soken

SMART CONTRACT
SECURITY AUDIT

Scary Games

November, 2021

Website: 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 03.11.2021

Contract Name: **CoinToken**

Deployed address: **0x06d7645f4f483bb925db2094dD5fdb1f75B07D61**

Total Supply: **100,000,000**

Token Tracker: **SCY**

Decimals: **9**

Token holders: **1**

Transactions count: **1**

Top 100 holders dominance: **100%**

Audit Details

SCARY GAMES

Project Name: **Scary Games**

Language: **Solidity**

Compiler Version: **v0.8.4**

Blockchain: **BSC**

Social Profiles

Project Website: **https://scarygames.io/**

Project Twitter: **https://twitter.com/scaary_games**

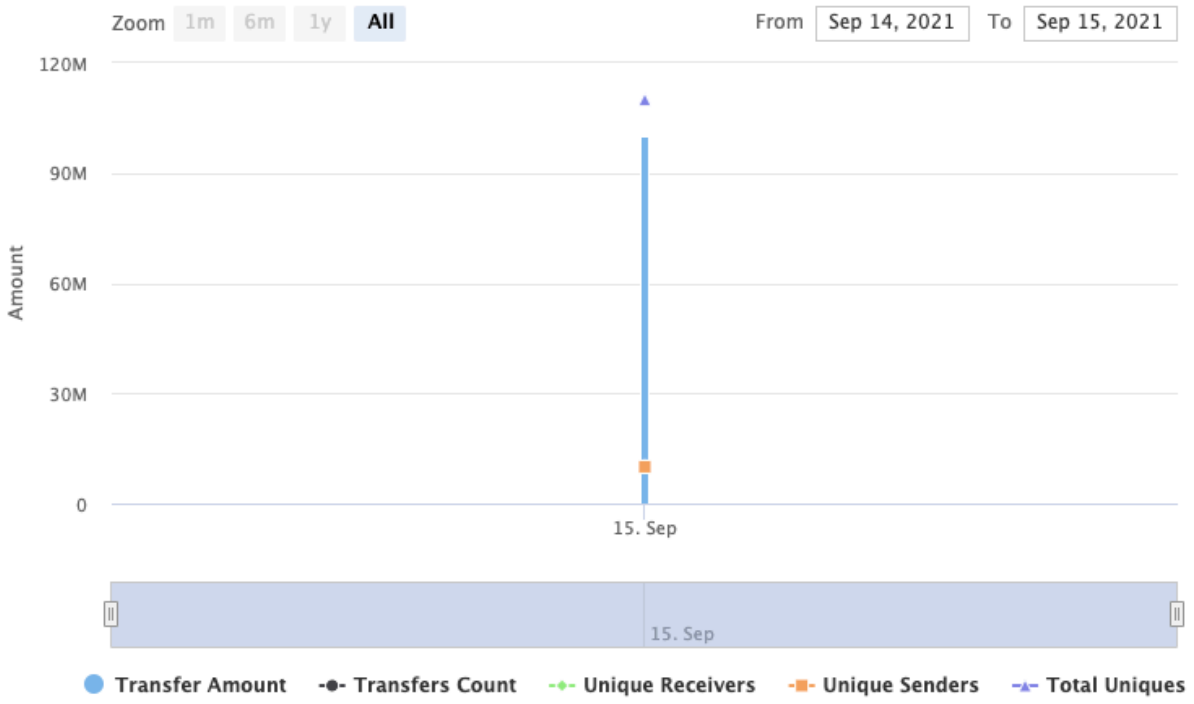
Project Telegram: **https://t.me/scarytoken**

