

Draft Security Assessment for

107-2022-04-jpegd (1New-FD) (10K-FLP)

July 23, 2023

The issue can cause large



Executive Summary

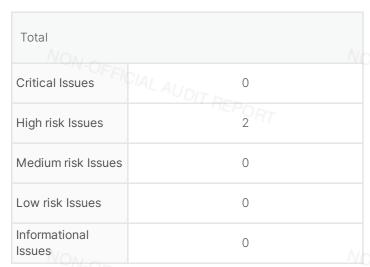
Overview Orași	
Project Name	107-2022-04-jpegd (1New-FD) (10K- FLP)
Codebase URL	https://github.com/code-423n4/2022- 04-jpegd
Scan Engine	Al Analyzer
Scan Time	2023/07/23 21:19:29
Commit Id	e72861a

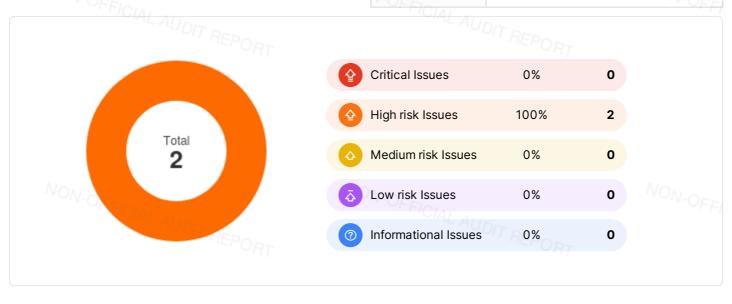
Critical Issues	economic losses, large-scale data disorder, loss of control of authority management, failure of key functions, or indirectly affect the correct operation of other smart contracts interacting with it.
High Risk Issues	The issue puts a large number of users' sensitive information at risk or is reasonably likely to lead to catastrophic impacts on clients' reputations or serious financial implications for clients and users.
Medium Risk Issues	The issue puts a subset of users' sensitive information at risk, would be detrimental to the client's reputation if exploited, or is reasonably likely to lead to moderate financial impact.
Low Risk Issues	The risk is relatively small and could not be exploited on a recurring basis, or is a risk that the client has indicated is low-impact in view of the client's business circumstances.
Informational Issue	The issue does not pose an immediate risk but is relevant to

in Depth.

?

security best practices or Defence







Summary of Findings

MetaScan security assessment was performed on July 23, 2023 21:19:29 on project 107-2022-04-jpegd (1New-FD) (1OK-FLP) with the repository https://github.com/code-423n4/2022-04-jpegd on branch default branch. The assessment was carried out by scanning the project's codebase using the scan engine Al Analyzer. There are in total 2 vulnerabilities / security risks discovered during the scanning session, among which 0 critical vulnerabilities, 2 high risk vulnerabilities, 0 medium risk vulnerabilities, 0 low risk vulnerabilities, 0 informational issues.

ID	Description	Severity
MSA-001	MWE-204: Unsafe First Deposit	High risk
MSA-002	MWE-200: Insecure LP Token Value Calculation	High risk





Findings



Critical (0)

No Critical vulnerabilities found here ICIAL AUDIT REPORT



High risk (2)

1. MWE-204: Unsafe First Deposit



High risk



Security Analyzer

First depositor can break minting of shares or drain the liquidity of all users.

File(s) Affected

contracts/vaults/yVault/yVault.sol #142-157

```
function deposit(uint256 _amount) public noContract(msg.sender) {
  require(_amount > 0, "INVALID_AMOUNT");
   uint256 balanceBefore = balance();
   token.safeTransferFrom(msg.sender, address(this), _amount);
   uint256 supply = totalSupply();
   uint256 shares;
   if (supply == 0) {
       shares = _amount;
   } else {
       //balanceBefore can't be 0 if totalSupply is > 0
       shares = (_amount * supply) / balanceBefore;
                                            N-OFFICIAL AUDIT REPORT
    _mint(msg.sender, shares);
   emit Deposit(msg.sender, _amount);
```

Recommendation

When totalSupply() == 0, send the first min liquidity LP tokens to the zero address to enable share dilution.



2. MWE-200: Insecure LP Token Value Calculation





Liquidity token value/price can be manipulated to cause flashloan attacks.

File(s) Affected

contracts/farming/yVaultLPFarming.sol #168-173

```
function _computeUpdate() internal view returns (uint256 newAccRewardsPerShare, uint256 currentBala
   currentBalance = vault.balanceOfJPEG() + jpeg.balanceOf(address(this));
   uint256 newRewards = currentBalance - previousBalance;
   newAccRewardsPerShare = accRewardPerShare + newRewards * 1e36 / totalStaked;
```

contracts/farming/yVaultLPFarming.sol #75-95

```
function pendingReward(address _user)
    external
       view
       returns (uint256)
       uint256 rewardShare = accRewardPerShare;
       uint256 staked = totalStaked;
       /\!/if\ block Number\ is\ greater\ than\ the\ pool's\ `lastReward Block`\ the\ pool's\ `accReward Per Share'\ is
       //we need to calculate the up to date amount to return an accurate reward value
       if (block.number > lastRewardBlock && staked > 0) {
           (rewardShare, ) = _computeUpdate();
       }
       return
//rewards that concuser] +
           //rewards that the user had already accumulated but not claimed
           //subtracting the user's `lastAccRewardPerShare` from the pool's `accRewardPerShare` results
           //the pool has accumulated since the user's last claim, multiplying it by the user's shares
           (balanceOf[_user] * (rewardShare - userLastAccRewardPerShare[_user])) /
           1e36;
```

Recommendation

Do not use AMM pool or custom liquidity calculation to caculate LP token value/price. NON-OFFICIAL AUDIT REPORT NON-OFFICIAL AUDIT REPORT



Medium risk (0)

No Medium risk vulnerabilities found here



Low risk (0)

No Low risk vulnerabilities found here



CIAL AUDIT REPORT Informational (0)



No Informational vulnerabilities found here



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