

Blockchain Security | Smart Contract Audits | KYC

MADE IN GERMANY

Audit

Security Assessment 17. January, 2022

For



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| Version | Date | Description |
|---------|------------------|--|
| 1.0 | 17. January 2022 | Layout projectAutomated- /Manual-Security TestingSummary |

Network

Binance Smart Chain (BEP20)

Website

https://universeun.com/

Telegram

https://t.me/universeun

Twitter

https://twitter.com/daouniverse

Github

https://universeun.com/

Description

The cryptocurrency combined with NFT, Swap and IDO platforms is a more friendly NFT token. It's responsible for bringing the crypto world to more people, and it has a higher mission.

universeNFT is a card with the theme of ft planet, which not only has a real planet design, but also a virtual currency planet, fantasy planet and other planet design.

UniverseSWAP is a built-in swap platform, not only of which the exchange speed is extremely fast, but also who has the functions of pledge nft farm, mining, etc., and will continue to develop more functions in the future

U-Ido platform is a professional launch platform. We will help potential virtual currency to launch, and provide nft market and swap platform help

Project Engagement

During the 13th of January 2022, **UniverseUN Team** engaged Solidproof.io to audit smart contracts that they created. The engagement was technical in nature and focused on identifying security flaws in the design and implementation of the contracts. They provided Solidproof.io with access to their code repository and whitepaper.



Contract Link v1.0

Provided as files

Vulnerability & Risk Level

Risk represents the probability that a certain source-threat will exploit vulnerability, and the impact of that event on the organization or system. Risk Level is computed based on CVSS version 3.0.

| Level | Value | Vulnerability | Risk (Required Action) |
|---------------|---------|---|---|
| Critical | 9 - 10 | A vulnerability that can disrupt the contract functioning in a number of scenarios, or creates a risk that the contract may be broken. | Immediate action to reduce risk level. |
| High | 7 – 8.9 | A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way. | Implementation of corrective actions as soon aspossible. |
| Medium | 4 – 6.9 | A vulnerability that could affect the desired outcome of executing the contract in a specific scenario. | Implementation of corrective actions in a certain period. |
| Low | 2 – 3.9 | A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective. | Implementation of certain corrective actions or accepting the risk. |
| Informational | 0 – 1.9 | A vulnerability that have informational character but is not effecting any of the code. | An observation that does not determine a level of risk |

Auditing Strategy and Techniques Applied

Throughout the review process, care was taken to evaluate the repository for security-related issues, code quality, and adherence to specification and best practices. To do so, reviewed line-by-line by our team of expert pentesters and smart contract developers, documenting any issues as there were discovered.

Methodology

The auditing process follows a routine series of steps:

- 1. Code review that includes the following:
 - i) Review of the specifications, sources, and instructions provided to SolidProof to make sure we understand the size, scope, and functionality of the smart contract.
 - ii) Manual review of code, which is the process of reading source code line-byline in an attempt to identify potential vulnerabilities.
 - iii) Comparison to specification, which is the process of checking whether the code does what the specifications, sources, and instructions provided to SolidProof describe.
- 2. Testing and automated analysis that includes the following:
 - i) Test coverage analysis, which is the process of determining whether the test cases are actually covering the code and how much code is exercised when we run those test cases.
 - ii) Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
- 3. Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.
- 4. Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts.

Used Code from other Frameworks/Smart Contracts (direct imports)

Imported packages:



BoxSale

IPlayer

IPlayerInfo

IPay

IERC20

Context

Ownable

Accessible

SafeMath

Address

EnumerableSet

ReentrancyGuard

IERC721Receiver

ERC721Holder

IERC165

IERC721

ISale

IdoAction

Context

IERC20

Ownable

Accessible

SafeMath

Address

ReentrancyGuard

Box

Context

Ownable

Accessible

👺 SafeMath

Address

EnumerableSet

ReentrancyGuard

Nft

IERC721Receiver

INft

ERC721Holder

IERC165

IERC721

IERC721Metadata

IERC721Enumerable

Address

Context

達 Strings

ERC165

ERC721

ERC721Enumerable

Counters

Ownable

Accessible

NFTStake

👺 SafeMath

IERC165

IERC721

SafeERC20

IERC20

Address 🖹

Context

Ownable

Accessible

ReentrancyGuard

IERC721Receiver

ERC721Holder

IBox

IPlayData

NFTStakeAction

Context

Ownable

Accessible

達 Address

ReentrancyGuard

Pausable

IERC165

IERC721

IERC721Receiver

ERC721Holder

INftStake

PlayerDatas

PlayerAction

IERC20

Context

Ownable

Accessible

SafeMath

👺 Address

ReentrancyGuard

Pausable

IPlayerData

IBox

IBox

INft

IERC20

Context

Ownable

Accessible

SafeMath

Section 4 Personal Address 1 Per

EnumerableSet

ReentrancyGuard

Pausable

Counters

Tested Contract Files

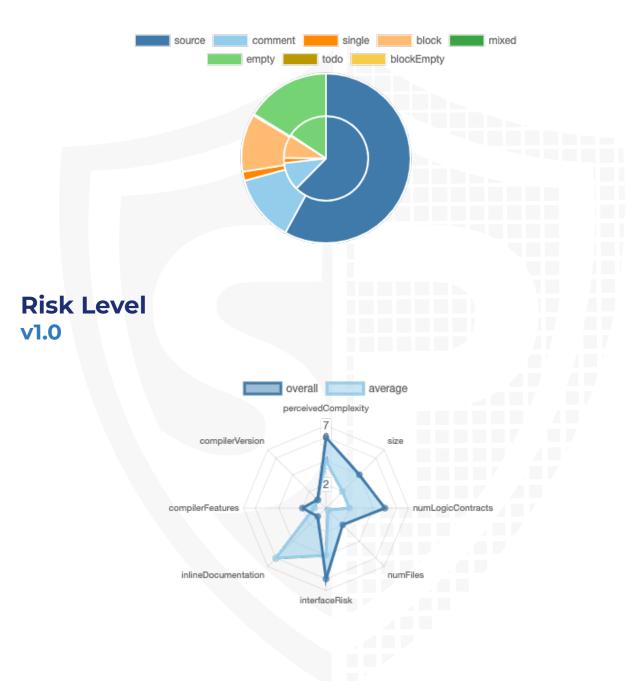
This audit covered the following files listed below with a SHA-1 Hash.

