SOLIDProof

Bring trust into your projects

Blockchain Security | Smart Contract Audits | KYC

MADE IN GERMANY

BSC Station

Audit

Security Assessment

19. December, 2022

For

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Version	Date	Description
1.0	13 December, 2022	• Layout project • Automated- /Manual-Security Testing • Summary

Network
Aptos

Website
https://bscstation.finance/

Twitter
https://twitter.com/bscstation

Telegram
https://t.me/bscstation

Description

BSCStation - The fully decentralized protocol for launching new ideas. An all-in-one Incubation Hub with a full-stack Defi platform across all main blockchain networks. We provide exclusive services including IDO/INO Launchpad, Yield farming, NFT Auction, Marketplace, and BSCSwap BSCStation operates on top of the all main blockchain networks and is designed to offer maximum value to consumers and institutions.

Project Engagement

During the Date, **BSC Station** 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.

Logo

Contract Link

v1.0

- https://gitlab.com/bscstationofficial/auditcode/-/tree/idocontracts/aptos-contracts

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-by-line 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.

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:

```
use std::signer;
use aptos_framework::coin;
use std::timestamp;
use std::vector;
use aptos_std::table::{Self, Table};
```

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

Filename	SHA-1 Hash
m_claim.move	98a5cf2a4a198adf213593f4a38215f0598c5ec9
m_joinpool.move	a38215f0598c5ec998a5cf2a4a198adf213593f4

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 .rs).

We will verify the following claims:

1. Missing signer checks
2. Missing ownership checks
3. Re-initiation with cross-instance confusion
4. Arithmetic overflow/underflows
5. Numerical precision errors
6. Loss of precision in calculation
7. Incorrect calculation
8. Casting truncation
9. Exponential complexity in calculation
10. Missing freeze authority checks
11. Over/under payment of loans
12. Overall checkup (Smart Contract Security)

Overall checkup (Smart Contract Security)

Tested	Verified

Legend

Attribute	Symbol
Verfified / Checked	
Partly Verified	
Unverified / Not checked	
Not available	

Modifiers and public functions
v1.0

Modifiers

N/A

Public functions

- create_pool
- admin_deposit_pool
- create_user
- add_whitelists
- add_whiteleists_single
- update_pool
- claim
- refund
- admin_withdraw
- admin_withdraw_stablecoin

Comments

- The admin can deposit and withdraw tokens from the contract
- Add addresses in the whitelist but cannot remove them
- Update the pool

Audit Results

AUDIT PASSED

Critical issues

No critical issues

High issues

No high issues

Medium issues

No high issues

Low issues

Issue	File	Type	Line	Description
#1	m_claim.move	Missing Zero address check	124,148,158	Check that the address passed in the function is not zero
#2	All	Missing Events	All	Emit events for critical parameter changes

Informational issues

Issue	File	Type	Line	Description
#1	All	NatSpec documentation missing	All	If you started to comment your code, also comment all other functions, variables etc.

Commented Code exist

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

File	Line
m_claim.move	295

Recommendation

Remove the commented code, or address them properly.

Audit Comments

We recommend you to use the special form of comments (NatSpec Format, 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.

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- There is still an owner (Owner still has not renounced ownership)
- Read the whole report and modifiers section for more information.

No unit tests were performed because no corresponding tests were supplied.

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