CRACKEN

Smart Contract Security Audit

Project: JD

Jun 28, 2023

Contract Address

0x3b1F0ac5E406B4838Db9eDFA41b6119Ac8df86DE

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The review does not address the compiler layer, any other areas beyond the programming language, or other programming aspects that could present security risks. If the audited source files are smart contract files, risks or issues introduced by using data feeds from off-chain sources are not extended by this review either.

Audit Review

The source code of the JD was audited in order to acquire a clear impression of how the project was implemented. The Cracken Tech audit team conducted in-depth research, analysis, and scrutiny, resulting in a series of observations. A detailed list of each issue found, and vulnerabilities in the source code will be included in the audit report. The problems and potential solutions are given in this report, we will identify common sources for such problems and comments for improvement.

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

- Review of the specifications, sources, and instructions provided to Cracken 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 Cracken describe.
- Test coverage analysis determines whether the test cases are covering the code and how much code is exercised when we run the test cases.
- Symbolic execution is analyzing 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.

Project Review

Token Summary

Parameter	Result
Token Name	**JD**
Token Symbol	JD
Token Decimal	18
Total Supply	18,888
Platform	BSC
Buy Tax Fee	2.1%
Sell Tax Fee	2.1%
Contract Creation Date	Jun 28, 2023
Liquidity Status	Not Available
Liquidity Lockup Time	Not Available
Compiler Version	v0.8.17+commit.8df45f5f
Optimization	No with 200 runs
Contract Address	0x3b1F0ac5E406B4838Db9eDFA41b6119Ac8df86DE
Deployer Address	0x89f16be97bd8ec0ae1b1f91506f3544615fe5234
Owner Address	0x89f16be97bd8ec0ae1b1f91506f3544615fe5234

Source Code

CRACKEN was commissioned by JD to perform an audit based on the following smart contract:
https://bscscan.com/address/0x3b1f0ac5e406b4838db9edfa41b6119ac8df86de#code

Smart Contract Vulnerability Checks

Vulnerability	Auto-Scan	Manual-Scan	Result
Unencrypted Private Data On-Chain	Complete	Complete	Low / No Risk
Code With No Effects	Complete	Complete	Low / No Risk
Message call with hardcoded gas amount	Complete	Complete	Low / No Risk
Hash Collisions with Multiple Variable Length Arguments	Complete	Complete	Low / No Risk
Unexpected Ether balance	Complete	Complete	Low / No Risk
Presence of unused variables	Complete	Complete	Low / No Risk
Right-To-Left-Override control character (U+202E)	Complete	Complete	Low / No Risk
Typographical Error	Complete	Complete	Low / No Risk
DoS With Block Gas Limit	Complete	Complete	Low / No Risk
Arbitrary Jump with Function Type Variable	Complete	Complete	Low / No Risk
Insufficient Gas Grieving	Complete	Complete	Low / No Risk
Incorrect Inheritance Order	Complete	Complete	Low / No Risk
Write to Arbitrary Storage Location	Complete	Complete	Low / No Risk
Requirement Violation	Complete	Complete	Low / No Risk
Missing Protection against Signature Replay Attacks	Complete	Complete	Low / No Risk
Weak Sources of Randomness from Chain Attributes	Complete	Complete	Low / No Risk
Authorization through tx. origin	Complete	Complete	Low / No Risk
Delegate call to Untrusted Callee	Complete	Complete	Low / No Risk

Vulnerability	Auto-Scan	Manual-Scan	Result
Use of Deprecated Solidity Functions	Complete	Complete	Low / No Risk
Assert Violation	Complete	Complete	Low / No Risk
Reentrancy	Complete	Complete	Low / No Risk
Unprotected SELF-DESTRUCT Instruction	Complete	Complete	Low / No Risk
Unprotected Ether Withdrawal	Complete	Complete	Low / No Risk
Outdated Compiler Version	Complete	Complete	Low / No Risk
Integer Overflow and Underflow	Complete	Complete	Low / No Risk
Function Default Visibility	Complete	Complete	Low / No Risk

Manual Code Review

Classification of Issues

Severity	Description
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.
Informational	A vulnerability that has an informational character but is not affecting any of the code.