Project Reddit: **https://www.reddit.com/r/Scary_Games/**

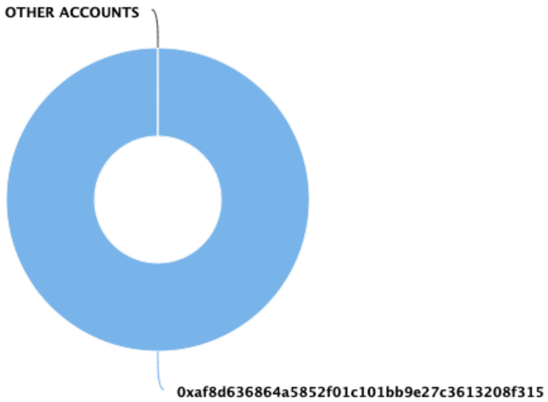
KYC Passed

CEO of Scary Games project has passed KYC verification on behalf of Soken team. All personal data received from audited company will remain private until any fraudulent activity will happen.

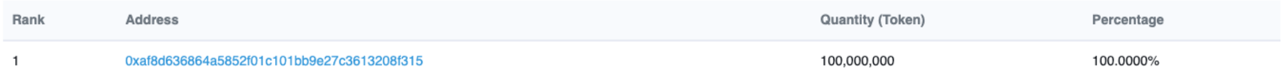
Token Analytics



SCY Token Distribution

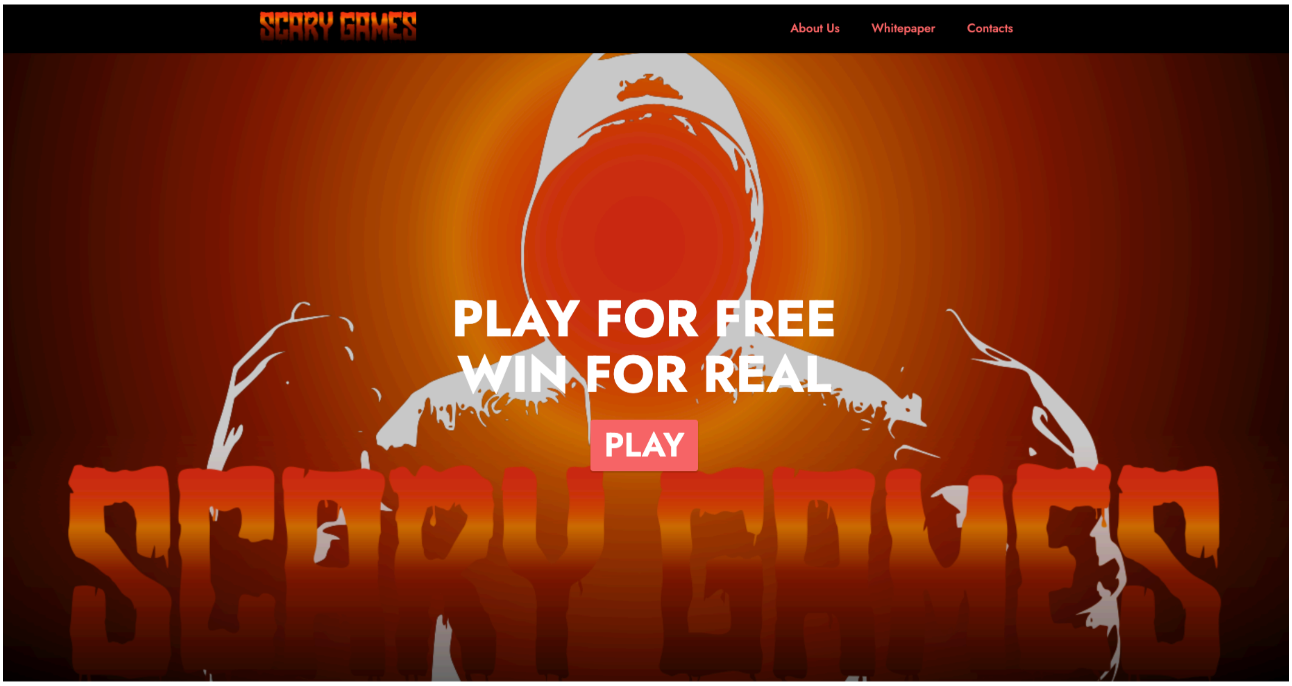


SCY Top 10 Holders



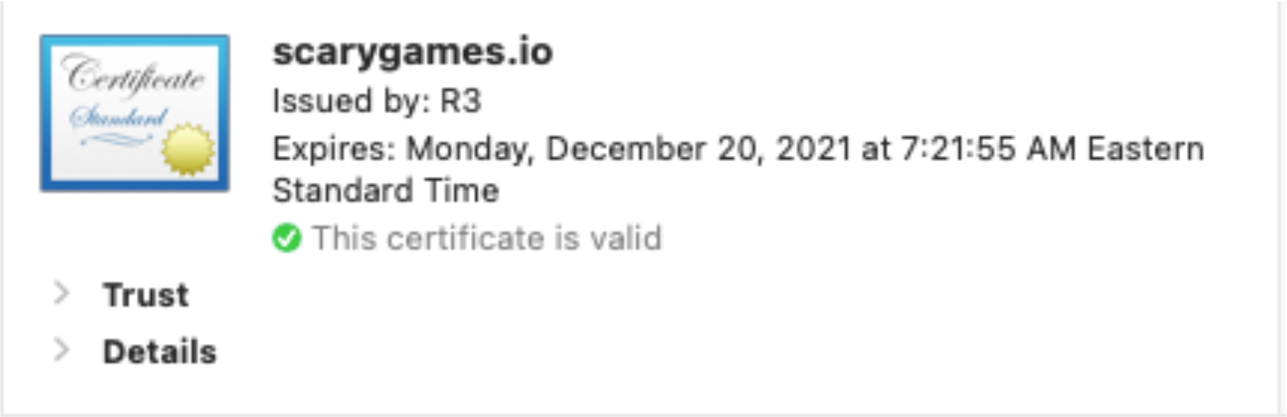
Rank	Address	Quantity (Token)	Percentage
1	0xaf8d636864a5852f01c101bb9e27c3613208f315	100,000,000	100.0000%

Project Website Overview



✓JavaScript errors hasn't been found.
✓Malware pop-up windows hasn't been detected.
✓No issues with loading elements, code, or stylesheets.

