

Blockchain Security | Smart Contract Audits | KYC Development | Marketing

MADE IN GERMANY

Bullfarm

Audit

Security Assessment 10. October, 2022

For







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Version	Date	Description
1.0	10. October 2022	Layout projectAutomated-/Manual-Security TestingSummary

Network

Ethereum (ERC20)

Website

https://ushi.pro/ https://eth-bull.app/

Telegram

https://t.me/u_s_h_i

Twitter

https://twitter.com/USHI_ETH

Instagram

https://instagram.com/ushi_eth?igshid=YmMyMTA2M2Y=

Youtube

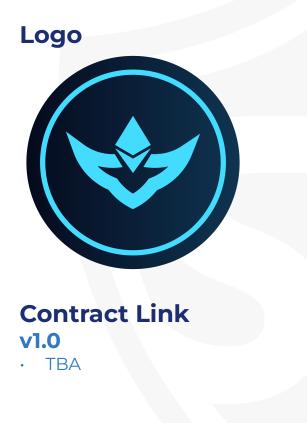
https://youtube.com/channel/UCFROBrgKsVzLB3UTPtZxAGA

Description

Bull is a faithful assistant that designed to help to taste the sweetness of a big growth

Project Engagement

During the 7th of October 2022, **Bullfarm 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.



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:

Dependency / Import Path	Count
@openzeppelin/contracts/access/Ownable.sol	2
@openzeppelin/contracts/token/ERC20/IERC20.sol	2
@openzeppelin/contracts/utils/Address.sol	1
@openzeppelin/contracts/utils/math/SafeMath.sol	1
@uniswap/v2-core/contracts/interfaces/IUniswapV2Factory.sol	1
@uniswap/v2-core/contracts/interfaces/IUniswapV2Pair.sol	1
@uniswap/v2-periphery/contracts/interfaces/IUniswapV2Router02.sol	2

Tested Contract Files

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

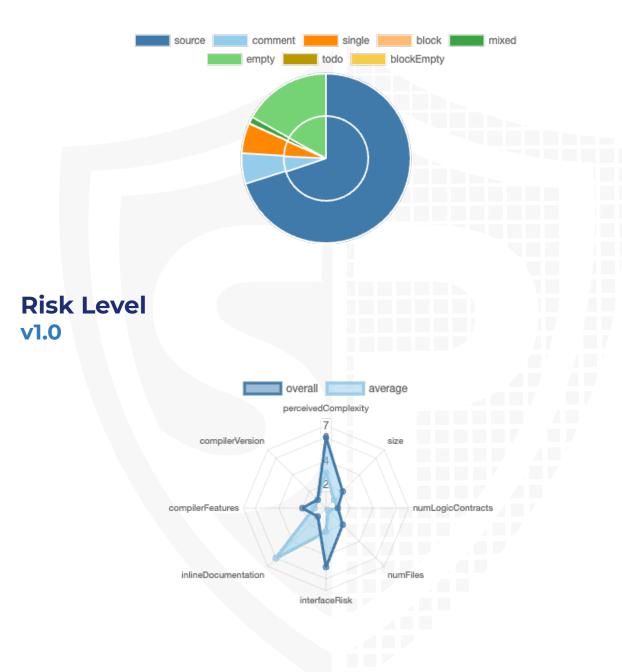
A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.

v1.0

File Name	SHA-1 Hash
contracts/interfaces/IBullFund.sol	b0c205510e2d1124192750f1d1f90c7f64bcac5c
contracts/interfaces/IUshiToken.sol	41f9efb66aa2bb750e083db1b5ea40ebf4912cf7
contracts/interfaces/IBullFarm.sol	544f2468bd43c45120ec9fa46df5efbe119fd434
contracts/BullFarm.sol	2f21856259667b82f0c1e96df00b6835af94c714
contracts/UshiToken.sol	0c2704f4dfda778094cacdf927b4725e5307002b
contracts/LineManager.sol	a7a1376f5f9c79ea21d316a8b5496bfa28afe000
contracts/BullFarmFund.sol	1f54f988657a44412d22ac4d8e31a38f5dba3927

Metrics

Source Lines v1.0



Capabilities

Components

Version	Contracts	Libraries	Interfaces	Abstract
1.0	4	0	3	0

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	rsion	n Public Payabl	
1.0		73	8

