



Audit Report

Play2Burn

December 2021

Type BEP20

Address 0x547C927Dc80c0F94A3825C805D725a69aB16DD6E

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Contract Review

Contract Name	Play2Burn
Compiler Version	v0.8.10+commit.fc410830
Optimization	10 runs
Licence	None
Explorer	https://bscscan.com/token/0x547C927Dc80c0F94A3825C805D725a69aB16DD6E
Symbol	P2B
Decimals	9
Total Supply	100,000,000,000
Source	contract.sol
Domain	play2burn.io

Audit Updates

Initial Audit	20th December 2021
Corrected	

Contract Analysis

● Critical
 ● Medium
 ● Pass

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

ST - Stop Transactions

Criticality

medium

Location<https://bscscan.com/address/0x547C927Dc80c0F94A3825C805D725a69aB16DD6E#code#L1346>

Description

The contract owner has the authority to stop transactions for all users excluding the owner. The owner may take advantage of it by setting the `_maxTxAmount` to zero.

```
if (from != owner() && to != owner()) {  
    require(  
        amount <= _maxTxAmount,  
        "Transfer amount exceeds the maxTxAmount."  
    );  
}
```

Recommendation

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.

OCTD - Owner Contract Tokens Drain

Criticality	critical
Location	https://bscscan.com/address/0x547C927Dc80c0F94A3825C805D725a69aB16DD6E#code#L1126

Description

The contract owner has the authority to claim all the balance of the contract. The owner may take advantage of it by calling the `claimStuckTokens` function, setting the zero address as argument.

```
if (_token == address(0x0)) {  
    payable(owner()).transfer(address(this).balance);  
    return;  
}
```

Recommendation

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.

ELFM - Exceed Limit Fees Manipulation

Criticality	critical
Location	https://bscscan.com/address/0x547C927Dc80c0F94A3825C805D725a69aB16DD6E#code#L1081,L1088

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 `setBuyFee` function with high percentage values.

```
function setBuyFee(uint16 liq, uint16 market, uint16 reward, uint16 tax)
external onlyOwner {
    buyFee.liquidityFee = liq;
    buyFee.marketingFee = market;
    buyFee.rewardFee = reward;
    buyFee.taxFee = tax;
}
```

Recommendation

The contract could embody a check for the maximum acceptable value.

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.

ULTW - Unlimited Liquidity to Team Wallet

Criticality	critical
Location	https://bscscan.com/address/0x547C927Dc80c0F94A3825C805D725a69aB16DD6E#code#L1378

Description

The contract owner has the authority to transfer funds without limit to the team wallet. These funds have been swiped from the swap & liquify feature. The owner may take advantage of it by setting a high fee to the `marketingFee` variable.

```
uint256 forMarketing = contractTokenBalance
    .mul(buyFee.marketingFee + sellFee.marketingFee)
    .div(
        buyFee.marketingFee +
        sellFee.marketingFee +
        buyFee.liquidityFee +
        sellFee.liquidityFee
    );
swapAndSendFee(forMarketing);
```

Recommendation

The contract could embody a check for the maximum acceptable value.

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

Pass	Name
✓	Integer Underflow
✓	Parity Multisig Bug
✓	Callstack Depth Attack
✓	Transaction-Ordering Dependency
✓	Timestamp Dependency
✓	Re-Entrancy

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
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	✓	-

