freshcoins

SMART CONTRACT CODE REVIEW AND SECURITY ANALYSIS REPORT

N

N Protocol

$N

15/12/2022

TOKEN OVERVIEW

Fees

• **Buy fees:**   3%

• **Sell fees:**   3%

Fees privileges

• **Can change fees up to 99%**

Ownership

• **Owned**

Minting

• **No mint function**

Max Tx Amount / Max Wallet Amount

• **Can change max tx amount and max wallet amount at a very low value**

Blacklist

• **Blacklist function detected**

Other privileges

• **Can exclude / include from fees**

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DISCLAIMER

The information provided on this analysis document is only
for general information and should not be used as a reason to invest.

FreshCoins Team will take no payment for manipulating the results
of this audit.

The score and the result will stay on this project page information
on our website https://freshcoins.io
FreshCoins Team does not guarantees that a project will not sell off
team supply, or any other scam strategy (RUG or Honeypot etc)

INTRODUCTION

FreshCoins (Consultant) was contracted by
N Protocol (Customer) to conduct a Smart Contract Code Review and
Security Analysis.

0x36c86a1c23f4D17f3B3F28B7266cD7DB1D74A0B4

Network: **Ethereum (ETH)**

This report presents the findings of the security assessment of
Customer's smart contract and its code review conducted on 15/12/2022

AUDIT OVERVIEW

54

Security Score
HIGH RISK

93
Static Scan
Automatic scanning for common vulnerabilities

46
ERC Scan
Automatic checks for ERC's conformance

3 High

2 Medium

0 Low

0 Optimizations

0 Informational

3

No.	Issue description	Checking Status
1	Compiler Errors / Warnings	Passed
2	Reentrancy and Cross-function	Passed
3	Front running	Passed
4	Timestamp dependence	Passed
5	Integer Overflow and Underflow	Passed
6	Reverted DoS	Passed
7	DoS with block gas limit	Passed
8	Methods execution permissions	Passed
9	Exchange rate impact	Passed
10	Malicious Event	Passed
11	Scoping and Declarations	Passed
12	Uninitialized storage pointers	Passed
13	Design Logic	Passed
14	Safe Zeppelin module	Passed

OWNER PRIVILEGES

● Contract owner can't mint tokens after initial contract deploy

● Contract owner can exclude / include an address from transactions

```solidity
function blockBots(address[] memory bots_) public onlyOwner {
    for (uint256 i = 0; i < bots_.length; i++) {
        bots[bots_[i]] = true;
    }
}

function unblockBot(address notbot) public onlyOwner {
    bots[notbot] = false;
}
```

● Contract owner can exclude / include wallet(s) from tax

```solidity
function excludeMultipleAccountsFromFees(address[] calldata accounts, bool excluded) public onlyOwner {
    for(uint256 i = 0; i < accounts.length; i++) {
        _isExcludedFromFee[accounts[i]] = excluded;
    }
}
```

● Contract owner can set max tx amount and max wallet amount at a a very low value

Recommendation: Threshold should be at least 1% of total supply

```solidity
function setMaxTxnAmount(uint256 amountPercent) public onlyOwner {
    require(amountPercent>0);
    _maxTxAmount = (_tTotal * amountPercent ) / 100;
}

function setMaxWalletSize(uint256 amountPercent) public onlyOwner {
    require(amountPercent>0);
    _maxWalletSize = (_tTotal * amountPercent ) / 100;
}
```

● Contract owner can enable / disable tx limitations and wallet limitations

```solidity
function removeLimits() external onlyOwner{
    _maxTxAmount = _tTotal;
    _maxWalletSize = _tTotal;
}
```

● Contract owner can change fees up to 99%

```solidity
function setFee(uint256 redisFeeOnBuy, uint256 redisFeeOnSell, uint256 taxFeeOnBuy, uint256 taxFeeOnSell)
public onlyOwner {
    require(redisFeeOnBuy >= 0 && redisFeeOnBuy <= 0, "Buy rewards must be between 0% and 0%");
    require(taxFeeOnBuy >= 0 && taxFeeOnBuy <= 99, "Buy tax must be between 0% and 99%");
    require(redisFeeOnSell >= 0 && redisFeeOnSell <= 0, "Sell rewards must be between 0% and 0%");
    require(taxFeeOnSell >= 0 && taxFeeOnSell <= 99, "Sell tax must be between 0% and 99%");

    _redisFeeOnBuy = redisFeeOnBuy;
    _redisFeeOnSell = redisFeeOnSell;
    _taxFeeOnBuy = taxFeeOnBuy;
    _taxFeeOnSell = taxFeeOnSell;

}
```