A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.

| File Name | SHA-1 Hash |
|------------------------------|--|
| contracts/nftstake.sol | 4d59ce000f06a70a684cd736ec0ec3357326b3b0 |
| contracts/nftstakeAction.sol | dd36b7f2e6a217d0d58fbc98cf6acc0829492180 |
| contracts/box.sol | 363b42391d288e7ae60cc38ead989ee7affc3ce0 |
| contracts/playerAction.sol | 345dc07638b055d8316439ca9eb91dbae9b9d135 |
| contracts/IdoAction.sol | ef9bed2cf32edf3a53718cd79c86bb9bcef88433 |
| contracts/nft.sol | dd8f010ce2e058db533e0366717a93100eb572b4 |
| contracts/boxSale.sol | 1bbd305b99e40b67d01dddfeb54e0cf7ac42220d |
| contracts/playerDatas.sol | 3f6fa5d775f27f83d85b3339cfbc44e6070f8a12 |

Metrics

Source Lines v1.0



Capabilities

Components

| Version | Contracts | Libraries | Interfaces | Abstract |
|---------|-----------|-----------|------------|----------|
| 1.0 | 20 | 21 | 31 | 29 |

Exposed Functions

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.

| Ve | Version Public | | Payable |
|-----|----------------|-----|---------|
| 1.0 | | 269 | 1 |

| Version | External | Internal | Private | Pure | View |
|---------|----------|----------|---------|------|------|
| 1.0 | 118 | 553 | 34 | 84 | 193 |

State Variables

| Version | Total | Public |
|---------|-------|--------|
| 1.0 | 116 | 46 |

Capabilities

| Version | Solidity Versions observed | Experim ental Features | Can Receive Funds | Uses Assembl Y | Has Destroya ble Contract s |
|---------|----------------------------------|------------------------------|-------------------------|---------------------------|---|
| 1.0 | ^0.8.0 | ABIEnc oderV2 | yes | yes (17 asm blocks) | |

| 10 | | | | |
|-----|--|-----|-----|--|
| 1.0 | | yes | yes | |



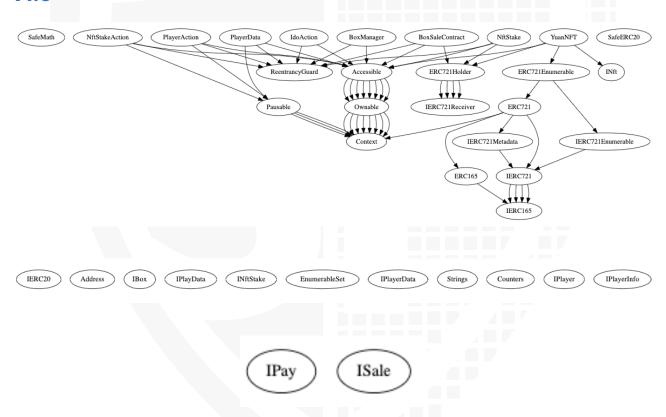
Scope of Work

The above token Team provided us with the files that needs to be tested (Github, Bscscan, Etherscan, files, etc.). The scope of the audit is the main contract (usual the same name as team appended with .sol).

We will verify the following claims:

- 1. Correct implementation of Token standard
- 2. Deployer cannot mint any new tokens
- 3. Deployer cannot burn or lock user funds
- 4. Deployer cannot pause the contract
- 5. Overall checkup (Smart Contract Security)

Inheritance Graph v1.0



Verify Claims

Correct implementation of Token standard



YuanNFT

- ## Check functions
- [√] balanceOf(address) is present
 - [✓] balanceOf(address) -> () (correct return value)
 - [√] balanceOf(address) is view
- [√] ownerOf(uint256) is present
 - [√] ownerOf(uint256) -> () (correct return value)
 - [√] ownerOf(uint256) is view
- [√] safeTransferFrom(address,address,uint256,bytes) is present
- [✓] safeTransferFrom(address,address,uint256,bytes) -> () (correct return type)
 - [√] Transfer(address,address,uint256) is emitted
- [√] safeTransferFrom(address,address,uint256) is present
- [✓] safeTransferFrom(address,address,uint256) -> () (correct return type)
 - [✓] Transfer(address,address,uint256) is emitted
- [√] transferFrom(address,address,uint256) is present
 - [√] transferFrom(address,address,uint256) -> () (correct return type)
 - [√] Transfer(address,address,uint256) is emitted
- [√] approve(address,uint256) is present
 - [√] approve(address,uint256) -> () (correct return type)
 - [√] Approval(address,address,uint256) is emitted
- [√] setApprovalForAll(address,bool) is present
 - [√] setApprovalForAll(address,bool) -> () (correct return type)
 - [✓] ApprovalForAll(address,address,bool) is emitted
- [√] getApproved(uint256) is present
 - [✓] getApproved(uint256) -> () (correct return value)
 - [√] getApproved(uint256) is view
- [√] isApprovedForAll(address,address) is present
 - [✓] isApprovedForAll(address,address) -> () (correct return value)
 - [√] isApprovedForAll(address,address) is view
- [√] supportsInterface(bytes4) is present
 - [√] supportsInterface(bytes4) -> () (correct return value)
 - [√] supportsInterface(bytes4) is view
- [√] name() is present
 - [√] name() -> () (correct return value)

