Cyberscope

Audit Report

LitchiChain

October 2022

SHA256 c7f5eb3a0434976f22b4f2415f17cc40620c0afcd95f4a03e5df6390ccbc73f8

Audited by © cyberscope

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Contract Review

Contract Name	LitchiChain
Compiler Version	v0.8.11+commit.d7f03943
Testing Deploy	https://testnet.bscscan.com/token/0x30770bf27742161f7F55444014aFfCab8619f9FD
Symbol	Litchi
Decimals	9
Total Supply	100,000,000
Domain	https://litchichain.com

Source Files

Filename	**SHA256**
contract.sol	c7f5eb3a0434976f22b4f2415f17cc40620c0afcd95f4a03e5df6390ccbc73f8

Audit Updates

Initial Audit	13th October 2022
Corrected	

Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

Severity	Code	Description	Status
●	ST	Stops Transactions	Passed
●	OCTD	Transfers Contract's Tokens	Passed
●	OTUT	Transfers User's Tokens	Passed
●	ELFM	Exceeds Fees Limit	Passed
●	ULTW	Transfers Liquidity to Team Wallet	Passed
●	MT	Mints Tokens	Passed
●	BT	Burns Tokens	Passed
●	BC	Blacklists Addresses	Passed

Contract Diagnostics

Critical Medium Minor / Informative

Severity	Code	Description	Status
●	L01	Public Function could be Declared External	Unresolved
●	L02	State Variables could be Declared Constant	Unresolved
●	L04	Conformance to Solidity Naming Conventions	Unresolved
●	L05	Unused State Variable	Unresolved
●	L07	Missing Events Arithmetic	Unresolved
●	L12	Using Variables before Declaration	Unresolved
●	L14	Uninitialized Variables in Local Scope	Unresolved

L01 - Public Function could be Declared External

Criticality	minor / informative
Location	contract.sol#L274,558,363
Status	Unresolved

Description

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

```
transfer
enableTrading
getCirculatingSupply
```

Recommendation

Use the external attribute for functions never called from the contract.

L02 - State Variables could be Declared Constant

Criticality	minor / informative
Location	contract.sol#L117
Status	Unresolved

Description

Constant state variables should be declared constant to save gas.

```
_rTotal
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor / informative
Location	contract.sol#L112,132,135,33,133,371,113,131,134,125,111,115,114,154
Status	Unresolved

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.

```
_name
maxSellTaxes
masterTaxDivisor
WETH
maxTransferTaxes
_antiSnipe
_symbol
maxBuyTaxes
maxRoundtripTax
...
```

Recommendation

Follow the Solidity naming convention.
https://docs.soliditylang.org/en/v0.4.25/style-guide.html#naming-conventions.

L05 - Unused State Variable

Criticality	minor / informative
Location	contract.sol#L117
Status	Unresolved

Description

There are segments that contain unused state variables.

```
_rTotal
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality	minor / informative
Location	contract.sol#L397,402,428,419
Status	Unresolved

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.

```
_maxTxAmount = (_tTotal * percent) / divisor
_maxWalletSize = (_tTotal * percent) / divisor
piSwapPercent = priceImpactSwapPercent
swapThreshold = (_tTotal * thresholdPercent) / thresholdDivisor
```

Recommendation

Emit an event for critical parameter changes.

L12 - Using Variables before Declaration

Criticality	minor / informative
Location	contract.sol#L587
Status	Unresolved

Description

The contract is using a variable before the declaration. This is usually happening either if it has not been declared yet or the variable has been declared in a different scope.

```
check
```

Recommendation

The variables should be declared before any usage of them.

L14 - Uninitialized Variables in Local Scope

Criticality	minor / informative
Location	contract.sol#L586,587
Status	Unresolved

Description

The are variables that are defined in the local scope and are not initialized.

```
checked
check
```

Recommendation

All the local scoped variables should be initialized.