Project Website SSL Certification



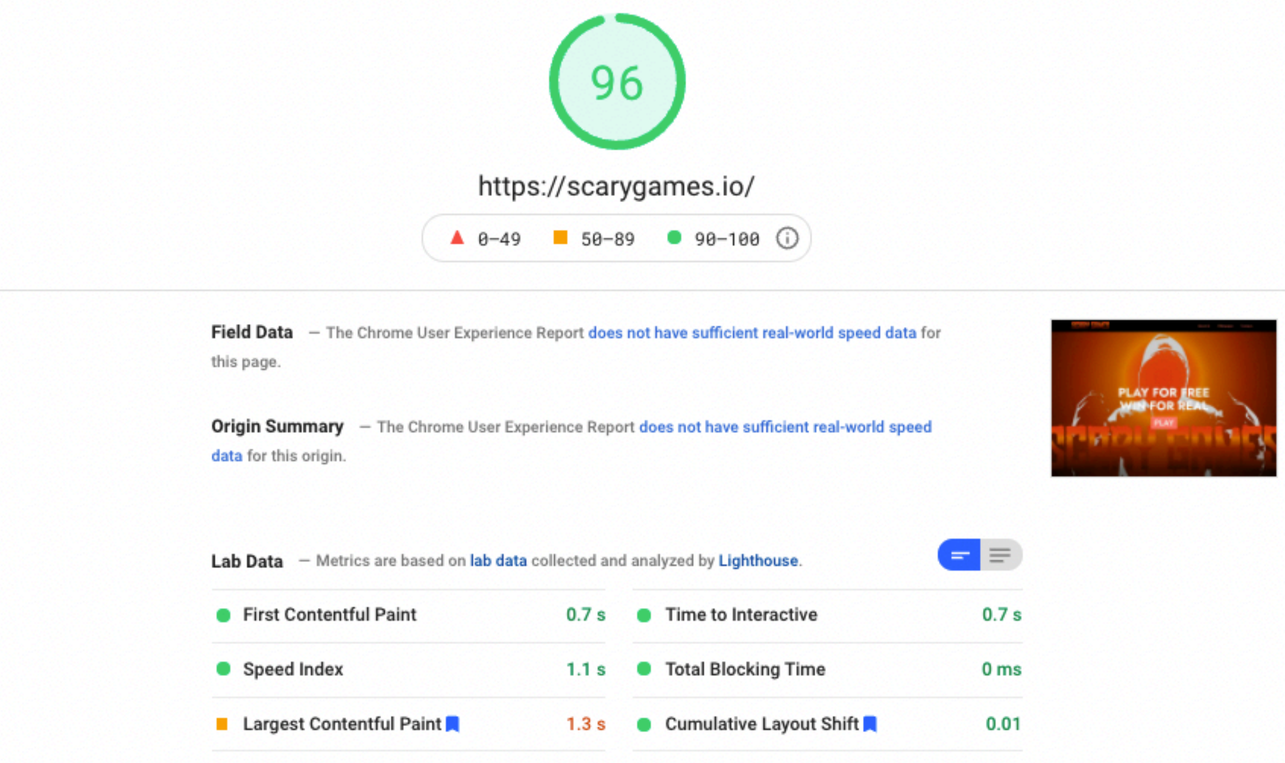
scarygames.io

Issued by: R3

Expires: Monday, December 20, 2021 at 7:21:55 AM Eastern Standard Time

✓ This certificate is valid

Project Website Optimization for Desktop



