


SMART CONTRACT SECURITY AUDIT

Final report

Plan: Simple

Alkebuland

July 2022

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INTRODUCTION

A fungible token of ERC20 standard with antibot functionality.

Name	Alkebuland
Audit date	2022-07-26 - 2022-07-26
Language	Solidity
Network	Binance Smart Chain



CONTRACTS CHECKED

Name	Address
AntiBotStandardToken	0xa6ff2c209c032f443efc03a848c16219dc474b78

AUDIT PROCESS

The code was audited by the team according to the following order:

Automated analysis

-  Scanning the project's smart contracts with several publicly available automated Solidity analysis tools
-  Manual confirmation of all the issues found by the tools

Manual audit

-  Thorough manual analysis of smart contracts for security vulnerabilities
-  Smart contracts' logic check

ATTACKS CHECKED

Title	Check result
Unencrypted Private Data On-Chain	✓ passed
Code With No Effects	✓ passed
Message call with hardcoded gas amount	✓ passed
Typographical Error	✓ passed
DoS With Block Gas Limit	✓ passed
Presence of unused variables	✓ passed
Incorrect Inheritance Order	✓ passed
Requirement Violation	✓ passed
Weak Sources of Randomness from Chain Attributes	✓ passed
Shadowing State Variables	✓ passed
Incorrect Constructor Name	✓ passed
Block values as a proxy for time	✓ passed
Authorization through tx.origin	✓ passed
DoS with Failed Call	✓ passed
Delegatecall to Untrusted Callee	✓ passed

Use of Deprecated Solidity Functions	✓ passed
Assert Violation	✓ passed
State Variable Default Visibility	✓ passed
Reentrancy	✓ passed
Unprotected SELFDESTRUCT Instruction	✓ passed
Unprotected Ether Withdrawal	✓ passed
Unchecked Call Return Value	✓ passed
Floating Pragma	✓ passed
Outdated Compiler Version	✓ passed
Integer Overflow and Underflow	✓ passed
Function Default Visibility	✓ passed

CLASSIFICATION OF ISSUES

High severity	Issues leading to assets theft, locking or any other loss of assets or leading to contract malfunctioning.
Medium severity	Issues that can trigger a contract failure of malfunctioning.
Low severity	Issues that do now affect contract functionality. For example, unoptimised gas usage, outdated or unused code, code style violations, etc.