Version	External Internal Private I		Pure	View	
1.0	39	61	28	3	33

State Variables

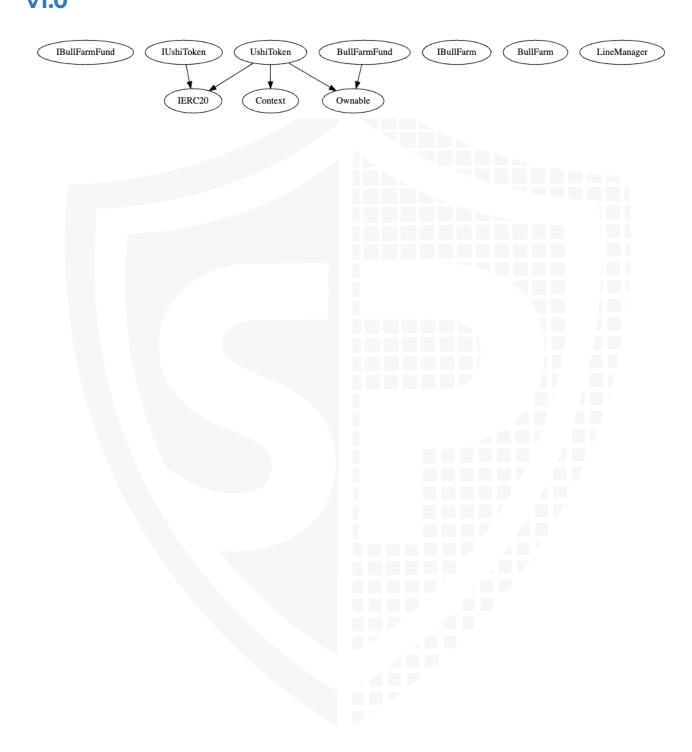
Version	Version Total P	
1.0	73	49

Capabilities

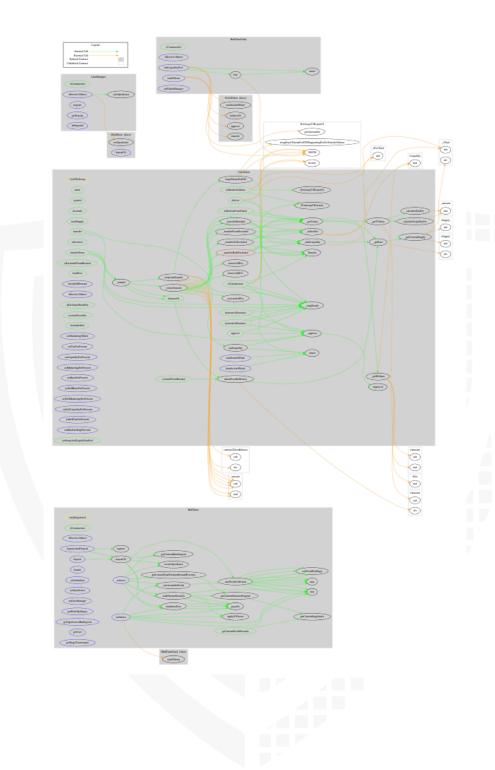
Version	Solidity Versions observed	Experim ental Features	Can Receive Funds	Uses Assembl Y	Has Destroya ble Contract s
1.0	^0.8.0		yes		

Version	Transfer s ETH	Low- Level Calls	Deleg ateCa II	Uses Hash Function s	EC Rec ove r	New/ Create/ Create2
1.0	yes					

Inheritance Graph v1.0



CallGraph v1.0



Scope of Work/Verify Claims

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. Is contract an upgradeable
- 2. Correct implementation of Token standard
- 3. Deployer cannot mint any new tokens
- 4. Deployer cannot burn or lock user funds
- 5. Deployer cannot pause the contract
- 6. Deployer cannot set fees
- 7. Deployer cannot blacklist/antisnipe addresses
- 8. Overall checkup (Smart Contract Security)

Is contract an upgradeable

Name	
Is contract an upgradeable?	No

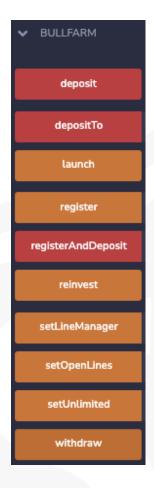


Correct implementation of Token standard

	ERC20						
Function	Description	Exist	Tested	Verified			
TotalSupply	Provides information about the total token supply	\checkmark	√	\checkmark			
BalanceOf	Provides account balance of the owner's account	\checkmark	√	\checkmark			
Transfer	Executes transfers of a specified number of tokens to a specified address	√	√	√			
TransferFrom	Executes transfers of a specified number of tokens from a specified address	√	√	√			
Approve	Allow a spender to withdraw a set number of tokens from a specified account	1	√	✓			
Allowance	Returns a set number of tokens from a spender to the owner	√	1	✓			

Write functions of contract v1.0







Deployer cannot mint any new tokens

Name	Exist	Tested	Status
Deployer cannot mint	-	-	-



Deployer cannot burn or lock user funds

Name	Exist	Tested	Status
Deployer cannot lock	\checkmark	√	X
Deployer cannot burn	√	√	\checkmark