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https://scarygames.io/

▲ 0–49 ■ 50–89 ● 90–100

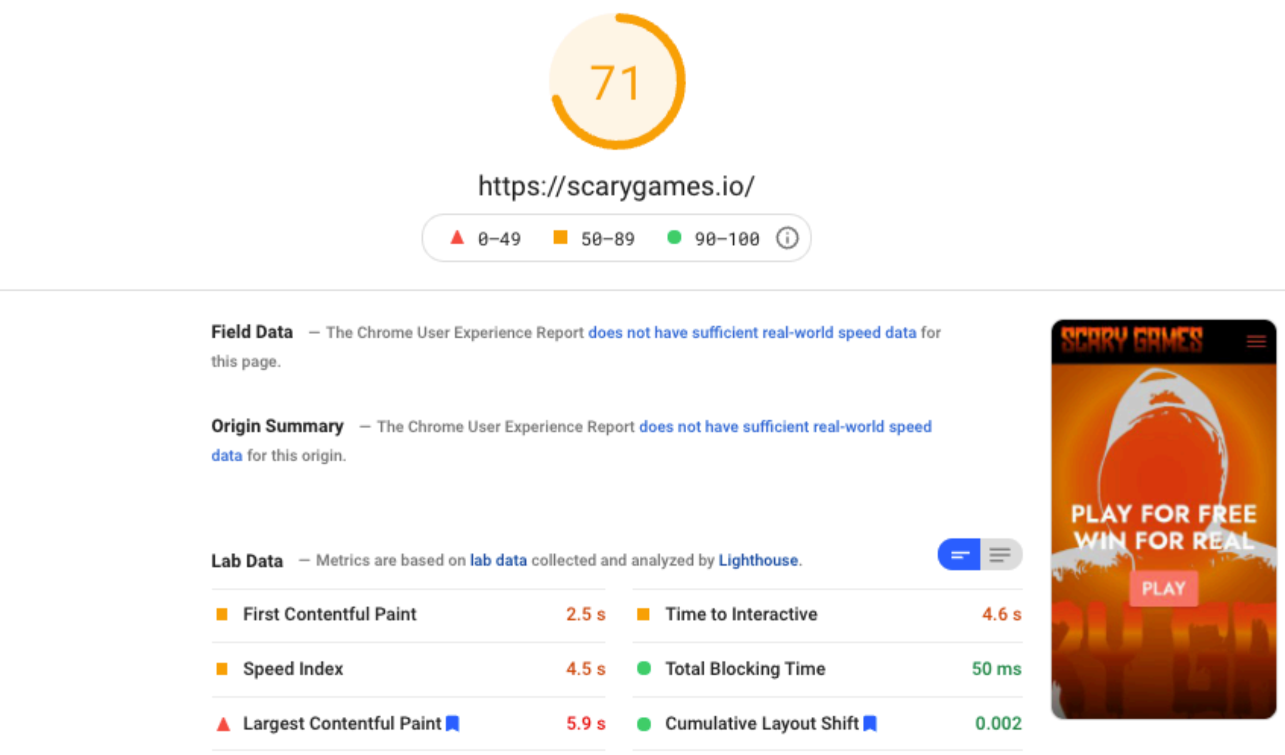
Field Data — The Chrome User Experience Report does not have sufficient real-world speed data for this page.

