 8 days before the creation of the audit. It will expire in 12 months.

There is no public billing information, the creator is protected by the privacy settings.

Summary

ShiPlay is aiming to be a digital currency and an NFTs Collection, specialising in games and Metaverse. The token has a friendly and growing community. The contract analysis reported one medium threat issue. The contract owner can potentially set the total fees to 50%. It could have a check for a more reasonable maximum value like 25%. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats. There are some informative comments that do not affect the contract security.

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Coinscope is aiming to make crypto discoverable and efficient globally. It provides all the essential tools to assist users draw their own conclusions.



The Coinscope.co team

<https://www.coinscope.co>