❖ ISSUES

High severity issues

No issues were found

Medium severity issues

No issues were found

Low severity issues

1. Antibot may block transfers (AntiBotStandardToken)

The contract calls an external contract for antibot protection. The antibot contract is deployed via proxy and it's coe can be changed. The antibot may potentially block transfers.

```
function _transfer(
    address sender,
    address recipient,
    uint256 amount
) internal virtual {
    ...

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

◆ CONCLUSION

Alkebuland AntiBotStandardToken contract was audited. 1 low severity issue was found.

◆ **DISCLAIMER**

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This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

STATIC ANALYSIS

INFO:Detectors:

AntiBotStandardToken.allowance(address,address).owner (Alkebuland.sol#590) shadows:

- Ownable.owner() (Alkebuland.sol#150-152) (function)

AntiBotStandardToken._approve(address,address,uint256).owner (Alkebuland.sol#795)

shadows:

- Ownable.owner() (Alkebuland.sol#150-152) (function)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#local-variable-shadowing>

INFO:Detectors:

AntiBotStandardToken.constructor(string,string,uint8,uint256,address,address,uint256).serviceFeeReceiver_ (Alkebuland.sol#491) lacks a zero-check on :

- address(serviceFeeReceiver_).transfer(serviceFee_) (Alkebuland.sol#510)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#missing-zero-address-validation>

INFO:Detectors:

Reentrancy in AntiBotStandardToken._transfer(address,address,uint256)

(Alkebuland.sol#716-736):

External calls:

- pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (Alkebuland.sol#725)

State variables written after the call(s):

- _balances[sender] = _balances[sender].sub(amount,ERC20: transfer amount exceeds balance) (Alkebuland.sol#730-733)

- _balances[recipient] = _balances[recipient].add(amount) (Alkebuland.sol#734)

Reentrancy in AntiBotStandardToken.constructor(string,string,uint8,uint256,address,address,uint256) (Alkebuland.sol#485-511):

External calls:

- pinkAntiBot.setTokenOwner(owner()) (Alkebuland.sol#500)

State variables written after the call(s):

- enableAntiBot = true (Alkebuland.sol#501)

Reentrancy in AntiBotStandardToken.transferFrom(address,address,uint256)

(Alkebuland.sol#630-645):

External calls:

- _transfer(sender,recipient,amount) (Alkebuland.sol#635)

- pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (Alkebuland.sol#725)

State variables written after the call(s):

- _approve(sender,_msgSender(),_allowances[sender][_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance)) (Alkebuland.sol#636-643)

- _allowances[owner][spender] = amount (Alkebuland.sol#802)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-2>

INFO:Detectors:

Reentrancy in AntiBotStandardToken._transfer(address,address,uint256) (Alkebuland.sol#716-736):

External calls:

- pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (Alkebuland.sol#725)

Event emitted after the call(s):

- Transfer(sender,recipient,amount) (Alkebuland.sol#735)

Reentrancy in AntiBotStandardToken.constructor(string,string,uint8,uint256,address,address,uint256) (Alkebuland.sol#485-511):

External calls:

- pinkAntiBot.setTokenOwner(owner()) (Alkebuland.sol#500)

Event emitted after the call(s):

- TokenCreated(owner(),address(this),TokenType.antiBotStandard,VERSION)

(Alkebuland.sol#503-508)

Reentrancy in AntiBotStandardToken.transferFrom(address,address,uint256)

(Alkebuland.sol#630-645):

External calls:

- _transfer(sender,recipient,amount) (Alkebuland.sol#635)

- pinkAntiBot.onPreTransferCheck(sender,recipient,amount) (Alkebuland.sol#725)

Event emitted after the call(s):

- Approval(owner,spender,amount) (Alkebuland.sol#803)

- _approve(sender,_msgSender(),_allowances[sender]

[_msgSender()].sub(amount,ERC20: transfer amount exceeds allowance))

(Alkebuland.sol#636-643)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#reentrancy-vulnerabilities-3>

INFO:Detectors:

AntiBotStandardToken._burn(address,uint256) (Alkebuland.sol#768-779) is never used and should be removed

AntiBotStandardToken._setupDecimals(uint8) (Alkebuland.sol#813-815) is never used

and should be removed

Context._msgData() (Alkebuland.sol#110-112) is never used and should be removed

SafeMath.div(uint256,uint256) (Alkebuland.sol#324-326) is never used and should be removed

SafeMath.div(uint256,uint256,string) (Alkebuland.sol#380-389) is never used and should be removed

SafeMath.mod(uint256,uint256) (Alkebuland.sol#340-342) is never used and should be removed

SafeMath.mod(uint256,uint256,string) (Alkebuland.sol#406-415) is never used and should be removed

SafeMath.mul(uint256,uint256) (Alkebuland.sol#310-312) is never used and should be removed

SafeMath.sub(uint256,uint256) (Alkebuland.sol#296-298) is never used and should be removed

SafeMath.tryAdd(uint256,uint256) (Alkebuland.sol#211-217) is never used and should be removed

SafeMath.tryDiv(uint256,uint256) (Alkebuland.sol#253-258) is never used and should be removed

SafeMath.tryMod(uint256,uint256) (Alkebuland.sol#265-270) is never used and should be removed

SafeMath.tryMul(uint256,uint256) (Alkebuland.sol#236-246) is never used and should be removed

SafeMath.trySub(uint256,uint256) (Alkebuland.sol#224-229) is never used and should be removed

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code>
INFO:Detectors:

Pragma version=0.8.4 (Alkebuland.sol#461) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6

solc-0.8.4 is not recommended for deployment

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity>

INFO:Detectors:

Parameter AntiBotStandardToken.setEnableAntiBot(bool)._enable (Alkebuland.sol#513) is not in mixedCase

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions>

INFO:Detectors:

Variable AntiBotStandardToken._totalSupply (Alkebuland.sol#480) is too similar to AntiBotStandardToken.constructor(string,string,uint8,uint256,address,address,uint256).totalSupply_ (Alkebuland.sol#489)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-are-too-similar>

INFO:Detectors:

renounceOwnership() should be declared external:

- Ownable.renounceOwnership() (Alkebuland.sol#169-171)

transferOwnership(address) should be declared external:

- Ownable.transferOwnership(address) (Alkebuland.sol#177-180)

name() should be declared external:

- AntiBotStandardToken.name() (Alkebuland.sol#520-522)

symbol() should be declared external:

- AntiBotStandardToken.symbol() (Alkebuland.sol#528-530)

decimals() should be declared external:

- AntiBotStandardToken.decimals() (Alkebuland.sol#545-547)

totalSupply() should be declared external:

- AntiBotStandardToken.totalSupply() (Alkebuland.sol#552-554)

balanceOf(address) should be declared external:

- AntiBotStandardToken.balanceOf(address) (Alkebuland.sol#559-567)

transfer(address,uint256) should be declared external:

- AntiBotStandardToken.transfer(address,uint256) (Alkebuland.sol#577-585)

allowance(address,address) should be declared external:

- AntiBotStandardToken.allowance(address,address) (Alkebuland.sol#590-598)

approve(address,uint256) should be declared external:

- AntiBotStandardToken.approve(address,uint256) (Alkebuland.sol#607-615)

transferFrom(address,address,uint256) should be declared external:

- AntiBotStandardToken.transferFrom(address,address,uint256)

(Alkebuland.sol#630-645)

increaseAllowance(address,uint256) should be declared external:

- AntiBotStandardToken.increaseAllowance(address,uint256) (Alkebuland.sol#659-670)

decreaseAllowance(address,uint256) should be declared external:

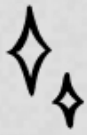
- AntiBotStandardToken.decreaseAllowance(address,uint256) (Alkebuland.sol#686-700)

Reference: <https://github.com/crytic/slither/wiki/Detector-Documentation#public-function-that-could-be-declared-external>

INFO:Slither:Alkebuland.sol analyzed (7 contracts with 75 detectors), 40 result(s) found


INFO:Slither:Use <https://crytic.io/> to get access to additional detectors and Github integration

Alkebuland



WOOF!

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