Origin Summary — The Chrome User Experience Report does not have sufficient real-world speed data for this origin.

Lab Data — Metrics are based on lab data collected and analyzed by Lighthouse.

●	First Contentful Paint	0.7 s	●	Time to Interactive	0.7 s
●	Speed Index	1.1 s	●	Total Blocking Time	0 ms
■	Largest Contentful Paint	1.3 s	●	Cumulative Layout Shift	0.01

Project Website Optimization for Mobile



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https://scarygames.io/

▲ 0–49 ■ 50–89 ● 90–100

Field Data — The Chrome User Experience Report does not have sufficient real-world speed data for this page.

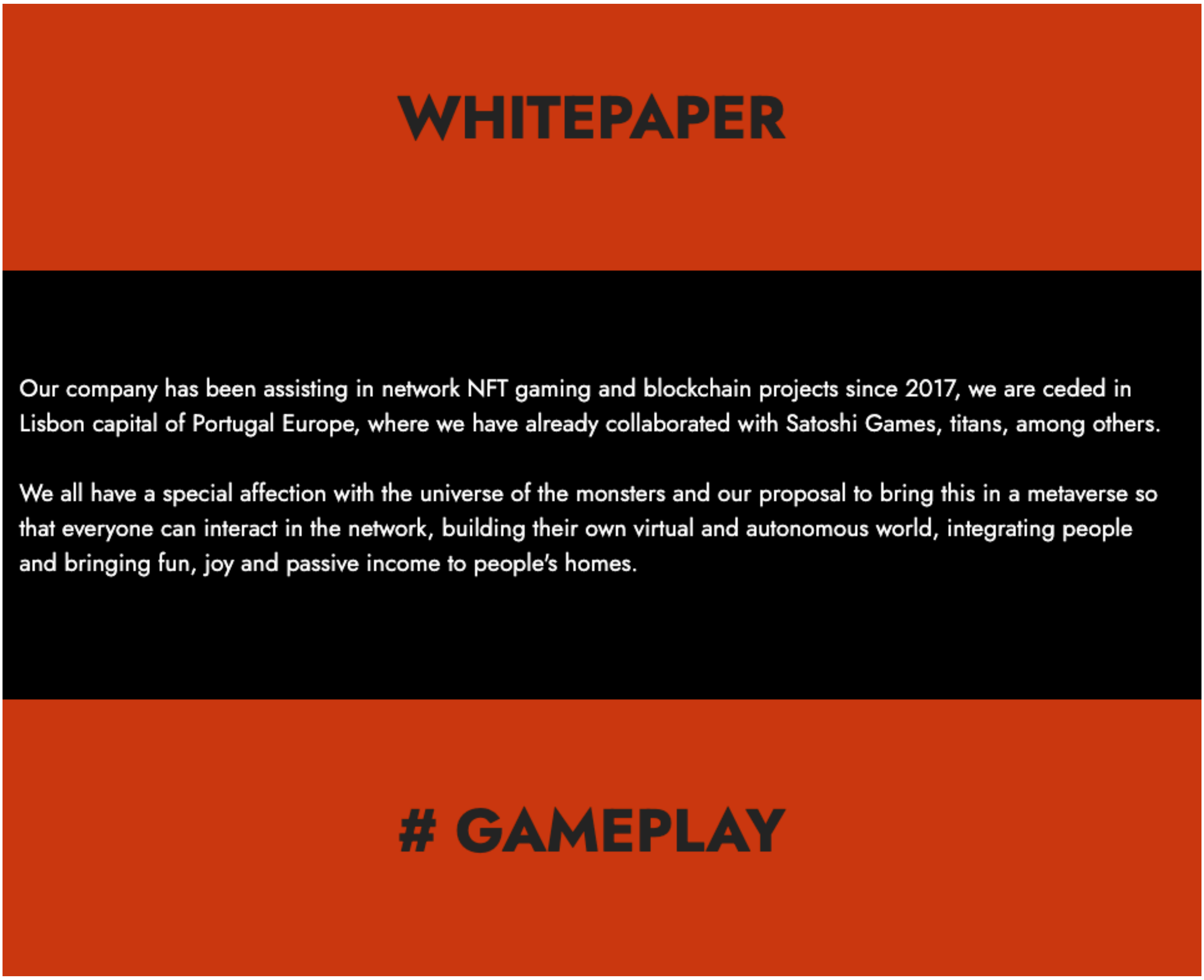
Origin Summary — The Chrome User Experience Report does not have sufficient real-world speed data for this origin.