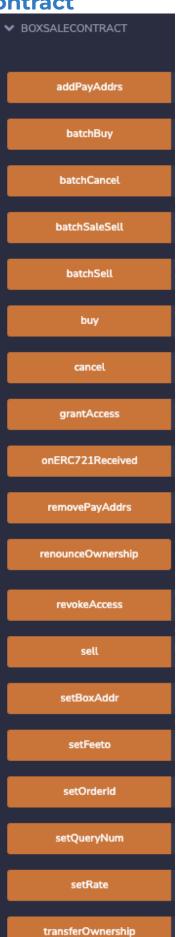
- [✓] name() is view
- [√] symbol() is present
 - [✓] symbol() -> () (correct return value)
- [√] tokenURI(uint256) is present
 - [✓] tokenURI(uint256) -> () (correct return value)

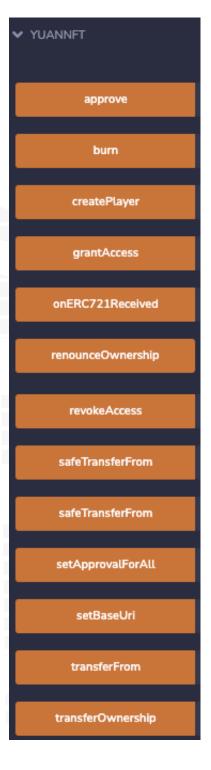
Check events

- √ Transfer(address,address,uint256) is present
 - [√] parameter 0 is indexed
 - [√] parameter 1 is indexed
 - [√] parameter 2 is indexed
- [√] Approval(address,address,uint256) is present
 - [√] parameter 0 is indexed
 - [√] parameter 1 is indexed
 - [√] parameter 2 is indexed
- [√] ApprovalForAll(address,address,bool) is present
 - [√] parameter 0 is indexed
 - [√] parameter 1 is indexed

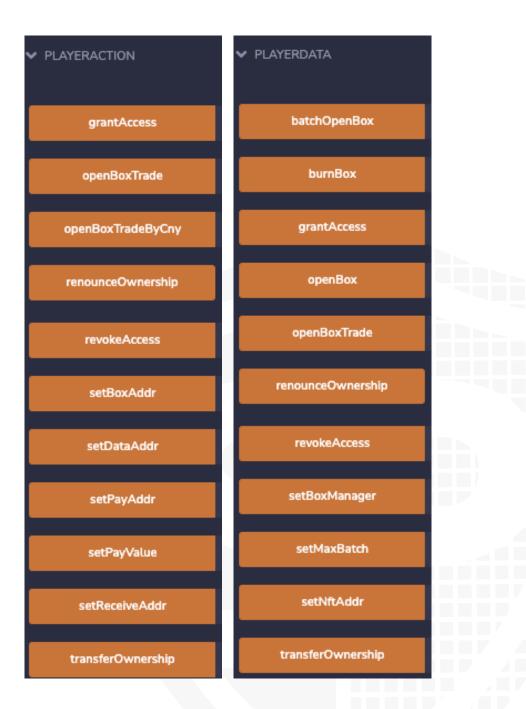
Write functions of contract











Deployer cannot mint any new tokens

| Name | Exist | Tested | Verified |
|-------------|--------------|--------------|----------|
| cannot mint | \checkmark | \checkmark | X |

Comments:

- YuanNft
 - · OnlyAccessed addresses can mint with createPlayer function



Deployer cannot burn or lock user funds

| Name | Exist | Tested | Verified |
|-------------|----------|--------|----------|
| cannot lock | ✓ | ✓ | X |
| cannot burn | √ | ✓ | X |

Comments:

- YuanNft
 - · OnlyAccessed addresses can burn with burn function
- boxSale
 - onlyAccessed can lock following functions
 - pledgeNft
- nftStakeAction
 - onlyOwner can lock following functions by activate pause
 - takeProfit
 - pledgeNft
 - · unpledgeNft
- PlayerAction
 - onlyOwner can lock following functions by activate pause
 - openBoxTrade

Deployer cannot pause the contract

| Name | Exist | Tested | Verified |
|-----------------------|--------------|--------------|----------|
| Deployer cannot pause | \checkmark | \checkmark | X |

Comments:

- NftStakeAction
 - · Deployer can pause following functions
 - pledgeNft
 - unpledgeNft
 - takeProfit
- PlayerAction
 - Deployer can pause following functions
 - openBoxTrade
- PlayerDatas
 - · Library implemented but wasn't used

Overall checkup (Smart Contract Security)



Legend

| Attribute | Symbol |
|--------------------------|--------------|
| Verfified / Checked | \checkmark |
| Partly Verified | |
| Unverified / Not checked | X |
| Not available | - |

Modifiers

BoxSale

- setBoxAddr
- ❷ onlyOwner
- setQueryNum
- ⊗ onlyOwner
- batchSaleSell
- batchSell
- batchCancel
- batchBuy
- ell 😓
- cancel
- ⊗ nonReentrant
- buy
- setFeeto
- ⊗ onlyOwner
- setRate
- ⊗ onlyOwner
- addPayAddrs
- ⊗ onlyOwner
- removePayAddrs
- ⊗ onlyOwner
- setOrderId
- ⊗ onlyOwner