Comments:

v1.0

- Owner can lock user funds by
 - Setting "_myHoldingPercent" to 0
- Tokens
 - will be burned while tx

```
function _tokenTransfer(address sender1, address recipient1, uint256 amount1) private
   if (_isExcludedFromFee[sender1] || _isExcludedFromFee[recipient1]) {
        removeAllFee():
    activateSellFee();
   uint256 burnAmt = amount f.mul(_burnFee).div(100);
    uint256 marketingAmt = amount f.mul(_marketingFee).div(100);
    if (_isExcluded[sender † ] && !_isExcluded[recipient † ]) {
         _transferFromExcluded(sender1, recipient1, (amount1.sub(burnAmt).sub(marketingAmt)));
    } else if (!_isExcluded[sender1] && _isExcluded[recipient1]) {
     _transferToExcluded(sender1, recipient1, (amount1.sub(burnAmt).sub(marketingAmt)));
else if (!_isExcluded[sender1] && !_isExcluded[recipient1]) {
    _transferStandard(sender1, recipient1, (amount1.sub(burnAmt).sub(marketingAmt)));
} else if (_isExcluded[sender1] && _isExcluded[recipient1]) {
        _transferBothExcluded(sender1, recipient1, (amount1.sub(burnAmt).sub(marketingAmt)));
        _transferStandard(sender1, recipient1, (amount1.sub(burnAmt).sub(marketingAmt)));
   _taxFee = 0;
_liquidityFee = 0;
    _transferStandard(<mark>senderf, address(0), burnAmt);</mark>
    _transferStandard(sender 1, marketingWallet, marketingAmt);
    _taxFee = _previousTaxFee;
    _liquidityFee = _previousLiquidityFee;
    if (_isExcludedFromFee[sender | ] || _isExcludedFromFee[recipient | ] || recipient | == uniswapV2Pair) {
        restoreAllFee();
```

Deployer cannot pause the contract

Name	Exist	Tested	Status
Deployer cannot pause	-	_	-



Deployer cannot set fees

Name	Exist	Tested	Status
Deployer cannot set fees over 25%	\checkmark	√	\checkmark
Deployer cannot set fees to nearly 100% or to 100%	√	√	√



Deployer can blacklist/antisnipe addresses

Name	Exist	Tested	Status
Deployer cannot blacklist/antisnipe addresses	-	-	-



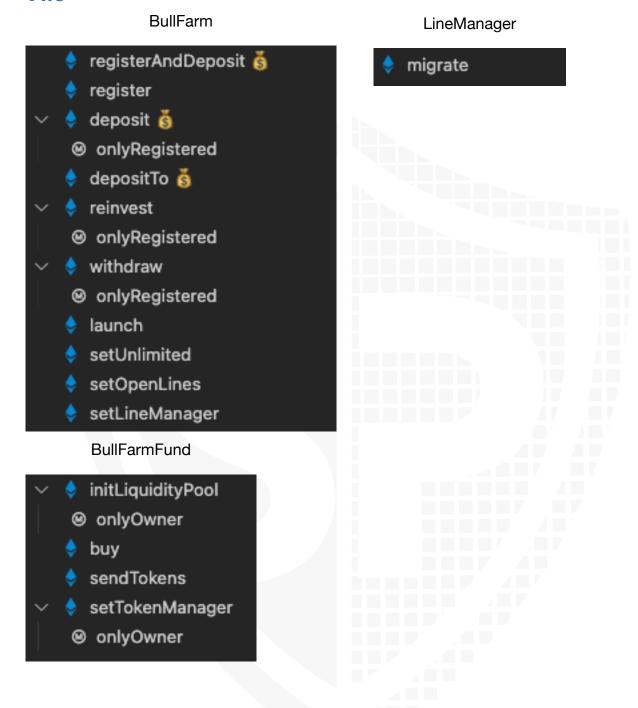
Overall checkup (Smart Contract Security)