Lab Data — Metrics are based on lab data collected and analyzed by Lighthouse.

■	First Contentful Paint	2.5 s	■	Time to Interactive	4.6 s
■	Speed Index	4.5 s	●	Total Blocking Time	50 ms
▲	Largest Contentful Paint	5.9 s	●	Cumulative Layout Shift	0.002

Whitepsaper of the project

The whitepaper of Glasshouse project has been verified on behalf of Soken team.



WHITEPAPER

Our company has been assisting in network NFT gaming and blockchain projects since 2017, we are ceded in Lisbon capital of Portugal Europe, where we have already collaborated with Satoshi Games, titans, among others.

We all have a special affection with the universe of the monsters and our proposal to bring this in a metaverse so that everyone can interact in the network, building their own virtual and autonomous world, integrating people and bringing fun, joy and passive income to people's homes.

GAMEPLAY

Whitepaper link: **https://scarygames.io/page1.html**

Contract Function Details

+ [Int] IERC20.sol
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer
- [Ext] allowance
- [Ext] approve
- [Ext] transferFrom

+ [Lib] SafeMath
- [Int] tryAdd
- [Int] trySub
- [Int] tryMul
- [Int] tryDiv
- [Int] tryMod
- [Int] add
- [Int] sub
- [Int] mul
- [Int] div
- [Int] mod
- [Int] sub
- [Int] div
- [Int] mod

+ [Lib] Address.sol
- [Int] isContract
- [Int] sendValue #
- [Int] functionCall #
- [Int] functionCall #
- [Int] functionCallWithValue #
- [Int] functionCallWithValue #
- [Int] functionStaticCall #
- [Int] functionStaticCall #
- [Prv] _verifyCallResult #

+ Ownable is Context (Context)
- [Pub] owner
- [Pub] renounceOwnership
- [Pub] transferOwnership
- [Pub] lock
- [Pub] unlock

+ [Int] IUniswapV2Factory
- [Ext] feeTo

- [Ext] feeToSetter
- [Ext] getPair
- [Ext] allPairs
- [Ext] allPairsLength
- [Ext] createPair #
- [Ext] setFeeTo #
- [Ext] setFeeToSetter #

