Cyberscope

Audit Report

Alkebuland

August 2022

Type	BEP20
Network	BSC
Address	0x2AbBACFD3Ba59E71868260Dd4eb88a6102c45e6B
Audited by	© cyberscope

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Contract Review

Contract Name	LiquidityGeneratorToken
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0x2AbBACFD3Ba59E71868260Dd4eb88a6102c45e6B
Symbol	AKLD
Decimals	9
Total Supply	2,500,000,000
Domain	https://alkebuland.io

Source Files

Filename	**SHA256**
contract.sol	69d66bbe11e8f0687c87de70a01b42f9fe6e6fdcd5e8d45002fc7b6dff31e378

Audit Updates

Initial Audit	13th July 2022
Corrected	1st August 2022

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

Contract Diagnostics

Critical Medium Minor

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

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L1123,1045,1187,1234,165,1093,1139,1049,1238,1261,1147,1084,1053,173,1075,1435,1159,1143,1110,1066,1057

Description

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

```
totalSupply
transfer
increaseAllowance
totalFees
reflectionFromToken
isExcludedFromFee
allowance
transferOwnership
decimals
...
```

Recommendation

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

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L940,943,946,951,1408,1261,641,1400,1396

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.

```
_amount
WETH
_enabled
_charityAddress
_charityFee
_liquidityFee
_taxFee
```

Recommendation

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

L07 - Missing Events Arithmetic

Criticality	minor
Location	contract.sol#L1242,1250

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.

```
_liquidityFee = liquidityFeeBps
_taxFee = taxFeeBps
```

Recommendation

Emit an event for critical parameter changes.

L08 - Tautology or Contradiction

Criticality	minor
Location	contract.sol#L972

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)(charityFeeBps_ >= 0,Invalid charity fee)
require(bool,string)(taxFeeBps_ >= 0,Invalid tax fee)
require(bool,string)(liquidityFeeBps_ >= 0,Invalid liquidity fee)
```

Recommendation

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

L09 - Dead Code Elimination

Criticality	minor
Location	contract.sol#L610,469,523,593,583,537,556,441,504,566,494

Description

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