IdoAction

- setProjectParty
- ⊗ onlyOwner
- setMinimumQuantity
- ⊗ onlyOwner
- setLargestNumber
- ⊗ onlyOwner
- setMaxtNumber
- ⊗ onlyOwner
- setChangeAmount
 - onlyOwner
- setStartTime
- onlyOwner
- setEndTime
- ⊗ onlyOwner
- setIdoAmount
- ⊗ onlyOwner
- 🐤 setTokenAddr
- ⊗ onlyOwner
- <Constructor>
- buy
 - ⊗ nonReentrant

Box

- setPeriodTime
- ⊗ onlyOwner
- subBox
- ⊗ nonReentrant
- batchSubBox
- onlyAccessednonReentrant
- setBoxNo
- setBox
- ⊗ onlyOwner
- setPeriod
- ⊗ onlyOwner

NftStake

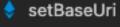
- setBox
- ⊗ onlyOwner
- setPlayDataAddr
- ⊗ onlyOwner
- setNftPower
- ⊗ onlyOwner
- pledgeNft
- ⊗ changeAverage
- ⊗ onlyAccessed
- unpledgeNft
- ❷ changeAverage

- takeProfit
- ❷ changeAverage
- ⊗ onlyAccessed
- extraProfit
- changelsDis
- setblockPerNumber
- setInitAddress
- ⊗ onlyOwner
- setLastBlockNumber

NftStakeAction

- setnftAddr
- ⊗ onlyOwner
- setstakeAddr
- onlyOwner
- pledgeNft
 - nonReentrant
 - whenNotPaused
- unpledgeNft

- takeProfit
- ⊗ whenNotPaused



⊗ onlyOwner

<Constructor>
burn

createPlayer

⊗ onlyAccessed

PlayerDatas

PlayerAction

- setReceiveAddr
- setBoxAddr
- ⊗ onlyOwner
- setPayAddr
- ⊗ onlyOwner
- setPayValue
- ⊗ onlyOwner
- setDataAddr
- ⊗ onlyOwner
- openBoxTrade
- whenNotPaused
- openBoxTradeByCny
- onlyAccessed
- nonReentrant

- setMaxBatch
- onlyOwner
- openBoxTrade
- ❷ onlyAccessed
- nonReentrant
- openBox
- onlyAccessed
- nonReentrant
- batchOpenBox

- burnBox
- onlyAccessed
- setNftAddr
- ⊗ onlyOwner
- 💠 setBoxManager
- ⊗ onlyOwner

Comments

- Deployer can set following state variables without any limitations
 - Box
 - period
 - BoxSale
 - queryNum
 - · Can only be set higher than previous query num
 - feeTo
 - rateBase
 - rate
 - OrderId
 - Can only be set higher than previous OrderId
 - IdoAction
 - minimumQuantity

- largestNumber
- maxtNumber
- changeAmount
- startTime
- endTime
- idoAmount
- NftStake
 - _isDIS
 - blockPerNumber
 - lastBlockNumber
- PlayerAction
 - payValue
- PlayerDatas
- maxBatch
- · Deployer can enable/disable following state variables
 - Box
 - periodTimes
 - BoxAttrs
 - BoxManagers
 - accessAllowed
 - BoxSale
 - sellers
 - Ordering
 - BoxSaleOrder
 - Ordered
 - selleds
 - PayAddrs
 - accessAllowed
 - IdoAction
 - accessAllowed
 - Nft
 - accessAllowed
 - NftStake
 - nftPower
 - isSettlement
 - accessAllowed
 - PlayerAction
 - accessAllowed

CallGraph



Source Units in Scope

v1.0

| Туре | File | Logic Contracts | Interfaces | Lines | nLines | nSLOC | Comment Lines | Complex. Score | Capabilities |
|-------------------------|------------------------------|--------------------|------------|-------|--------|-------|------------------|-------------------|-------------------|
| ∌≧ Q | contracts/nftstake.sol | 9 | 6 | 501 | 423 | 353 | 4 | 310 | <u></u> |
| ∌≧ Q % | contracts/nftstakeAction.sol | 8 | 4 | 266 | 231 | 187 | 3 | 190 | ■•• ❖ |
| ≥ | contracts/box.sol | 8 | | 472 | 457 | 356 | 4 | 216 | ■92 ☆ |
| ∌ €Q % | contracts/playerAction.sol | 8 | 3 | 364 | 324 | 261 | 3 | 202 | ■•• ❖ |
| >≥ > > | contracts/IdoAction.sol | 7 | 1 | 350 | 324 | 253 | 4 | 185 | ■•• |
| ≥ €0, | contracts/nft.sol | 11 | 6 | 627 | 561 | 424 | 8 | 409 | |
| ≥€ \ | contracts/boxSale.sol | 9 | 8 | 1341 | 1167 | 575 | 633 | 432 | ■ /92☆ |
| ≥ €Q | contracts/playerDatas.sol | 10 | 3 | 586 | 526 | 419 | 4 | 304 | ■ 90 |
| ∌≧ Q % | Totals | 70 | 31 | 4507 | 4013 | 2828 | 663 | 2248 | ■/ <u>\$ ••</u> # |

Legend

| 3 | |
|------------------|---|
| Attribute | Description |
| Lines | total lines of the source unit |
| nLines | normalized lines of the source unit (e.g. normalizes functions spanning multiple lines) |
| nSLOC | normalized source lines of code (only source-code lines; no comments, no blank lines) |
| Comment Lines | lines containing single or block comments |
| Complexity Score | a custom complexity score derived from code statements that are known to introduce code complexity (branches, loops, calls, external interfaces,) |

Audit Results

AUDIT PASSED

Critical issues

No critical issues

High issues

No high issues

Medium issues

| Issue | File | Type | Line | Description |
|-------|---------------|------------------------------|------------|--|
| #1 | BoxSale | Unchecked tokens transfer | 1244, 1243 | Use `SafeERC20`, or ensure that the transfer/ transferFrom return value is checked |
| #2 | IdoActio n | Unchecked tokens transfer | 344 | Use `SafeERC20`, or ensure that the transfer/ transferFrom return value is checked |