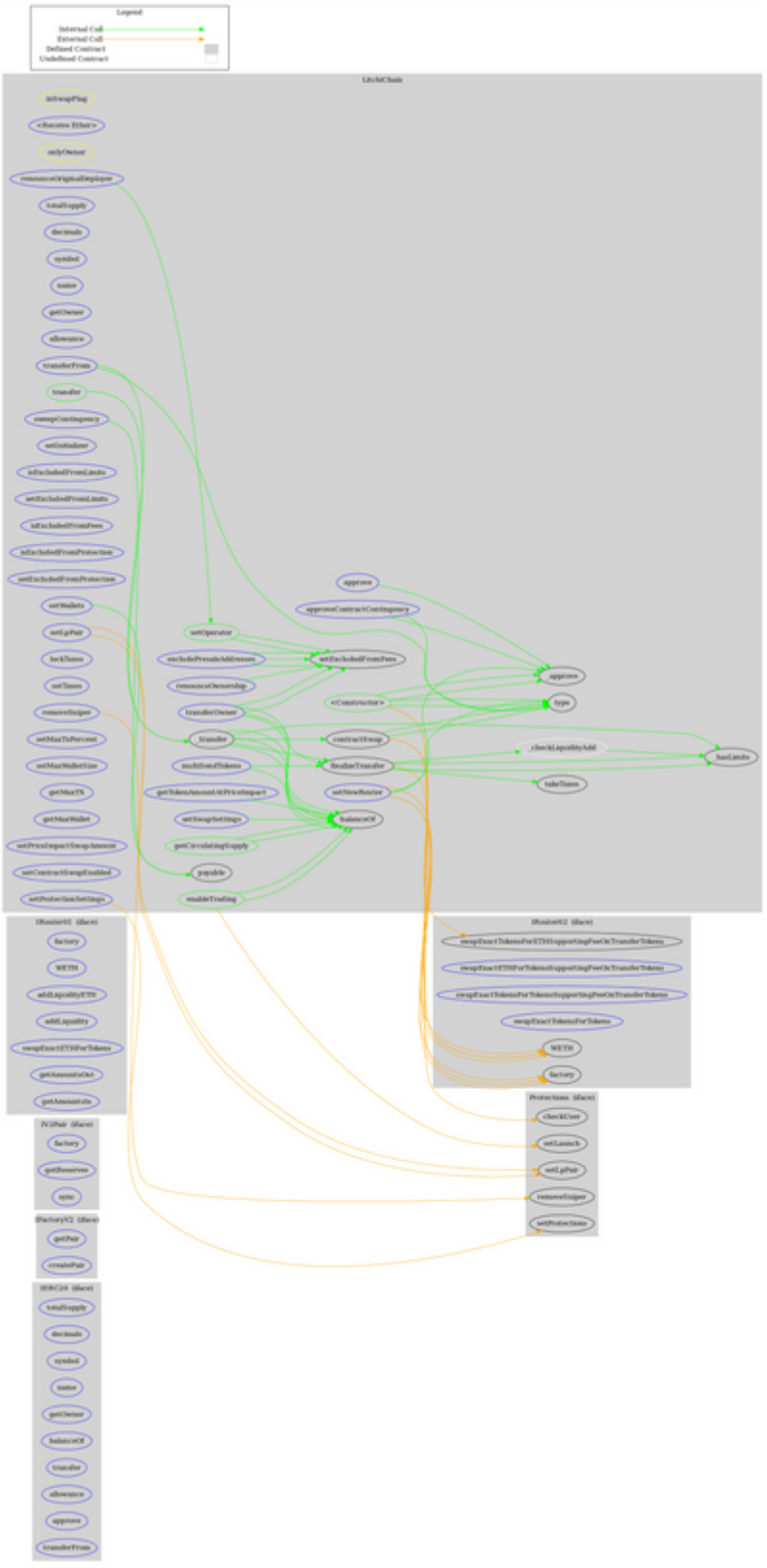
Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
IFactoryV2	Interface			
	getPair	External		-
	createPair	External	✓	-
IV2Pair	Interface			
	factory	External		-
	getReserves	External		-
	sync	External	✓	-
IRouter01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidityETH	External	Payable	-
	addLiquidity	External	✓	-
	swapExactETHForTokens	External	Payable	-
	getAmountsOut	External		-