```
functionCall
functionStaticCall
isContract
functionCallWithValue
functionDelegateCall
sendValue
verifyCallResult
...
```

Recommendation

Remove unused functions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
SafeMath	Library			
	tryAdd	Internal		
	trySub	Internal		
	tryMul	Internal		
	tryDiv	Internal		
	tryMod	Internal		
	add	Internal		
	sub	Internal		
	mul	Internal		

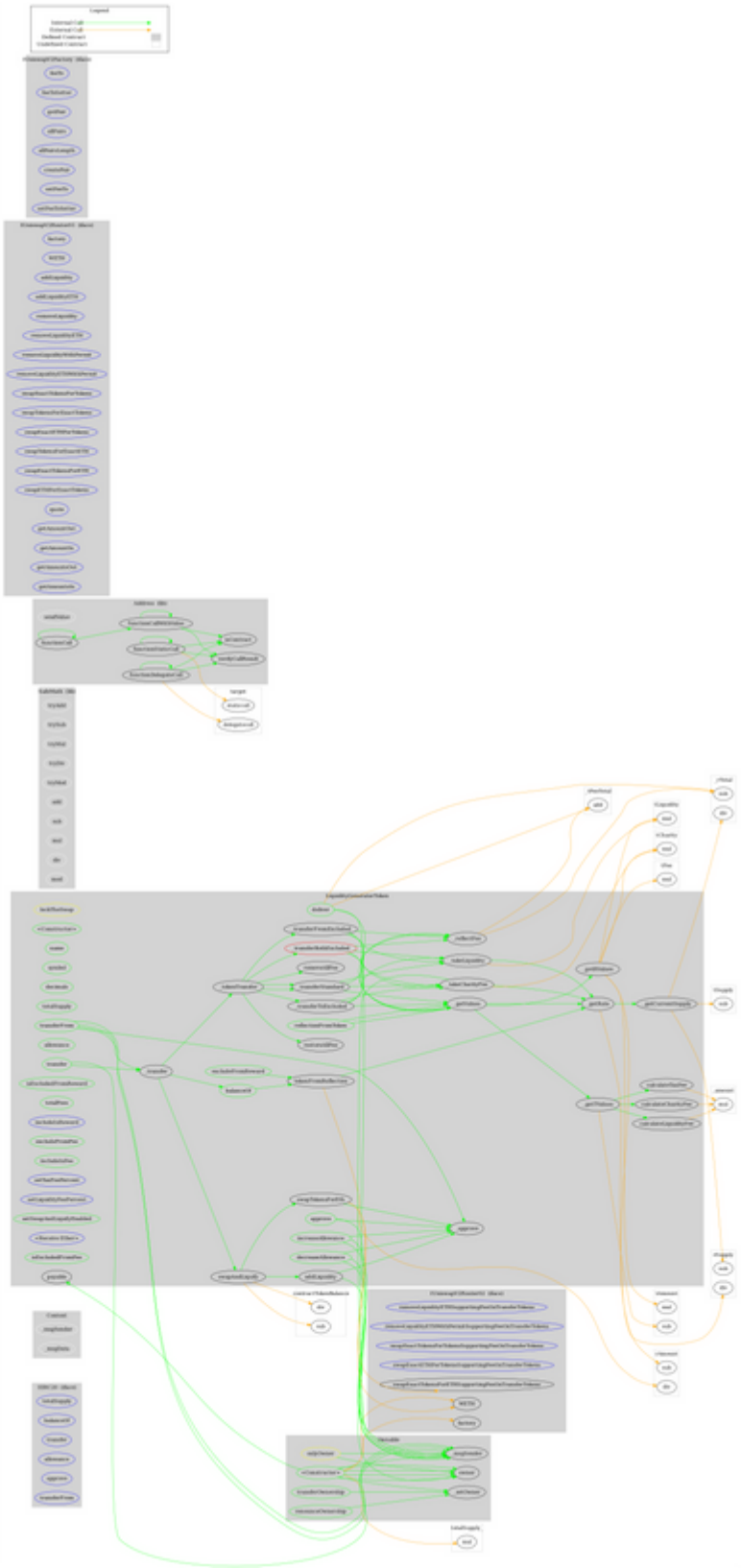
	div	Internal		
	mod	Internal		
	sub	Internal		
	div	Internal		
	mod	Internal		
Address	Library			
	isContract	Internal		
	sendValue	Internal	✓	
	functionCall	Internal	✓	
	functionCall	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionCallWithValue	Internal	✓	
	functionStaticCall	Internal		
	functionStaticCall	Internal		
	functionDelegateCall	Internal	✓	
	functionDelegateCall	Internal	✓	
	verifyCallResult	Internal		
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	✓	-
BaseToken	Implementation			
LiquidityGeneratorToken	Implementation	IERC20, Ownable, BaseToken		
	<Constructor>	Public	Payable	-
	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
	_transferBothExcluded	Private	✓	
	excludeFromFee	Public	✓	onlyOwner
	includeInFee	Public	✓	onlyOwner
	setTaxFeePercent	External	✓	onlyOwner
	setLiquidityFeePercent	External	✓	onlyOwner
	setSwapAndLiquifyEnabled	Public	✓	onlyOwner
	<Receive Ether>	External	Payable	-
	_reflectFee	Private	✓	
	_getValues	Private		
	_getTValues	Private		
	_getRValues	Private		
	_getRate	Private		
	_getCurrentSupply	Private		
	_takeLiquidity	Private	✓	
	_takeCharityFee	Private	✓	
	calculateTaxFee	Private		
	calculateLiquidityFee	Private		
	calculateCharityFee	Private		
	removeAllFee	Private	✓	

	restoreAllFee	Private	✓	
	isExcludedFromFee	Public		-
	_approve	Private	✓	
	_transfer	Private	✓	
	swapAndLiquify	Private	✓	lockTheSwap
	swapTokensForEth	Private	✓	
	addLiquidity	Private	✓	
	_tokenTransfer	Private	✓	
	_transferStandard	Private	✓	
	_transferToExcluded	Private	✓	
	_transferFromExcluded	Private	✓	

Contract Flow



Domain Info

Domain Name	alkebuland.io
Registry Domain ID	340c4a0e24e548cfaa7c01ab314e362b-DONUTS
Creation Date	2022-06-20T22:39:47Z
Updated Date	2022-06-25T22:39:55Z
Registry Expiry Date	2023-06-20T22:39:47Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://www.namecheap.com/
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

The domain has been created in 11 months before the creation of the audit.

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

Summary

Alkebuland is an interesting project that has a friendly and growing community. The Smart Contract analysis reported no compiler error 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 25% fees.

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The Cyberscope team

https://www.cyberscope.io

Cyberscope

Audit Report

Alkebuland

July 2022

Type	BEP20
Network	BSC
Address	0xa6ff2c209c032f443efc03a848c16219dc474b78
Audited by	© cyberscope

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Contract Review

Contract Name	AntiBotStandardToken
Compiler Version	v0.8.4+commit.c7e474f2
Optimization	200 runs
Licence	MIT
Explorer	https://bscscan.com/token/0xa6ff2c209c032f443efc03a848c16219dc474b78
Symbol	AKLD
Decimals	18
Total Supply	2,500,000,000
Domain	alkebuland.io

Source Files

Filename	**SHA256**
contract.sol	018174c70f79aa836fc246f8ee7d0890eb3883c1b40148388f8eaff14c97b391

Audit Updates

Initial Audit	13th July 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

BC - Blacklisted Contracts

Criticality	minor
Location	contract.sol#L725

Description

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

