AuditAce
FROM INCEPTION TO SUCCESS

auditace.tech

Smart Contract Audit

FOR

White Rabbit

DATED : 4 June 23'

AUDIT SUMMARY

Project name – White Rabbit

Date: 4 June, 2023

Scope of Audit- Audit Ace was consulted to conduct the smart contract audit of the solidity source codes.

Audit Status: Passed

Issues Found

Status	Critical	High	Medium	Low	Suggestion
Open	0	0	0	0	1
Acknowledged	0	0	0	0	0
Resolved	0	0	0	0	0

USED TOOLS

Tools:

1- Manual Review:
a line by line code review has been performed by audit ace team.

2- BSC Test Network:
all tests were done on BSC Test network, each test has its transaction has attached to it.

3- Slither : Static Analysis

Testnet Link: all tests were done using this contract, tests are done on BSC Testnet

https://testnet.bscscan.com/token/0xe31faedd1fe0180f174a7ce540fba77d814ea911

Token Information

Token Name : White Rabbit

Token Symbol: WRB

Decimals: 18

Token Supply:100,000,000,000

Token Address:
0x55D004a30b4958f84df134a8082C0082c1923551

Checksum:
ba62deaafd161d4c3f54796e67e2c279bb97307d

Owner: -
0xf46e65701d892Bd3a67B5Fe909C50359394d0415

TOKEN OVERVIEW

Fees:

Buy Fees: 0-8%

Sell Fees: 0-8 %

Transfer Fees: 0%

Fees Privilige: Owner

Ownership : Owned

Minting: No mint function

Max Tx Amount/ Max Wallet Amount: none

Blacklist: No

Other Priviliges: - changing swap threshold

- changing fees
- modifying swap settings
- enabling trades
- initial distribution of tokens

AUDIT METHODOLOGY

The auditing process will follow a routine as special considerations by Auditace:

- Review of the specifications, sources, and instructions provided to Auditace to make sure the contract logic meets the intentions of the client without exposing the user's funds to risk.

- Manual review of the entire codebase by our experts, which is the process of reading source code line-by-line in an attempt to identify potential vulnerabilities.

- Specification comparison is the process of checking whether the code does what the specifications, sources, and instructions provided to Auditace describe.

- Test coverage analysis determines whether the test cases are covering the code and how much code isexercised when we run the test cases.

- Symbolic execution is analysing a program to determine what inputs cause each part of a program to execute.

- Reviewing the codebase to improve maintainability, security, and control based on the established industry and academic practices.

VULNERABILITY CHECKLIST

- ✓ Return values of low-level calls
- ✓ Private modifier
- ✓ Multiple Sends
- ✓ Using Suicide
- ✓ Gas Limitand Loops
- ✓ Address hardcoded
- ✓ Exception Disorder
- ✓ Using inline assembly
- ✓ Divide before multiply
- ✓ Missing Zero Address Validation
- ✓ Compiler version not fixed
- ✓ **Gasless Send**
- ✓ Using block.timestamp
- ✓ Re-entrancy
- ✓ Tautology or contradiction
- ✓ Timestamp Dependence
- ✓ Revert/require functions
- ✓ Use of tx.origin
- ✓ Integer overflow/underflow
- ✓ Dangerous strict equalities
- ✓ Using SHA3
- ✓ Using throw