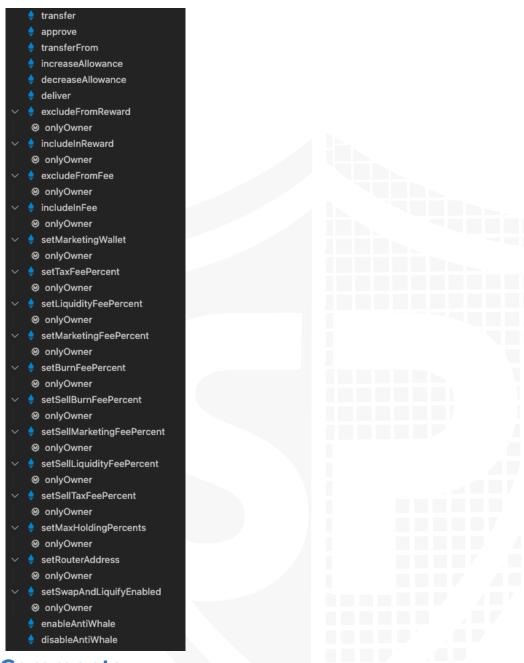
Legend

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

Modifiers and public functions v1.0



UshiToken



Comments

- Deployer can enable/disable following state variables
 - UshiToken
 - swapAndLiquifyEnabled
 - _isExcludedFromFee
 - isExcluded
 - _excluded
- · Deployer can set following addresses
 - UshiToken
 - uniswapV2Pair
 - uniswapV2Router
 - marketingWallet

- BullFarmFund
 - manager
- BullFarm
 - lineManager
- Existing Modifiers
 - onlyRegistered
 - lockTheSwap
- · If an address is excluded from reward it cannot call the deliver function
- · Liquidity will be added to the owner in BullFarmFund

```
// Add the liquidity
uniswapV2Router.addLiquidityETH{value: INITIAL_ETH_LIQUIDITY} (
address(token),
tokenAmount,
0, // slippage is unavoidable
0, // slippage is unavoidable
owner(),
block.timestamp
);
```

Please check if an OnlyOwner or similar restrictive modifier has been forgotten.

Source Units in Scope

v1.0

Туре	File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score	Capabilities
Q	contracts/interfaces/IBullFund.sol		1	8	7	3	1	3	
Q	contracts/interfaces/IUshiToken.sol		1	9	8	4	1	5	
Q	contracts/interfaces/IBullFarm.sol		1	9	7	3	1	8	. <u>Š</u>
9	contracts/BullFarm.sol	1		406	406	321	26	231	. <u>Š</u> .
)	contracts/UshiToken.sol	1		561	550	419	34	364	. <u>Š</u>
9	contracts/LineManager.sol	1		55	55	42	1	28	. <u>Š</u>
9	contracts/BullFarmFund.sol	1		96	96	70	9	86	. <u>Š</u> .
Q	Totals	4	3	1144	1129	862	73	725	. <u>Š</u>

Legend

Attribute	Description
Lines	total lines of the source unit
nLines	normalised lines of the source unit (e.g. normalises functions spanning multiple lines)
nSLOC	normalised 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

Critical issues

No critical issues

High issues

No high issues

Medium issues

No medium issues

Low issues

Issue	File	Type	Line	Description
#1	All	A floating pragma is set	3	The current pragma Solidity directive is not a certain one.
#2	BullFar m	Missing Zero Address Validation (missing- zero-check)	75-77, 231	Check that the address is not zero
#3	BullFar mFund	Missing Zero Address Validation (missing- zero-check)	94	Check that the address is not zero
#4	UshiTok en	Missing Zero Address Validation (missing- zero-check)	81-82,493	Check that the address is not zero
#5	UshiTok en	State variable visibility is not set	63	It is best practice to set the visibility of state variables explicitly
#6	LineMa nager	State variable visibility is not set	8-10	It is best practice to set the visibility of state variables explicitly
#7	BullFar m	State variable visibility is not set	43, 48	It is best practice to set the visibility of state variables explicitly
#8	UshiTok en	Local variables shadowing	318, 126	Rename the local variables that shadow another component

#9	UshiTok en	Missing Events Arithmetic	513, 503, 508, 538, 518, 528, 523, 533, 498	Emit an event for critical parameter changes
#10	BullFar m	Tautology or contradictio	224	The check of "lines >= 0" is unnecessary because lines is an uint type. It cannot be below 0.

Informational issues

Issue	File	Туре	Line	Description
#1	BullFar m	State variables that could be declared constant (constable-states)	40	Add the `constant` attributes to state variables that never change
#2	UshiTok en	State variables that could be declared constant (constable-states)	32, 30, 31, 26, 65	Add the `constant` attributes to state variables that never change
#3	All	NatSpec documentation missing		If you started to comment your code, also comment all other functions, variables etc.
#4	BullFar m	Delay Withdraw	See description	We recommend you generally to add a delay of min. 24 hours to withdraw.

Audit Comments

We recommend you to use the special form of comments (NatSpec Format, Follow link for more information https://docs.soliditylang.org/en/latest/natspec-format.html) for your contracts to provide rich documentation for functions, return variables and more. This helps investors to make clear what that variables, functions etc. do.

10. October 2022:

· Read whole report and modifiers section 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 Lifetime	NOT PASSED
<u>SW</u> <u>C-1</u> <u>02</u>	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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