```
if (enableAntiBot) {
        pinkAntiBot.onPreTransferCheck(sender, recipient, amount);
 }
```

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

Severity	Code	Description
	US	Untrusted Source
	STC	Succeeded Transfer Check
	CO	Code Optimization
	L01	Public Function could be Declared External
	L04	Conformance to Solidity Naming Conventions
	L09	Dead Code Elimination

US - Untrusted Source

Criticality	minor
Location	contract.sol#L482

Description

The contract uses an external contract in order to determine the transaction's flow. The external contract is untrusted. As a result it may produce security issues and harm the transactions.

```
IPinkAntiBot public pinkAntiBot;
```

Recommendation

The contract should use a trusted external source. A trusted source could be either a commonly recognized or an audited contract. The pointing addresses should not be able to change after the initialization.

STC - Succeeded Transfer Check

Criticality	minor
Location	contract.sol#L510

Description

According to the ERC20 specification, the transfer methods should be checked if the result is successful. Otherwise, the contract may wrongly assume that the transfer has been established.

```
payable(serviceFeeReceiver_).transfer(serviceFee_);
```

Recommendation

The contract should check if the result of the transfer methods is successful.

CO - Code Optimization

Criticality	minor
Location	contract.sol#L768

Description

There are code segments that could be optimized. A segment may be optimized so that it becomes a smaller size, consumes less memory, executes more rapidly, or performs fewer operations.

This code segment can be optimized by removing. The `_burn` function is not used on contract implementation.

```
function _burn(address account, uint256 amount) internal virtual {
    require(account != address(0), "ERC20: burn from the zero address");

    _beforeTokenTransfer(account, address(0), amount);

    _balances[account] = _balances[account].sub(
        amount,
        "ERC20: burn amount exceeds balance"
    );
    _totalSupply = _totalSupply.sub(amount);
    emit Transfer(account, address(0), amount);
}
```

Recommendation

Rewrite some code segments so the runtime will be more performant.

L01 - Public Function could be Declared External

Criticality	minor
Location	contract.sol#L626,165,548,655,682,586,573,524,516,173,541,555,603

Description

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

```
approve
balanceOf
decimals
transferOwnership
name
symbol
transfer
allowance
decreaseAllowance
...
```

Recommendation

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

L04 - Conformance to Solidity Naming Conventions

Criticality	minor
Location	contract.sol#L509

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.

```
_enable
```

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#L809,764

Description

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

```
_burn
_setupDecimals
```

Recommendation

Remove unused functions.

Contract Functions

Contract	Type	Bases		
	Function Name	Visibility	Mutability	Modifiers
IERC20	Interface			
	totalSupply	External		-
	balanceOf	External		-
	transfer	External	✓	-
	allowance	External		-
	approve	External	✓	-
	transferFrom	External	✓	-
Context	Implementation			
	_msgSender	Internal		
	_msgData	Internal		
Ownable	Implementation	Context		
	<Constructor>	Public	✓	-
	owner	Public		-
	renounceOwnership	Public	✓	onlyOwner
	transferOwnership	Public	✓	onlyOwner
	_setOwner	Private	✓	
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		
IPinkAntiBot	Interface			
	setTokenOwner	External	✓	-
	onPreTransferCheck	External	✓	-
BaseToken	Implementation			
AntiBotStandardToken	Implementation	IERC20, Ownable, BaseToken		
	<Constructor>	Public	Payable	-
	setEnableAntiBot	External	✓	onlyOwner
	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	✓	
	_setupDecimals	Internal	✓	
	_beforeTokenTransfer	Internal	✓	

Contract Flow



Domain Info

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Creation Date	2022-06-20T22:39:47Z
Updated Date	2022-06-25T22:39:55Z
Registry Expiry Date	2023-06-20T22:39:47Z
Registrar WHOIS Server	whois.namecheap.com
Registrar URL	https://www.namecheap.com/
Registrar	NameCheap, Inc.
Registrar IANA ID	1068

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Summary

The Smart Contract analysis reported one minor severity issue. The contract owner has the authority to blacklist addresses. In addition, the IPinkAntiBot contract is out of the audit's scope. 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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