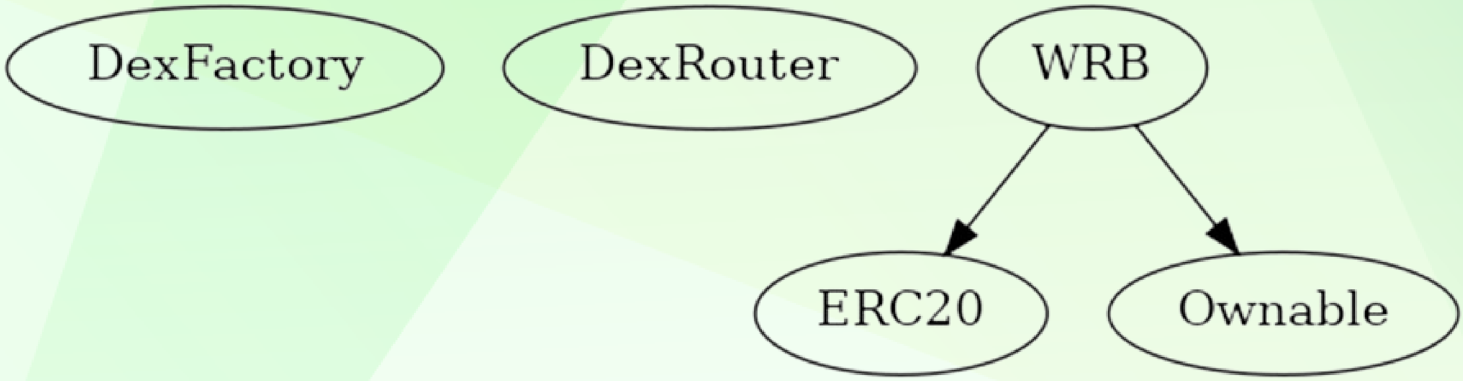
CLASSIFICATION OF RISK

Severity	Description
◆ Critical	These vulnerabilities could be exploited easily and can lead to asset loss, data loss, asset, or data manipulation. They should be fixed right away.
◆ High-Risk	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.
◆ Medium-Risk	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.
◆ Low-Risk	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.
◆ Gas Optimization /Suggestion	A vulnerability that has an informational character but is not affecting any of the code.

Findings

Severity	Found
◆ Critical	0
◆ High-Risk	0
◆ Medium-Risk	0
◆ Low-Risk	0
◆ Gas Optimization / Suggestions	1

INHERITANCE TREE



POINTS TO NOTE

- Owner is not able to set buy/sell taxes over 8%
- Owner is not ablet o set transfer taxes (0% forever)
- Owner is not able to set max buy/sell/transfer/hold amount
- Owner is not able to blacklist an arbitrary wallet
- Owner is not able to mint new tokens
- Owner is not able to disable trades

