Cyberscope

Audit Report

JACKALOPE COIN

September 2022

Type	BEP20
Network	BSC
Address	0x234aaFBf28e1086fC7047F805F04836758B1bc81
Audited by	© cyberscope

Table of Contents

Contract Review

Contract Name	LOPE
Compiler Version	v0.8.16+commit.07a7930e
Optimization	200 runs
Licence	Unlicense
Explorer	https://bscscan.com/token/0x234aaFBf28e1086fC7047F805F04836758B1bc81
Symbol	LOPE
Decimals	18
Total Supply	99,999,999,999
Domain	https://jackalopecoin.com

Source Files

Filename	**SHA256**
contract.sol	5d8a1db65fa09a6d21c46116b74f4a925182ed4939cbd18c186d15d5fc703c14

Audit Updates

Initial Audit	3rd October 2022
Corrected	

Contract Analysis

● Critical ● Medium ● Minor / Informative ● Pass

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

ST - Stops Transactions

Criticality	critical
Location	contract.sol#L1182
Status	Unresolved

Description

The contract owner has the authority to stop the sales for all users excluding the owner. The owner may take advantage of it by setting the totalSellFee to 100%. As a result, the contract may operate as a honeypot.

```
if(takeFee) {

        uint16 totalFee;

        if(automatedMarketMakerPairs[from]){
            totalFee = totalBuyFee;
        }else if(automatedMarketMakerPairs[to]){
            totalFee = totalSellFee;
        }

         uint256 fees = amount.mul(totalFee).div(100);
        amount = amount.sub(fees);
        super._transfer(from, address(this), fees);

    }

    super._transfer(from, to, amount);
```

Recommendation

The contract could embody a check for not allowing setting the totalSellFee over the allowed limit. More information on ELFM - Exceeds Fees Limit.

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 - Exceeds Fees Limit

Criticality	critical
Location	contract.sol#L1110,1116
Status	Unresolved

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` and `setSellFee`function with a high percentage value.

```
function setBuyFee(uint16 liqFee, uint16 team) external onlyOwner {
    buyFee.projectFee = liqFee;
    buyFee.teamFee = team;
    totalBuyFee = buyFee.projectFee + buyFee.teamFee;
}

function setSellFee(uint16 liqFee, uint16 team) external onlyOwner {
    sellFee.projectFee = liqFee;
    sellFee.teamFee = team;
    totalSellFee = sellFee.projectFee + sellFee.teamFee;
}
```

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.

BC - Blacklists Addresses

Criticality	medium
Location	contract.sol#L1098
Status	Unresolved

Description

The contract owner has the authority to stop addresses from transactions. The owner may take advantage of it by calling the blacklistAddress function.

```
function blacklistAddress(address account, bool value) external onlyOwner{
    _isBlacklisted[account] = value;
  }
```

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.

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
	L09	Dead Code Elimination	Unresolved
	L14	Uninitialized Variables in Local Scope	Unresolved

L01 - Public Function could be Declared External

Criticality	minor / informative
Location	contract.sol#L759,590,1086,696,806,679,722,787,598,671,1135,703,1118,741,730
Status	Unresolved

Description

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

```
transferFrom
renounceOwnership
excludeMultipleAccountsFromFees
decimals
decreaseAllowance
symbol
transfer
increaseAllowance
transferOwnership
...
```

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#L993
Status	Unresolved

Description

Constant state variables should be declared constant to save gas.

```
isTradingEnabled
```

Recommendation

Add the constant attribute to state variables that never change.

L04 - Conformance to Solidity Naming Conventions

Criticality	minor / informative
Location	contract.sol#L1003,1008,996,1004,8
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.

```
_teamWalletAddress
_isBlacklisted
deadWallet
_projectWalletAddress
WETH
```

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#L996,993
Status	Unresolved

Description

There are segments that contain unused state variables.

```
deadWallet
isTradingEnabled
```

Recommendation

Remove unused state variables.

L07 - Missing Events Arithmetic

Criticality	minor / informative
Location	contract.sol#L1076,1106,1112
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.

```
swapTokensAtAmount = amt
totalBuyFee = buyFee.projectFee + buyFee.teamFee
totalSellFee = sellFee.projectFee + sellFee.teamFee
```

Recommendation

Emit an event for critical parameter changes.