Low issues

| Issue | File | Type | Line | Description |
|-------|---------|---|------|--|
| #1 | Main | Contract doesn't import npm packages from source (like OpenZeppelin etc.) | | We recommend to import all packages from npm directly without flatten the contract. Functions could be modified or can be susceptible to vulnerabilities |
| #2 | Box | A floating pragma is set | 4 | The current pragma Solidity directive is ""^0.8.0"". |
| #3 | BoxSale | A floating pragma is set | 2 | The current pragma Solidity directive is ""^0.8.0"". |

| #4 IdoActio #5 Nft #6 Afloating pragma is set #6 NftStak #6 NftStak #7 NftStak #7 NftStak #8 PlayerA #9 PlayerD #8 Afloating pragma is set #8 Nft #8 NftStak #9 PlayerD #9 Afloating pragma is set #10 BoxSale #11 NftStak #11 NftStak #12 NftStak #13 NftStak #14 PlayerA #15 NftStak #15 NftStak #16 NftStak #17 NftStak #18 NftStak #19 NftStak #19 NftStak #10 NftStak #10 NftStak #10 NftStak #11 NftStak #11 NftStak #12 NftStak #13 NftStak #14 PlayerA #15 NftStak #15 NftStak #16 NftStak #17 NftStak #18 NftStak #19 NftStak #19 NftStak #10 NftStak #10 NftStak #10 NftStak #11 NftStak #12 NftStak #13 NftStak #14 PlayerA #15 NftStak #15 NftStak #16 NftStak #16 NftStak #17 NftStak #18 State variable visibility #19 Isoarch-check) #10 NftStak #11 NftStak #12 PlayerD #13 NftStak #14 PlayerA #15 NftStak #15 NftStak #16 NftStak #17 NFT #18 Sox Missing Zero Address Validation (missing-zero-check) #18 NftStak #19 NftStak #19 NftStak #10 NftStak #10 NftStak #11 NftStak #11 NftStak #12 PlayerD #13 NftStak #14 PlayerD #15 NftStak #15 NftStak #16 NftStak #17 NFT #17 Local variables #18 Sox Missing Events #18 Box #18 Box Missing Events #18 Box Arithmetic #18 Box Arithmetic #18 Box Sale #18 Missing Events #18 Arithmetic #18 Box Sale #18 Sox Sale #18 Nissing Events #18 Arithmetic #18 Sox Sale #18 S | | | | | |
|--|-----|---------|--------------------------|---------------|-------------------------------|
| directive is ""A0.8.0"". #6 NftStak e NftStak e Afloating pragma is set e Afloating pragma is set e Cition #8 PlayerA ction #9 PlayerD atas #10 BoxSale Missing Zero Address Validation (missing-zero-check) #11 NftStak eAction #12 NftStak eAction #13 NftStak eAction #14 PlayerA ction #15 PlayerA by Alissing Zero Address Validation (missing-zero-check) #16 PlayerA by Alissing Zero Address Validation (missing-zero-check) #17 NftStak eAction #18 NftStak eAction #19 PlayerA atas #10 BoxSale Missing Zero Address Validation (missing-zero-check) #11 IdoActio Missing Zero Address Validation (missing-zero-check) #12 NftStak eAction #13 NftStak Missing Zero Address Validation (missing-zero-check) #14 PlayerA ction #15 PlayerD Address Validation (missing-zero-check) #16 PlayerD Atas Validation (missing-zero-check) #17 NftStak State variable visibility is not set #18 NftStak Ata Variables shadowing #19 BoxSale Missing Events #10 NftStak Entit the address is not visibility directive is ""A0.8.0"". #11 The current pragma Solidity directive is ""A0.8.0"". #12 The current pragma Solidity directive is ""A0.8.0"". #14 Check that the address is not vero zero. #15 PlayerD Address Validation (missing-zero-check) #16 PlayerD Address Validation (missing-zero-check) #17 NFT Local variables shadowing #18 Box Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #10 Box Missing Events #11 Nft Local variables are the local variables that shadow another component #11 Emit an event for critical parameter changes | #4 | | A floating pragma is set | 3 | |
| e directive is ""AO.8.0"". #7 NftStak eAction #8 PlayerA ction #8 PlayerD atas #10 BoxSale Missing Zero Address Validation (missing-zero-check) #11 PlayerA chion #12 PlayerA Missing Zero Address Validation (missing-zero-check) #13 NftStak eAction #14 PlayerA ction #15 PlayerD atas #16 PlayerA State variables validation (missing-zero-check) #17 NftStak PlayerA ction #18 PlayerA ction #19 PlayerA Missing Zero Address Validation (missing-zero-check) #10 NftStak eAction #11 PlayerA Ction #12 PlayerA Ction #13 NftStak PlayerA Ction #14 PlayerA Ction #15 PlayerD Address Validation (missing-zero-check) #16 NftStak State variable visibility is not set #17 NftStak State variables shadowing #18 Box Missing Events #19 BoxSale Missing Events #19 Emit an event for critical | #5 | Nft | A floating pragma is set | 3 | , - |
| eAction directive is ""AO.8.0"". #8 PlayerA ction A floating pragma is set ction A floating pragma is set ction A floating pragma is set at 2 The current pragma Solidity directive is ""AO.8.0"". #9 PlayerD atas Missing Zero Address Validation (missing-zero-check) #10 BoxSale Missing Zero Address Validation (missing-zero-check) #11 IdoActio Action Nussing Zero Address Validation (missing-zero-check) #12 NftStak Missing Zero Address Validation (missing-zero-check) #13 NftStak Missing Zero Address Validation (missing-zero-check) #14 PlayerA Action Validation (missing-zero-check) #15 PlayerD Address Validation (missing-zero-check) #16 NftStak State variable visibility is not set Shadowing #17 NFT Local variables shadowing #18 Box Missing Events Arithmetic #19 BoxSale Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #10 Reverted that the address is not variables with the shadow another component in the local variables parameter changes #18 Example Address Arithmetic #19 BoxSale Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #10 Reverted The current pragma Solidity directive is ""AO.8.0"". #11 The current pragma Solidity directive is ""AO.8.0"". #11 The current pragma Solidity directive is ""AO.8.0"". #11 The current pragma Solidity directive is ""AO.8.0"". #12 The current pragma Solidity directive is ""AO.8.0"". #11 The current pragma Solidity directive is ""AO.8.0"". #12 The current pragma Solidity directive is ""AO.8.0"". #13 The current pragma Solidity directive is ""AO.8.0"". #14 PlayerD Action (missing-zero Address Arithmetic #15 PlayerD Action (missing-zero Address Arithmetic #16 PlayerD Action (missing-zero Address Arithmetic #17 NFT Local variables shadowing #18 Box Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #10 Local variables Shadowing #11 A Check that the address is not Zero #12 The current pragma Solidity #12 The current pragma Solidity #13 Check that the address is not Zero #14 Check that the addr | #6 | | A floating pragma is set | 2 | |