● Contract owner can change swap settings

```solidity
function setMinSwapTokensThreshold(uint256 swapTokensAtAmount) public onlyOwner {
    _swapTokensAtAmount = swapTokensAtAmount;
}

function toggleSwap(bool _swapEnabled) public onlyOwner {
    swapEnabled = _swapEnabled;
}
```

● Contract owner can enable / disable trade

```solidity
function setTrading(bool _tradingOpen) public onlyOwner {
    tradingOpen = _tradingOpen;
}
```

● Contract owner can renounce ownership

```solidity
function renounceOwnership() public virtual onlyOwner {
    emit OwnershipTransferred(_owner, address(0));
    _owner = address(0);
}
```

● Contract owner can transfer ownership

```solidity
function transferOwnership(address newOwner) public virtual onlyOwner {
    require(newOwner != address(0), "Ownable: new owner is the zero address");
    emit OwnershipTransferred(_owner, newOwner);
    _owner = newOwner;
}
```

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. The risk can be prevented by temporarily locking the contract or renouncing ownership.

CONCLUSION AND ANALYSIS

Smart Contracts within the scope were manually reviewed and analyzed with static tools.

Audit report overview contains all found security vulnerabilities and other issues in the reviewed code.

Found 3 HIGH issues during the first review.

TOKEN DETAILS

Details

Buy fees:	3%
Sell fees:	3%
Max TX:	1,000,000,000
Max Sell:	N/A

Honeypot Risk

Ownership:	Owned
Blacklist:	Detected
Modify Max TX:	Detected
Modify Max Sell:	Not detected
Disable Trading:	Detected

Others

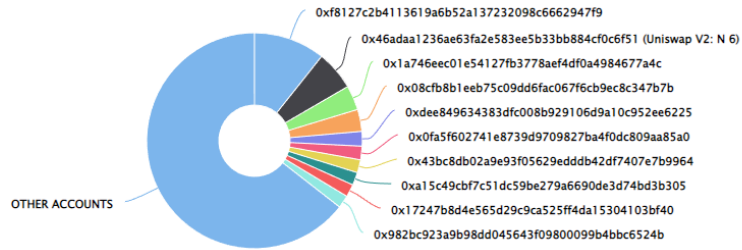|	
Liquidity:	N/A
Holders:	Clean

N TOKEN ANALYTICS
& TOP 10 TOKEN HOLDERS

The top 10 holders collectively own 35.54% (355,408,096.64 Tokens) of N Protocol | Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 309

N Protocol Top 10 Token Holders
Source: Etherscan.io

0xf8127c2b4113619a6b52a137232098c6662947f9
0x46adaa1236ae63fa2e583ee5b33bb884cf0c6f51 (Uniswap V2: N 6)
0x1a746eec01e54127fb3778aef4df0a4984677a4c
0x08cfb8b1eeb75c09dd6fac067f6cb9ec8c347b7b
0xdee849634383dfc008b929106d9a10c952ee6225
0x0fa5f602741e8739d9709827ba4f0dc809aa85a0
0x43bc8db02a9e93f05629edddb42df7407e7b9964
0xa15c49cbf7c51dc59be279a6690de3d74bd3b305
0x17247b8d4e565d29c9ca525ff4da15304103bf40
0x982bc923a9b98dd045643f09800099b4bbc6524b

OTHER ACCOUNTS

(A total of 355,408,096.64 tokens held by the top 10 accounts from the total supply of 1,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	0xf8127c2b4113619a6b52a137232098c6662947f9	107,007,008.871679081	10.7007%
2	Uniswap V2: N 6	59,264,917.606844817	5.9265%
3	0x1a746eec01e54127fb3778aef4df0a4984677a4c	36,996,290	3.6996%
4	0x08cfb8b1eeb75c09dd6fac067f6cb9ec8c347b7b	32,945,086.358573502	3.2945%
5	0xdee849634383dfc008b929106d9a10c952ee6225	21,899,290.191107035	2.1899%
6	0x0fa5f602741e8739d9709827ba4f0dc809aa85a0	20,326,703.157990616	2.0327%
7	0x43bc8db02a9e93f05629edddb42df7407e7b9964	19,465,656.629372121	1.9466%
8	0xa15c49cbf7c51dc59be279a6690de3d74bd3b305	19,216,815.871462814	1.9217%
9	0x17247b8d4e565d29c9ca525ff4da15304103bf40	19,208,219.077111916	1.9208%
10	0x982bc923a9b98dd045643f09800099b4bbc6524b	19,078,108.879356889	1.9078%

TECHNICAL DISCLAIMER

Smart contracts are deployed and executed on the blockchain platform. The platform, its programming language, and other software related to the smart contract can have its vulnerabilities that can lead to hacks. The audit can't guarantee the explicit security of the audited project / smart contract.