+ [Int] IUniswapV2Pair
- [Ext] name
- [Ext] symbol
- [Ext] decimals
- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] allowance
- [Ext] approve #
- [Ext] transfer #
- [Ext] transferFrom #
- [Ext] DOMAIN_SEPARATOR
- [Ext] PERMIT_TYPEHASH
- [Ext] nonces
- [Ext] permit #
- [Ext]_LIQUIDITY
- [Ext] factory
- [Ext] token0
- [Ext] token1
- [Ext] getReserves
- [Ext] price0CumulativeLast
- [Ext] price1CumulativeLast
- [Ext] kLast
- [Ext] mint
- [Ext] burn #
- [Ext] swap #
- [Ext] skim #
- [Ext] sync #
- [Ext] initialize #

+ Int] IUniswapV2Router01
- [Ext] factory
- [Ext] WETH
- [Ext] addLiquidity #
- [Ext] addLiquidityETH ($)
- [Ext] removeLiquidity #
- [Ext] removeLiquidityETH #
- [Ext] removeLiquidityWithPermit #

- [Ext] removeLiquidityETHWithPermit #
- [Ext] swapExactTokensForTokens #
- [Ext] swapTokensForExactTokens #
- [Ext] swapExactETHForTokens ($)
- [Ext] swapTokensForExactETH #
- [Ext] swapExactTokensForETH #
- [Ext] swapETHForExactTokens ($)
- [Ext] quote
- [Ext] getAmountOut
- [Ext] getAmountIn
- [Ext] getAmountsOut
- [Ext] getAmountsIn

+ Metacrypt_B_TR_TAX_NC_X.sol
- [Pub] name
- [Pub] symbol
- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer
- [Pub] allowance
- [Pub] approve
- [Pub] transferFrom
- [Pub] increaseAllowance
- [Pub] decreaseAllowance
- [Pub] isExcludedFromReward
- [Pub] deliver
- [Pub] reflectionFromToken
- [Pub] tokenFromReflection
- [Pub] excludeFromReward
- [Pub] includeInReward
- [Prv] _transferBothExcluded
- [Pub] excludeFromFee
- [Pub] includeInFee
- [Ext] setTaxFeePercent
- [Ext] setDevFeePercent
- [Ext] setLiquidityFeePercent
- [Ext] setMaxTxPercent
- [Ext] setDevWalletAddress
- [Pub] setSwapAndLiquifyEnabled
- ``[Prv] _reflectFee
- [Prv] _getValues
- [Prv] _getTValues
- [Prv] _getRValues
- [Prv] _getRate

- [Prv] _getCurrentSupply
- [Prv] _takeLiquidity
- [Prv] _takeDev
- [Prv] calculateTaxFee
- [Prv] calculateDevFee
- [Prv] calculateLiquidityFee
- [Prv] removeAllFee
- [Prv] restoreAllFee
- [Pub] isExcludedFromFee
- [Prv] _approve
- [Prv] _transfer
- [Prv] swapAndLiquify
- [Prv] swapTokensForEth
- [Prv] addLiquidity
- [Prv] _tokenTransfer
- [Prv] _transferStandard
- [Prv] _transferToExcluded
- [Prv] _transferFromExcluded
- [Ext] setRouterAddress
- [Ext] setNumTokensSellToAddToLiquidity

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 Complier 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 Issues

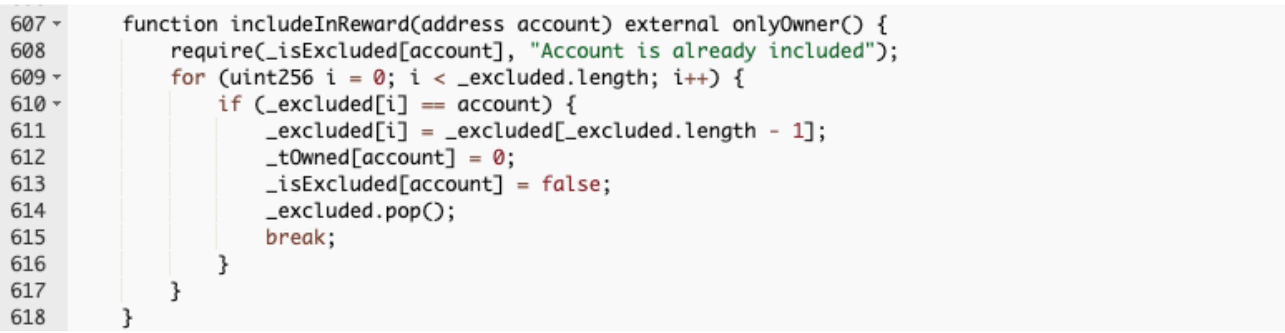
1) Volatile Code:

