



# SMART CONTRACT SECURITY AUDIT

Crypto Nodes

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Website: [soken.io](https://soken.io)

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# Disclaimer

This is a comprehensive report based on our automated and manual examination of cybersecurity vulnerabilities and framework flaws. We took into consideration smart contract based algorithms, as well. Reading the full analysis report is essential to build your understanding of project's security level. It is crucial to take note, though we have done our best to perform this analysis and report, that you should not rely on the our research and cannot claim what it states or how we created it. Before making any judgments, you have to conduct your own independent research. We will discuss this in more depth in the following disclaimer - please read it fully.

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Security analysis is based only on the smart contracts. No applications or operations were reviewed for security. No product code has been reviewed.

# Procedure

## Our analysis contains following steps:

1. Project Analysis;
2. Manual analysis of smart contracts:
  - Deploying smart contracts on any of the network(Ropsten/Rinkeby) using Remix IDE
  - Hashes of all transaction will be recorded
  - Behaviour of functions and gas consumption is noted, as well.
3. Unit Testing:
  - Smart contract functions will be unit tested on multiple parameters and under multiple conditions to ensure that all paths of functions are functioning as intended.
  - In this phase intended behaviour of smart contract is verified.
  - In this phase, we would also ensure that smart contract functions are not consuming unnecessary gas.
  - Gas limits of functions will be verified in this stage.
4. Automated Testing:
  - Mythril
  - Oyente
  - Manticore
  - Solgraph

# Terminology

**We categorize the finding into 4 categories based on their vulnerability:**

- Low-severity issue — less important, must be analyzed
- Medium-severity issue — important, needs to be analyzed and fixed
- High-severity issue — important, might cause vulnerabilities, must be analyzed and fixed
- Critical-severity issue — serious bug causes, must be analyzed and fixed.

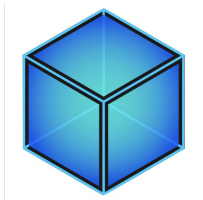
# Limitations

The security audit of Smart Contract cannot cover all vulnerabilities. Even if no vulnerabilities are detected in the audit, there is no guarantee that future smart contracts are safe. Smart contracts are in most cases safeguarded against specific sorts of attacks. In order to find as many flaws as possible, we carried out a comprehensive smart contract audit. Audit is a document that is not legally binding and guarantees nothing.

# Token Contract Details for 21.04.2022

Contract Name: **Nodes.sol, coin.sol**

## Audit Details



Project Name: **Crypto Nodes**

Language: **Solidity**

Compiler Version: **v0.8.0**

Blockchain: **Avalanche**

## About the project

CryptoNodes - It is a unique Crypto Protocol DaaS on the Avalanche Blockchain.a

Crypto Nodes are creating a very EasyToFollow and stable project. The tokenomics of the CryptoNodes project allows investors to gain guaranteed passive income using Nodes systems. Node - is a result of blocking tokens in exchange for a lifetime income, generated by a Smart contract. With CryptoNodes you will have to block 10 \$CRND, by transferring your \$CRND tokens to the Smart Contract, which will, thereby, generate an everyday payment in \$CRND for you. Which guarantees you stable high-yielding rewards.

# CRND Token Distribution

- **65% - Reward Pool**
- **15% - Multi signature treasury wallet**
- **10% - Liquidity Pool**
- **5% - Marketing**
- **5% - Development Team**

## Social Profiles

Project Website: <https://cryptonodes.finance/#/>

Project Twitter: <https://twitter.com/Crypt0Nodes>

Project Discord: <https://discord.com/invite/cryptonodes>

# Contract Function Details

## + Nodes.sol

### +CryptoNodes

- [Pub] transferOwner
- [Pub] addBlacklistMember
- [Pub] removeBlacklistMember
- [Pub] checkBlacklistMember
- [Pub] stopNodes
- [Pub] createNodes
- [Pub] upgradeToLvl2
- [Pub] totalNodesLvl1
- [Pub] totalNodesLvl2
- [Pub] checkNodesLvl1
- [Pub] checkNodesLvl2
- [Pub] checkNodesMoney
- [Pub] claimNodesMoney
- [Pub] checkNFT
- [Pub] changeNFTContract
- [Pub] withdrawToken
- [Pub] withdraw

## + coin.sol

### +CryptoNodes is ERC20, AI

- [Ext] decimals
- [Ext] TaxDistribution
- [Pub] decimals
- [Pub] transfer
- [Pub] transferFrom
- [Pub] changeTax
- [Pub] addBlacklistMember
- [Pub] removeBlacklistMember
- [Pub] checkBlacklistMember
- [Pub] addNoTaxMember
- [Pub] removeNoTaxMember
- [Pub] checkNoTaxMember
- [Pub] transferOwner
- [Pub] changeLiquidityPool
- [Pub] addPresaleContract
- [Pub] addGameContract
- [Pub] addTraderJoe
- [Int] TaxDistributionFrom
- [Pub] TaxDistribution



# Vulnerabilities checking

Issue Description	Checking Status
Compiler Errors	Completed
Delays in Data Delivery	Completed
Re-entrancy	Completed
Transaction-Ordering Dependence	Completed
Timestamp Dependence	Completed
Shadowing State Variables	Completed
DoS with Failed Call	Completed
DoS with Block Gas Limit	Completed
Outdated Compiler Version	Completed
Assert Violation	Completed
Use of Deprecated Solidity Functions	Completed
Integer Overflow and Underflow	Completed
Function Default Visibility	Completed
Malicious Event Log	Completed
Math Accuracy	Completed
Design Logic	Completed
Fallback Function Security	Completed
Cross-function Race Conditions	Completed
Safe Zeppelin Module	Completed

# Security Considerations

## 1) USE OF FLOATING PRAGMA : Nodes.sol, coin.sol

Solidity source files indicate the versions of the compiler they can be compiled with using a pragma directive at the top of the solidity file. This can either be a floating pragma or a specific compiler version. The contract was found to be using a floating pragma which is not considered safe as it can be compiled with all the versions described, i.e., *pragma solidity ^0.4.17; not recommended -> compiles with 0.4.17 and above* *pragma solidity 0.8.12; recommended -> compiles with 0.8.12 only*

# Conclusion

Smart contracts are free from any medium or high-severity issues.

NOTE: Please check the disclaimer above and note, that audit makes no statements or warranties on business model, investment attractiveness or code sustainability.

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