L09 - Dead Code Elimination

Criticality	minor / informative
Location	contract.sol#L884
Status	Unresolved

Description

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

```
_burn
```

Recommendation

Remove unused functions.

L14 - Uninitialized Variables in Local Scope

Criticality	minor / informative
Location	contract.sol#L1180
Status	Unresolved

Description

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

```
totalFee
```

Recommendation

All the local scoped variables should be initialized.

Contract Functions

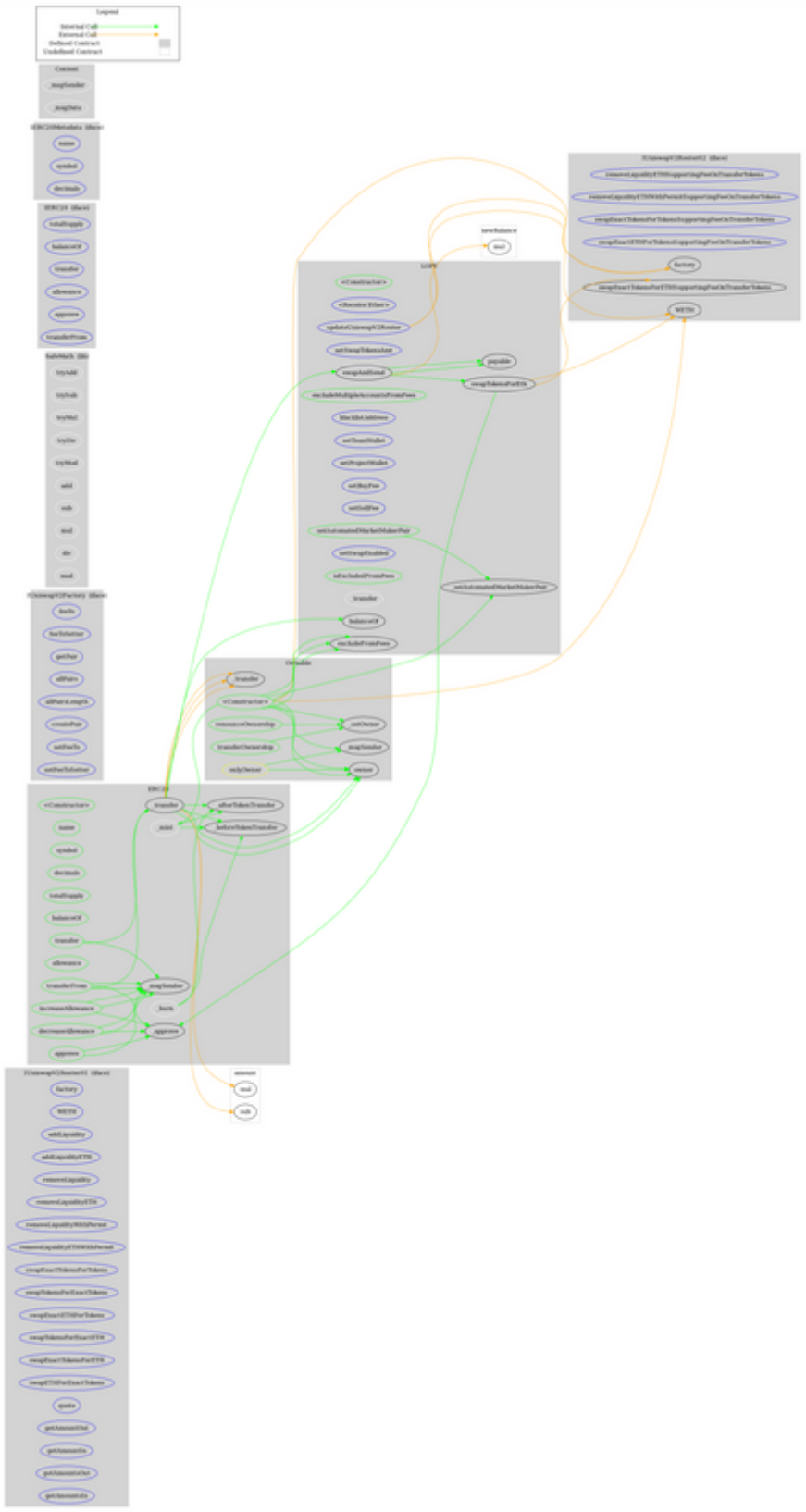
Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IUniswapV2Router01	Interface			
	factory	External		-
	WETH	External		-
	addLiquidity	External	✓	-
	addLiquidityETH	External	Payable	-
	removeLiquidity	External	✓	-
	removeLiquidityETH	External	✓	-
	removeLiquidityWithPermit	External	✓	-
	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	✓	-