| ction directive is ,, "^0,8.0"". #9 PlayerD atas A floating pragma is set atas A floating pragma is at a floating pragma is set atas A floating pragma is at a floating pragma is a floating pragma is at a floating pragma is at a floating pragma is a fl | #7 | | A floating pragma is set | 2 | |
| atas directive is ""Ao.8.0"". #10 BoxSale Missing Zero Address Validation (missing-zero-check) #11 IdoActio n Missing Zero Address Validation (missing-zero-check) #12 NftStak e Missing Zero Address Validation (missing-zero-check) #13 NftStak eAction Validation (missing-zero-check) #14 PlayerA ction Validation (missing-zero-check) #15 PlayerD atas Validation (missing-zero-check) #16 NftStak e Missing Zero Address Validation (missing-zero-check) #17 NftStak e Missing Zero Address Validation (missing-zero-check) #18 Sox Missing Zero Address Validation (missing-zero-check) #19 BoxSale Missing Events Arithmetic #19 BoxSale Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #10 Nissing Events Address Validation (missing-zero-check) #11 Signature Address Validation (missing-zero-check) #12 Diagramater Address Validation (missing-zero-check) #15 PlayerD atas Validation (missing-zero-check) #16 Sox Missing Events Arithmetic #17 NFT Local variables Shadowing #18 Box Missing Events #19 BoxSale Missing Events #18 Local variables Sox Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #19 Events Address Validation (missing-zero-check) #110 Check that the address is not Zero Entra the address is not Zero Check that th | #8 | _ | A floating pragma is set | 2 | |
| Validation (missing-zero-check) #11 IdoActio n Missing Zero Address Validation (missing-zero-check) #12 NftStak e Missing Zero Address Validation (missing-zero-check) #13 NftStak e Action Nissing Zero Address Validation (missing-zero-check) #14 PlayerA ction Zero Address Validation (missing-zero-check) #15 PlayerD Missing Zero Address Validation (missing-zero-check) #16 NftStak e State variable visibility is not set #17 NFT Local variables shadowing #18 Box Missing Events Address Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #19 BoxSale Missing Events #18 IndoAction (missing-zero Address Validation (missing-zero-check) Sale, 245 #17 Check that the address is not zero Zero Check that the address is not zero Zero Check that the address is not zero Zero-check that the address is not zero Zero Check that the address is not zero Zero Zero-check) #18 Emit an event for critical parameter changes | #9 | | A floating pragma is set | 2 | · |
| n Validation (missing-zero-check) #12 NftStak e NftStak e Validation (missing-zero-check) #13 NftStak eAction Validation (missing-zero-check) #14 PlayerA ction Validation (missing-zero-check) #15 PlayerD atas Validation (missing-zero-check) #16 NftStak e NftSta | #10 | BoxSale | Validation (missing- | | |
| e Validation (missing-zero-check) #13 NftStak eAction Validation (missing-zero-check) #14 PlayerA ction Validation (missing-zero-check) #15 PlayerD atas Validation (missing-zero-check) #16 NftStak e State variable visibility is not set #17 NFT Local variables shadowing #18 Box Missing Events Arithmetic #19 BoxSale Missing Events #19 BoxSale Missing Events **238, 242, 245 **245 Check that the address is not zero **Check that the address | #11 | | Validation (missing- | 315, 279, 311 | |
| eAction Validation (missing-zero-check) #14 PlayerA ction Wissing Zero Address Validation (missing-zero-check) #15 PlayerD atas Wissing Zero Address Validation (missing-zero-check) #16 NftStak State variable visibility is not set #17 NFT Local variables shadowing #18 Box Missing Events Arithmetic #19 BoxSale Missing Events #19 BoxSale Missing Events #17 Validation (missing-zero-check) #18 Zero Address Validation (missing-zero-check) #17 Check that the address is not zero Check that the address is not zero **Check that the address is not zero **C | #12 | | Validation (missing- | | |
| ction Validation (missing-zero-check) #15 PlayerD atas Validation (missing-zero-check) #16 NftStak e State variable visibility is not set #17 NFT Local variables shadowing #18 Box Missing Events Arithmetic #19 BoxSale Missing Events #19 BoxSale Missing Events #17 Local variables (Arithmetic) #18 Events Arithmetic #18 Sox Missing Events (As7, 572, 568) #19 Check that the address is not zero Check that the address is not zero **Check that the address is not zero **Check that the address is not zero **Check that the address is not zero **Provide Arithmetic (As7, 572, 568) **Top Check that the address is not zero **Check that the address is not zero **Provide Arithmetic (As7, 572, 568) **Top Check that the address is not zero **Check that the address is not zero **Provide Arithmetic (As7, 572, 568) **Top Check that the address is not zero | #13 | | Validation (missing- | | |
| atas Validation (missing-zero-check) #16 NftStak e State variable visibility is not set #17 NFT Local variables shadowing #18 Box Missing Events Arithmetic #19 BoxSale Missing Events **Total variables that shadow another component shadow and the parameter changes **Total variables zero **Total variables visibility of state variables explicitly **Total variables that shadow another component shadow another shadow another component shadow another shad | #14 | _ | Validation (missing- | | zero |
| e is not set 346, 348, visibility of state variables explicitly #17 NFT Local variables shadowing 596 Rename the local variables that shadow another component #18 Box Missing Events Arithmetic 464 Emit an event for critical parameter changes #19 BoxSale Missing Events 1337, 1154, Emit an event for critical | #15 | _ | Validation (missing- | | |
| shadowing that shadow another component #18 Box Missing Events 464 Emit an event for critical parameter changes #19 BoxSale Missing Events 1337, 1154, Emit an event for critical | #16 | | _ | 346, 348, | visibility of state variables |
| Arithmetic parameter changes #19 BoxSale Missing Events 1337, 1154, Emit an event for critical | #17 | NFT | | | that shadow another |
| , , , | #18 | Box | _ | 464 | |
| | #19 | BoxSale | | | |