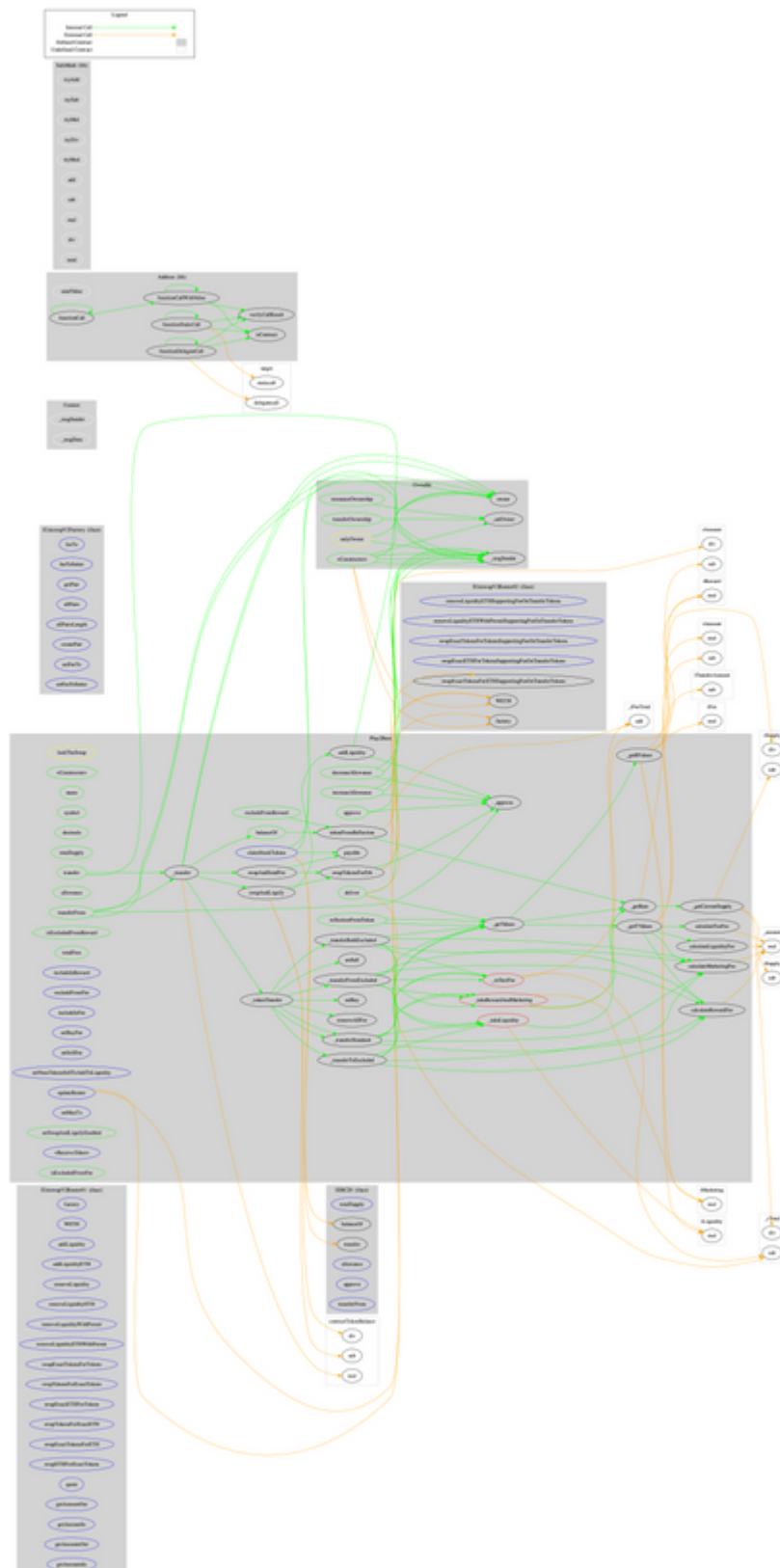
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
Address	Library			
	isContract	Internal		
	sendValue	Internal	✓	
	functionCall	Internal	✓	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionStaticCall	Internal		
	functionStaticCall	Internal		

	functionDelegateCall	Internal	✓	
	functionDelegateCall	Internal	✓	
	verifyCallResult	Internal		
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		
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Play2Burn	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	External	✓	onlyOwner
	includeInFee	External	✓	onlyOwner
	setBuyFee	External	✓	onlyOwner
	setSellFee	External	✓	onlyOwner
	setNumTokensSellToAddToLiquidity	External	✓	onlyOwner
	updateRouter	External	✓	onlyOwner
	setMaxTx	External	✓	onlyOwner
	setSwapAndLiquifyEnabled	Public	✓	onlyOwner
	claimStuckTokens	External	✓	onlyOwner
	<Receive Ether>	External	Payable	-
	_reflectFee	Private	✓	
	_getValues	Private		
	_getTValues	Private		
	_getRValues	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	_takeLiquidity	Private	✓	
	_takeRewardAndMarketing	Private	✓	
	calculateTaxFee	Private		
	calculateLiquidityFee	Private		
	calculateRewardFee	Private		
	calculateMarketingFee	Private		

	removeAllFee	Private	✓	
	setBuy	Private	✓	
	setSell	Private	✓	
	isExcludedFromFee	Public		-
	_approve	Private	✓	
	_transfer	Private	✓	
	swapAndLiquify	Private	✓	lockTheSwap
	swapAndSendFee	Private	✓	lockTheSwap
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	_tokenTransfer	Private	✓	
	_transferStandard	Private	✓	
	_transferToExcluded	Private	✓	
	_transferFromExcluded	Private	✓	
	_transferBothExcluded	Private	✓	

Contract Flow



Domain Info

Domain Name	play2burn.io
Registry Domain ID	13ac9b444f6d4b07828252b6853b1aa2-DONUTS
Creation Date	2021-12-05T19:05:44Z
Updated Date	2021-12-10T19:05:48Z
Registry Expiry Date	2022-12-05T19:05:44Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://www.namecheap.com/
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

The domain has been created 15 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

Play2Burn is a game studio aiming to deliver crypto games. The token has a friendly and growing community. There are some functions that can be abused by the owner, like manipulating fees, transferring funds to the team's wallet and stopping transactions. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

Disclaimer

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The Coinscope team disclaims any liability for the resulting losses.

About Coinscope

CoinScope is the leading early coin listing, voting and auditing authority firm. The audit process is analyzing and monitoring many aspects of the project. That way, it gives the community a good sense of security using an informative report and a generic score.

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>