The return values of functions *swapExactTokensForETHSupportingFeeOnTransferTokens* and *addLiquidityETH* are not properly handled.

Recommendation:

We recommend using variables to receive the return value of the functions mentioned above and handle both success and failure cases if needed by the business logic.

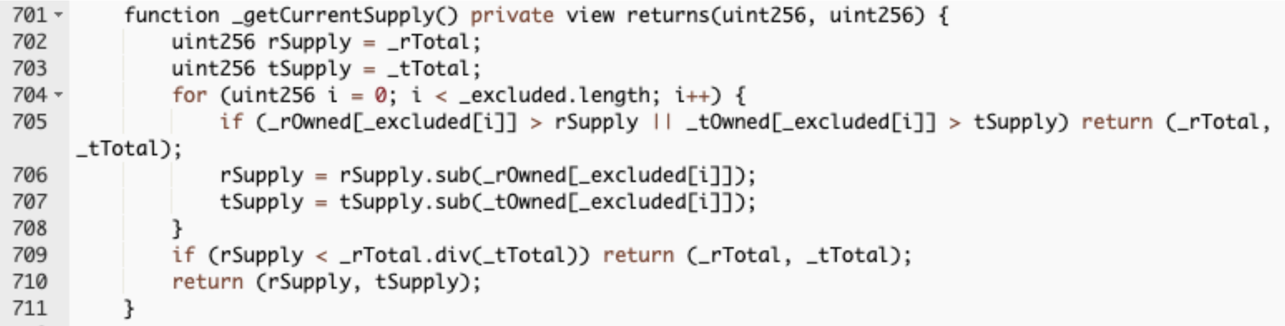
2) Out of Gas issue:



```
    function includeInReward(address account) external onlyOwner() {
        require(_isExcluded[account], "Account is already included");
        for (uint256 i = 0; i < _excluded.length; i++) {
            if (_excluded[i] == account) {
                _excluded[i] = _excluded[_excluded.length - 1];
                _tOwned[account] = 0;
                _isExcluded[account] = false;
                _excluded.pop();
                break;
            }
        }
    }
```

The function includeInRewards() uses the loop to find and remove addresses from the _excluded list. Function will be aborted with OUT_OF_GAS exception if there will be a long excluded addresses list.

3) Out of Gas issue:



```
    function _getCurrentSupply() private view returns(uint256, uint256) {
        uint256 rSupply = _rTotal;
        uint256 tSupply = _tTotal;
        for (uint256 i = 0; i < _excluded.length; i++) {
            if (_rOwned[_excluded[i]] > rSupply || _tOwned[_excluded[i]] > tSupply) return (_rTotal, _tTotal);
            rSupply = rSupply.sub(_rOwned[_excluded[i]]);
            tSupply = tSupply.sub(_tOwned[_excluded[i]]);
        }
        if (rSupply < _rTotal.div(_tTotal)) return (_rTotal, _tTotal);
        return (rSupply, tSupply);
    }
```

The function _getCurrentSupply also uses the loop for evaluating total supply. It also could be aborted with OUT_OF_GAS exception if there will be a long excluded addresses list.

Recommendation:

Use EnumerableSet instead of array or do not use long arrays.

Conclusion

Low-severity issues exist within smart contracts. Smart contracts are free from any critical 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.

Audited by soken

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