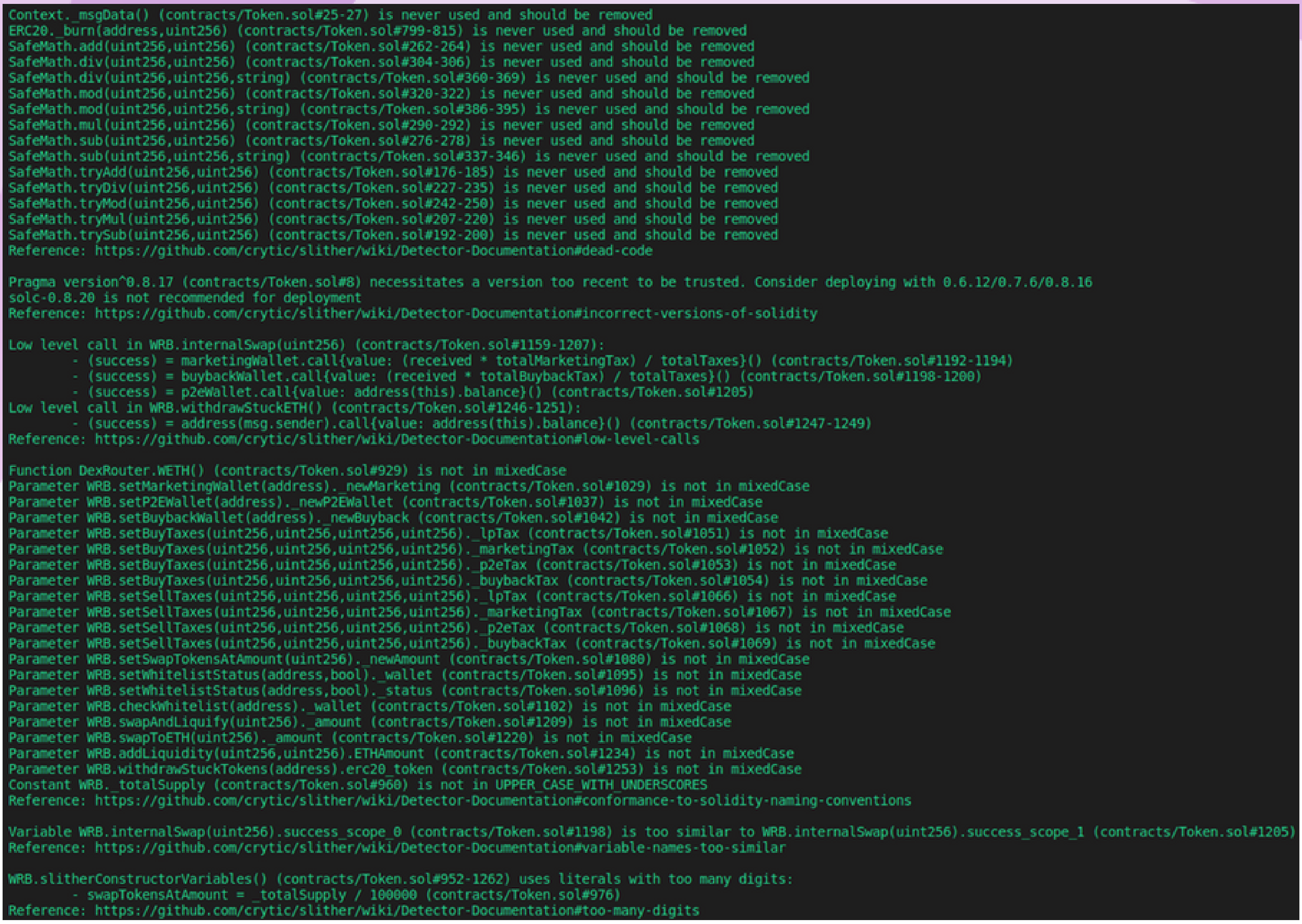
CONTRACT ASSESMENT

```
|  Contract  |        Type        |       Bases      |                  |                 |
|:----------:|:-------------------:|:----------------:|:----------------:|:---------------:|
|     └      |  **Function Name**  |  **Visibility**  |  **Mutability**  |  **Modifiers**  |
||||||
| **DexFactory** | Interface |  |||
| └ | createPair | External ❗️ | 🛑  |NO❗️ |
||||||
| **DexRouter** | Interface |  |||
| └ | factory | External ❗️ |   |NO❗️ |
| └ | WETH | External ❗️ |   |NO❗️ |
| └ | addLiquidityETH | External ❗️ |  💵 |NO❗️ |
| └ | swapExactTokensForETHSupportingFeeOnTransferTokens | External ❗️ | 🛑  |NO❗️ |
||||||
| **WRB** | Implementation | ERC20, Ownable |||
| └ | <Constructor> | Public ❗️ | 🛑  | ERC20 |
| └ | enableTrading | External ❗️ | 🛑  | onlyOwner |
| └ | setMarketingWallet | External ❗️ | 🛑  | onlyOwner |
| └ | setP2EWallet | External ❗️ | 🛑  | onlyOwner |
| └ | setBuybackWallet | External ❗️ | 🛑  | onlyOwner |
| └ | setBuyTaxes | External ❗️ | 🛑  | onlyOwner |
| └ | setSellTaxes | External ❗️ | 🛑  | onlyOwner |
| └ | setSwapTokensAtAmount | External ❗️ | 🛑  | onlyOwner |
| └ | toggleSwapping | External ❗️ | 🛑  | onlyOwner |
| └ | setWhitelistStatus | External ❗️ | 🛑  | onlyOwner |
| └ | checkWhitelist | External ❗️ |   |NO❗️ |
| └ | _takeTax | Internal 🔒 | 🛑  | |
| └ | _transfer | Internal 🔒 | 🛑  | |
| └ | internalSwap | Internal 🔒 | 🛑  | |
| └ | swapAndLiquify | Internal 🔒 | 🛑  | |
| └ | swapToETH | Internal 🔒 | 🛑  | |
| └ | addLiquidity | Private 🔐 | 🛑  | |
| └ | withdrawStuckETH | External ❗️ | 🛑  | onlyOwner |
| └ | withdrawStuckTokens | External ❗️ | 🛑  | onlyOwner |
| └ | <Receive Ether> | External ❗️ |  💵 |NO❗️ |

### Legend

|  Symbol  |  Meaning  |
|:--------:|-----------|
|    🛑    | Function can modify state |
|    💵    | Function is payable |
```