Findings

Severity	Found
High-Risk	2
Medium-Risk	0
Low-Risk	0
Informational	0
Total	2

🔴 **High-Risk: functions make cause the rug or scam project. Must be fixed.**

Set max buy / sell tax fee

Description:

The owner can change the buy & sell fees up to 100%

[HIGH-RISK]

```
function setBuyFee( uint256 fundFee,uint256 burnfee) external onlyOwner
{

        _fundFee = fundFee;
        _burnfee = burnfee;
 }

 function setSellFee(uint256 lpDividendFee) external onlyOwner {
        _LPDividendFee = lpDividendFee;
 }
```

Recommendation:

We recommend adding a requirement to limit the max fee amount.

High-Risk: functions make cause the rug or scam project. Must be fixed.

Set max Tx Amount function

Description:

The owner can set max Tx amount without a limit.

[HIGH-RISK]

```
function setLimitAmount(uint256 amount) external onlyOwner {

        _limitAmount = amount;

}
```

Recommendation:

We recommend that the owner should limit the max tx amount.

Privileged Functions

onlyOwner

Function Name	Parameters	Visibility
SetBlackLp	address addr,uint256 _value	External
calLPAmount	_lastTxAccount	Public
approve	address spender, uint256 addedValue	Public
batchSetFeeWhiteList	address [] memory addr, bool enable	Public
claimBalance	None	External
setBuyFee	uint256 fundFee,uint256 burnfee	External
setExcludeHolder	address addr, bool enable	External
setFeeWhiteList	address addr, bool enable	External
setFundAddress	address addr	External
setHolderCondition	uint256 amount	External
setHolderRewardCondition	uint256 amount	External
setLimitAmount	uint256 total	External
setMinTotal	uint256 total	External
setNumToSell	uint256 total	External
setProgressBlockDebt	uint256 progressBlockDebt	External
setSellFee	uint256 lpDividendFee	External
setSwapPairList	address addr, bool enable	External
renounceOwnership	address sender,address recipient,uint256 amount	Public
transferOwnership	address newOwner	Public

Contract Ownership

The contract ownership of JD is not currently renounced. The ownership of the contract grants special powers to the protocol creators, making them the sole addresses that can call sensible owner able functions that may alter the state of the protocol.

The current owner is the address 0x89F16BE97BD8eC0ae1b1f91506F3544615fE5234 which can be viewed: HERE

The owner wallet has the power to call the functions displayed on the privileged functions list above, if the owner wallet is compromised these privileges could be exploited.

We recommend the team renounce ownership at the right time if possible, or gradually migrate to a time lock with governing functionalities in respect of transparency and safety considerations.

Liquidity Overview

Liquidity Information

Parameter	Result
Pair Address	Not Available
JD Reserves	0.00 JD
BNB Reserves	0.00 BNB
Liquidity Value	$0.00 USD
Liquidity Ownership	The token does not have liquidity at the moment of the audit

Tokenomics

Rank	Address	Quantity (Token)	Percentage
1	0xd0b7df0eed2bdf95eb190bcf056335bbf39d6e32	18,888	100.0000%

Social Media Check

Social Media Type	Link	Result
Twitter	https://twitter.com/JDLM66/	Checked
Telegram	https://t.me/JDLM66/	Checked

Audit Conclusion

- The owner cannot mint new tokens
- The owner cannot pause trading
- The owner cannot blacklist users
- **The owner can set the max transaction amount without a limit [High-Risk].**
- **The owner can change the buy/sell fee up to 100% [High-Risk].**

  (The fees cannot be changed if the owner renounced the ownership)