| #20 | NftStak e | Missing Events Arithmetic | 492, 485 | Emit an event for critical parameter changes |
|-----|-----------------|------------------------------|----------|--|
| #21 | PlayerD atas | Missing Events Arithmetic | 492 | Emit an event for critical parameter changes |

Informational issues

| Issue | File | Type | Line | Description |
|-------|-----------------|--|---|---|
| #1 | PlayerD atas | State variables that could be declared constant (constable-states) | 470 | Add the `constant` attributes to state variables that never change |
| #2 | Box | Unused return values | 459 | Ensure that all the return values of the function calls are used and handle both success and failure cases if needed by the business logic |
| #3 | BoxSale | Unused return values | 1329, 1240, 1241, 1243, 1244, 1245, 1249, 1250, 1228, 1229, 1230, 1231, 1141, 1333, 1219, 1218 | Ensure that all the return values of the function calls are used and handle both success and failure cases if needed by the business logic |
| #4 | NftStak e | Unused state variables | 322 | Remove unused state variables |
| #5 | PlayerD atas | Unused state variables | 469 | Remove unused state variables |
| #6 | NftStak e | Unnecessary brackets | 490 | You can remove brackets from nftDataAddress |
| #7 | Вох | Naming convention | See description Lines | Use mixedCase naming convention in local variables Recommendation: - lastvalue to lastValue Lines (250, 251, 252) If you want to change variables, make sure to change it everywhere else too |

| #10 NftStak e Warning convention n Naming convention See description Lines Recommendation: - maxtNumber to maxNumber Lines (264, 292, 319, 334) - getnum to getNum Lines (275, 340) If you want to change variables, make sure to change it everywhere else too #10 NftStak e Naming convention See description Lines See description Lines Warning convention See description Lines If you want to change convention in local variables Recommendation: - allPofit to allProfit Lines (446, 458) If you want to change variables, make sure to change it everywhere else too | #8 | BoxSale | Naming convention | See description Lines | Use mixedCase naming convention in local variables Recommendation: - lastvalue to lastValue Lines (672, 675, 677)feeto to _feeTo Lines (1318, 1319) If you want to change variables, make sure to change it everywhere else too |
|---|-----|---------|-------------------|-----------------------------|---|
| e description Lines Recommendation: - allPofit to allProfit Lines (446, 458) If you want to change variables, make sure to change it everywhere else | #9 | | Naming convention | description | convention in local variables Recommendation: - maxtNumber to maxNumber Lines (264, 292, 319, 334) - getnum to getNum Lines (275, 340 If you want to change variables, make sure to change it everywhere else |
| | #10 | | Naming convention | description | convention in local variables Recommendation: - allPofit to allProfit Lines (446, 458) If you want to change variables, make sure to |

| #11 | NftStak e | Naming convention | See description Lines | Use mixedCase naming convention in local variables Recommendation: - setnftAddr to setNftAddress Lines (242) - setstakeAddr to setStakeAddress Lines (245) If you want to change variables, make sure to change it everywhere else too |
|-----|-----------------|-------------------|-----------------------------|--|
| #12 | PlayerD atas | Naming convention | See description Lines | Use mixedCase naming convention in local variables Recommendation: - lastvalue to lastValue Lines (292, 294, 295) If you want to change variables, make sure to change it everywhere else too |

Commented Code exist

There are some instances of code being commented out in the following files that should be removed:

| File | Line | Comment |
|---------|------------|--|
| BoxSale | 1142, 1143 | // PayAddrs.add(0x38e8a525c03d3dD6648012221F57e88C7E29CfdC); |

Recommendation

Remove the commented code, or address them properly.