STATIC ANALYSIS



```
Context._msgData() (contracts/Token.sol#25-27) is never used and should be removed
ERC20._burn(address,uint256) (contracts/Token.sol#799-815) is never used and should be removed
SafeMath.add(uint256,uint256) (contracts/Token.sol#262-264) is never used and should be removed
SafeMath.div(uint256,uint256) (contracts/Token.sol#304-306) is never used and should be removed
SafeMath.div(uint256,uint256,string) (contracts/Token.sol#360-369) is never used and should be removed
SafeMath.mod(uint256,uint256) (contracts/Token.sol#320-322) is never used and should be removed
SafeMath.mod(uint256,uint256,string) (contracts/Token.sol#386-395) is never used and should be removed
SafeMath.mul(uint256,uint256) (contracts/Token.sol#290-292) is never used and should be removed
SafeMath.sub(uint256,uint256) (contracts/Token.sol#276-278) is never used and should be removed
SafeMath.sub(uint256,uint256,string) (contracts/Token.sol#337-346) is never used and should be removed
SafeMath.tryAdd(uint256,uint256) (contracts/Token.sol#176-185) is never used and should be removed
SafeMath.tryDiv(uint256,uint256) (contracts/Token.sol#227-235) is never used and should be removed
SafeMath.tryMod(uint256,uint256) (contracts/Token.sol#242-250) is never used and should be removed
SafeMath.tryMul(uint256,uint256) (contracts/Token.sol#207-220) is never used and should be removed
SafeMath.trySub(uint256,uint256) (contracts/Token.sol#192-200) is never used and should be removed
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#dead-code

Pragma version^0.8.17 (contracts/Token.sol#8) necessitates a version too recent to be trusted. Consider deploying with 0.6.12/0.7.6/0.8.16
solc-0.8.20 is not recommended for deployment
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#incorrect-versions-of-solidity

Low level call in WRB.internalSwap(uint256) (contracts/Token.sol#1159-1207):
        - (success) = marketingWallet.call{value: (received * totalMarketingTax) / totalTaxes}() (contracts/Token.sol#1192-1194)
        - (success) = buybackWallet.call{value: (received * totalBuybackTax) / totalTaxes}() (contracts/Token.sol#1198-1200)
        - (success) = p2eWallet.call{value: address(this).balance}() (contracts/Token.sol#1205)
Low level call in WRB.withdrawStuckETH() (contracts/Token.sol#1246-1251):
        - (success) = address(msg.sender).call{value: address(this).balance}() (contracts/Token.sol#1247-1249)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#low-level-calls

Function DexRouter.WETH() (contracts/Token.sol#929) is not in mixedCase
Parameter WRB.setMarketingWallet(address)._newMarketing (contracts/Token.sol#1029) is not in mixedCase
Parameter WRB.setP2EWallet(address)._newP2EWallet (contracts/Token.sol#1037) is not in mixedCase
Parameter WRB.setBuybackWallet(address)._newBuyback (contracts/Token.sol#1042) is not in mixedCase
Parameter WRB.setBuyTaxes(uint256,uint256,uint256,uint256)._lpTax (contracts/Token.sol#1051) is not in mixedCase
Parameter WRB.setBuyTaxes(uint256,uint256,uint256,uint256)._marketingTax (contracts/Token.sol#1052) is not in mixedCase
Parameter WRB.setBuyTaxes(uint256,uint256,uint256,uint256)._p2eTax (contracts/Token.sol#1053) is not in mixedCase
Parameter WRB.setBuyTaxes(uint256,uint256,uint256,uint256)._buybackTax (contracts/Token.sol#1054) is not in mixedCase
Parameter WRB.setSellTaxes(uint256,uint256,uint256,uint256)._lpTax (contracts/Token.sol#1066) is not in mixedCase
Parameter WRB.setSellTaxes(uint256,uint256,uint256,uint256)._marketingTax (contracts/Token.sol#1067) is not in mixedCase
Parameter WRB.setSellTaxes(uint256,uint256,uint256,uint256)._p2eTax (contracts/Token.sol#1068) is not in mixedCase
Parameter WRB.setSellTaxes(uint256,uint256,uint256,uint256)._buybackTax (contracts/Token.sol#1069) is not in mixedCase
Parameter WRB.setSwapTokensAtAmount(uint256)._newAmount (contracts/Token.sol#1080) is not in mixedCase
Parameter WRB.setWhitelistStatus(address,bool)._wallet (contracts/Token.sol#1095) is not in mixedCase
Parameter WRB.setWhitelistStatus(address,bool)._status (contracts/Token.sol#1096) is not in mixedCase
Parameter WRB.checkWhitelist(address)._wallet (contracts/Token.sol#1102) is not in mixedCase
Parameter WRB.swapAndLiquify(uint256)._amount (contracts/Token.sol#1209) is not in mixedCase
Parameter WRB.swapToETH(uint256)._amount (contracts/Token.sol#1220) is not in mixedCase
Parameter WRB.addLiquidity(uint256,uint256).ETHAmount (contracts/Token.sol#1234) is not in mixedCase
Parameter WRB.withdrawStuckTokens(address).erc20_token (contracts/Token.sol#1253) is not in mixedCase
Constant WRB._totalSupply (contracts/Token.sol#960) is not in UPPER_CASE_WITH_UNDERSCORES
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#conformance-to-solidity-naming-conventions

Variable WRB.internalSwap(uint256).success_scope_0 (contracts/Token.sol#1198) is too similar to WRB.internalSwap(uint256).success_scope_1 (contracts/Token.sol#1205)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#variable-names-too-similar

WRB.slitherConstructorVariables() (contracts/Token.sol#952-1262) uses literals with too many digits:
        - swapTokensAtAmount = _totalSupply / 100000 (contracts/Token.sol#976)
Reference: https://github.com/crytic/slither/wiki/Detector-Documentation#too-many-digits
```