	swapExactETHForTokensSupporting FeeOnTransferTokens	External	Payable	-
	swapExactTokensForETHSupporting FeeOnTransferTokens	External	✓	-
IUniswapV2Factory	Interface			
	feeTo	External		-
	feeToSetter	External		-
	getPair	External		-
	allPairs	External		-
	allPairsLength	External		-
	createPair	External	✓	-
	setFeeTo	External	✓	-
	setFeeToSetter	External	✓	-
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	✓	-
IERC20Metadata	Interface	IERC20		
	name	External		-
	symbol	External		-
	decimals	External		-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
ERC20	Implementation	Context, IERC20, IERC20Metadata		
	<Constructor>	Public	✓	-
	name	Public		-
	symbol	Public		-
	decimals	Public		-
	totalSupply	Public		-
	balanceOf	Public		-
	transfer	Public	✓	-
	allowance	Public		-
	approve	Public	✓	-
	transferFrom	Public	✓	-
	increaseAllowance	Public	✓	-
	decreaseAllowance	Public	✓	-

	_transfer	Internal	✓	
	_mint	Internal	✓	
	_burn	Internal	✓	
	_approve	Internal	✓	
	_beforeTokenTransfer	Internal	✓	
	_afterTokenTransfer	Internal	✓	
LOPE	Implementation	ERC20, Ownable		
	<Constructor>	Public	✓	ERC20
	<Receive Ether>	External	Payable	-
	updateUniswapV2Router	External	✓	onlyOwner
	setSwapTokensAmt	External	✓	onlyOwner
	excludeFromFees	Public	✓	onlyOwner
	excludeMultipleAccountsFromFees	Public	✓	onlyOwner
	blacklistAddress	External	✓	onlyOwner
	setTeamWallet	External	✓	onlyOwner
	setProjectWallet	External	✓	onlyOwner
	setBuyFee	External	✓	onlyOwner
	setSellFee	External	✓	onlyOwner
	setAutomatedMarketMakerPair	Public	✓	onlyOwner
	setSwapEnabled	External	✓	onlyOwner
	_setAutomatedMarketMakerPair	Private	✓	
	isExcludedFromFees	Public		-
	_transfer	Internal	✓	
	swapAndSend	Private	✓	
	swapTokensForEth	Private	✓	

Contract Flow



Domain Info

Domain Name	jackalopecoin.com
Registry Domain ID	2728282587_DOMAIN_COM-VRSN
Creation Date	2022-09-27T16:24:07Z
Updated Date	2022-09-27T16:24:07Z
Registry Expiry Date	2023-09-27T16:24:07Z
Registrar WHOIS Server	whois.godaddy.com
Registrar URL	https://www.godaddy.com
Registrar	GoDaddy.com, LLC
Registrar IANA ID	146

The domain was created 6 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

There are some functions that can be abused by the owner like stopping transactions, manipulating fees and blacklisting addresses. The contract can be converted into a honeypot and prevent users from selling if the owner abuses the admin functions. A multi-wallet signing pattern will provide security against potential hacks. Temporarily locking the contract or renouncing ownership will eliminate all the contract threats.

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Coinscope audit and K.Y.C. service has been rebranded to Cyberscope.

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.

Cyberscope and Coinscope are aiming to make crypto discoverable and efficient globally. They provide all the essential tools to assist users draw their own conclusions.

The Cyberscope team

https://www.cyberscope.io