	getAmountsIn	External		-
IRouter02	Interface	IRouter01		
	swapExactTokensForETHSupportingFeeOnTransferTokens	External	✓	-
	swapExactETHForTokensSupportingFeeOnTransferTokens	External	Payable	-
	swapExactTokensForTokensSupportingFeeOnTransferTokens	External	✓	-
	swapExactTokensForTokens	External	✓	-
Protections	Interface			
	checkUser	External	✓	-
	setLaunch	External	✓	-
	setLpPair	External	✓	-
	setProtections	External	✓	-
	removeSniper	External	✓	-
LitchiChain	Implementation	IERC20		
	<Constructor>	Public	Payable	-
	<Receive Ether>	External	Payable	-
	transferOwner	External	✓	onlyOwner
	renounceOwnership	External	✓	onlyOwner
	setOperator	Public	✓	-
	renounceOriginalDeployer	External	✓	-
	totalSupply	External		-
	decimals	External		-
	symbol	External		-
	name	External		-
	getOwner	External		-
	allowance	External		-
	balanceOf	Public		-
	transfer	Public	✓	-
	approve	External	✓	-
	_approve	Internal	✓	
	approveContractContingency	External	✓	onlyOwner

	transferFrom	External	✓	-
	setNewRouter	External	✓	onlyOwner
	setLpPair	External	✓	onlyOwner
	setInitializer	External	✓	onlyOwner
	isExcludedFromLimits	External		-
	setExcludedFromLimits	External	✓	onlyOwner
	isExcludedFromFees	External		-
	setExcludedFromFees	Public	✓	onlyOwner
	isExcludedFromProtection	External		-
	setExcludedFromProtection	External	✓	onlyOwner
	getCirculatingSupply	Public		-
	removeSniper	External	✓	onlyOwner
	setProtectionSettings	External	✓	onlyOwner
	lockTaxes	External	✓	onlyOwner
	setTaxes	External	✓	onlyOwner
	setWallets	External	✓	onlyOwner
	setMaxTxPercent	External	✓	onlyOwner
	setMaxWalletSize	External	✓	onlyOwner
	getMaxTX	External		-
	getMaxWallet	External		-
	getTokenAmountAtPriceImpact	External		-
	setSwapSettings	External	✓	onlyOwner
	setPriceImpactSwapAmount	External	✓	onlyOwner
	setContractSwapEnabled	External	✓	onlyOwner
	excludePresaleAddresses	External	✓	onlyOwner
	_hasLimits	Internal		
	_transfer	Internal	✓	
	contractSwap	Internal	✓	inSwapFlag
	_checkLiquidityAdd	Internal	✓	
	enableTrading	Public	✓	onlyOwner
	sweepContingency	External	✓	onlyOwner
	multiSendTokens	External	✓	onlyOwner
	finalizeTransfer	Internal	✓	
	takeTaxes	Internal	✓	

Contract Flow



Domain Info

Domain Name	litchichain.com
Registry Domain ID	2730136587_DOMAIN_COM-VRSN
Creation Date	2022-10-05T21:13:48Z
Updated Date	2022-10-05T21:14:06Z
Registry Expiry Date	2023-10-05T21:13:48Z
Registrar WHOIS Server	whois.hostinger.com
Registrar URL	https://www.hostinger.com
Registrar	Hostinger, UAB
Registrar IANA ID	1636

The domain was 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

LitchiChain is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler errors or critical issues. The Contract Owner can access some admin functions that can not be used in a malicious way to disturb the users' transactions. There is also a limit of max 20% fee.

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The Cyberscope team

https://www.cyberscope.io