Result => A static analysis of contract’s source code has been performed using slither,

No major issues were found in the output

FUNCTIONAL TESTING

Router (PCS V2):
0xD99D1c33F9fC3444f8101754aBC46c52416550D1

All the functionalities have been tested, no issues were found

1- Adding liquidity (passed):
https://testnet.bscscan.com/tx/0xd7374804b6b01f35990e4371124d1d71b172ef224613e5e566eacbbb0b1c5841

2- Buying when excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0x74d36a45811057a36af202d1703bb387b1c4bc2541525f3cd191002eafa05fa3

3- Selling when excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0xbf1f8fc351efee2710e8415d3aee97c6cca5330d954b4037225adbd4252a4487

4- Transferring when excluded (0% tax) (passed):
https://testnet.bscscan.com/tx/0x76d7d3129209476a0f57fb49329b8775dc6815ef3b0b22973469a9786b00db4e

5- Buying when not excluded from fees (0-8% tax) (passed):
https://testnet.bscscan.com/tx/0x68d7bd4a4174147270d674734e22dbc6ed7387075e735a11116feb6c637b75d3

6- Sellingwhen not excluded from fees (0-8% tax) (passed):
https://testnet.bscscan.com/tx/0x5421199e4778373c1e1b274af54f25104784fc83542f2dc5e401ee84ebd68624

FUNCTIONAL TESTING

7- Transferring from a regular wallet (0% tax) (passed):
https://testnet.bscscan.com/tx/0x3cc7392c984c017632fbd4afa50efbefe542342dcca27cd3149cad15c6ca1280

8-Internal swap (BNB Fees and auto-liquidity) ((passed):
https://testnet.bscscan.com/tx/0x5421199e4778373c1e1b274af54f25104784fc83542f2dc5e401ee84ebd68624

ISSUES FOUND

Centralization – Trades must be enabled

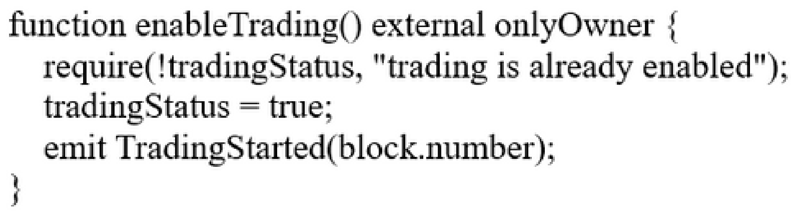
Severity: **Informational**

function: EnableTrading

Status: Not Resolved

Overview:

The smart contract owner must enable trades for holders. If trading remain disabled, no one would be able to buy/sell/transfer tokens.



```
function enableTrading() external onlyOwner {
    require(!tradingStatus, "trading is already enabled");
    tradingStatus = true;
    emit TradingStarted(block.number);
}
```

Suggestion

To mitigate this centralization issue, we propose the following options:

1. Renounce Ownership: Consider relinquishing control of the smart contract by renouncing ownership. This would remove the ability for a single entity to manipulate the router, reducing centralization risks.
2. Multi-signature Wallet: Transfer ownership to a multi-signature wallet. This would require multiple approvals for any changes to the mainRouter, adding an additional layer of security and reducing the centralization risk.
3. Transfer ownership to a trusted and valid 3rd party in order to guarantee enabling of the trades

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