Audit Comments

17. January 2022:

- Contract with address
 0x1416e6EA40CBb1F09Cd2dbEdAAd6fbFE3e38D51F was not provided to Solidproof, please do your own research here
- · Read whole report for more information

SWC Attacks

| ID | Title | Relationships | Status |
|--------------------------------------|--|--|--------|
| <u>SW</u> <u>C-1</u> <u>36</u> | Unencrypted Private Data On-Chain | CWE-767: Access to Critical Private Variable via Public Method | PASSED |
| <u>SW</u> <u>C-1</u> <u>35</u> | Code With No Effects | CWE-1164: Irrelevant Code | PASSED |
| <u>SW</u> <u>C-1</u> <u>34</u> | Message call with hardcoded gas amount | CWE-655: Improper Initialization | PASSED |
| <u>SW</u> <u>C-1</u> <u>33</u> | Hash Collisions With Multiple Variable Length Arguments | CWE-294: Authentication Bypass by Capture-replay | PASSED |
| <u>SW</u> <u>C-1</u> <u>32</u> | Unexpected Ether balance | CWE-667: Improper Locking | PASSED |
| <u>SW</u> <u>C-1</u> <u>31</u> | Presence of unused variables | CWE-1164: Irrelevant Code | PASSED |
| <u>SW</u> <u>C-1</u> <u>30</u> | Right-To-Left- Override control character (U+202E) | CWE-451: User Interface (UI) Misrepresentation of Critical Information | PASSED |
| <u>SW</u> <u>C-1</u> <u>29</u> | Typographical Error | CWE-480: Use of Incorrect Operator | PASSED |
| <u>SW</u> <u>C-1</u> <u>28</u> | DoS With Block Gas Limit | CWE-400: Uncontrolled Resource Consumption | PASSED |

| <u>SW</u> <u>C-1</u> <u>27</u> | Arbitrary Jump with Function Type Variable | CWE-695: Use of Low-Level Functionality | PASSED |
|--------------------------------------|--|---|---------------|
| <u>SW</u> <u>C-1</u> <u>25</u> | Incorrect Inheritance Order | CWE-696: Incorrect Behavior Order | PASSED |
| <u>SW</u> C-1 24 | Write to Arbitrary Storage Location | CWE-123: Write-what-where Condition | PASSED |
| SW C-1 23 | Requirement Violation | CWE-573: Improper Following of Specification by Caller | PASSED |
| <u>SW</u> <u>C-1</u> <u>22</u> | Lack of Proper Signature Verification | CWE-345: Insufficient Verification of Data Authenticity | PASSED |
| <u>SW</u> <u>C-1</u> <u>21</u> | Missing Protection against Signature Replay Attacks | CWE-347: Improper Verification of Cryptographic Signature | PASSED |
| <u>SW</u> <u>C-1</u> <u>20</u> | Weak Sources of Randomness from Chain Attributes | CWE-330: Use of Insufficiently Random Values | PASSED |
| <u>SW</u> <u>C-11</u> <u>9</u> | Shadowing State Variables | CWE-710: Improper Adherence to Coding Standards | NOT PASSED |
| <u>SW</u> <u>C-11</u> <u>8</u> | Incorrect Constructor Name | CWE-665: Improper Initialization | PASSED |
| <u>SW</u> <u>C-11</u> <u>7</u> | Signature Malleability | CWE-347: Improper Verification of Cryptographic Signature | PASSED |

| <u>SW</u> <u>C-11</u> <u>6</u> | Timestamp Dependence | CWE-829: Inclusion of Functionality from Untrusted Control Sphere | PASSED |
|--------------------------------------|---|--|---------------|
| <u>SW</u> <u>C-11</u> <u>5</u> | Authorization through tx.origin | CWE-477: Use of Obsolete Function | PASSED |
| <u>SW</u> <u>C-11</u> <u>4</u> | Transaction Order Dependence | CWE-362: Concurrent Execution using Shared Resource with Improper Synchronization ('Race Condition') | PASSED |
| <u>SW</u> <u>C-11</u> <u>3</u> | DoS with Failed Call | CWE-703: Improper Check or Handling of Exceptional Conditions | PASSED |
| <u>SW</u> <u>C-11</u> <u>2</u> | Delegatecall to Untrusted Callee | CWE-829: Inclusion of Functionality from Untrusted Control Sphere | PASSED |
| <u>SW</u> <u>C-11</u> <u>1</u> | Use of Deprecated Solidity Functions | CWE-477: Use of Obsolete Function | PASSED |
| <u>SW</u> <u>C-11</u> <u>O</u> | Assert Violation | CWE-670: Always-Incorrect Control Flow Implementation | PASSED |
| SW C-1 09 | Uninitialized Storage Pointer | CWE-824: Access of Uninitialized Pointer | PASSED |
| <u>SW</u> <u>C-1</u> <u>08</u> | State Variable Default Visibility | CWE-710: Improper Adherence to Coding Standards | NOT PASSED |
| SW C-1 07 | Reentrancy | CWE-841: Improper Enforcement of Behavioral Workflow | PASSED |
| SW C-1 06 | Unprotected SELFDESTRUC T Instruction | CWE-284: Improper Access Control | PASSED |

| <u>SW</u> <u>C-1</u> <u>05</u> | Unprotected Ether Withdrawal | CWE-284: Improper Access Control | PASSED |
|--------------------------------------|--------------------------------------|---|---------------|
| <u>SW</u> <u>C-1</u> <u>04</u> | Unchecked Call Return Value | CWE-252: Unchecked Return Value | PASSED |
| <u>SW</u> <u>C-1</u> <u>03</u> | Floating Pragma | CWE-664: Improper Control of a Resource Through its <u>Lifetime</u> | NOT PASSED |
| SW C-1 02 | Outdated Compiler Version | CWE-937: Using Components with Known Vulnerabilities | PASSED |
| <u>SW</u> <u>C-1</u> <u>01</u> | Integer Overflow and Underflow | CWE-682: Incorrect Calculation | PASSED |
| <u>SW</u> <u>C-1</u> <u>00</u> | Function Default Visibility | CWE-710: Improper Adherence to Coding Standards | PASSED |
| | | | |



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