



METATRUST

Draft

Security Assessment for

Hack-20220807- EGDFinance (10K-FLP) (1New-FLB)

July 23, 2023






Executive Summary

| Overview | | | |
|--------------|---|--|--|
| Project Name | Hack-20220807-EGDFinance (10K-FLP) (1New-FLB) | | |
| Codebase URL | - | | |
| Scan Engine | AI Analyzer | | |
| Scan Time | 2023/07/23 15:36:12 | | |
| Commit Id | - | | |

| Total | | | |
|----------------------|---|--|--|
| Critical Issues | 0 | | |
| High risk Issues | 2 | | |
| Medium risk Issues | 0 | | |
| Low risk Issues | 0 | | |
| Informational Issues | 0 | | |

| | | |
|---------------------|--|---|
| Critical Issues | | The issue can cause large 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 security best practices or Defence in Depth. |



| | | | |
|---|----------------------|------|---|
|  | Critical Issues | 0% | 0 |
|  | High risk Issues | 100% | 2 |
|  | Medium risk Issues | 0% | 0 |
|  | Low risk Issues | 0% | 0 |
|  | Informational Issues | 0% | 0 |

Summary of Findings

MetaScan security assessment was performed on **July 23, 2023 15:36:12** on project **Hack-20220807-EGDFinance (1OK-FLP) (1New-FLB)** with the repository **20220807_EGDFinance** on branch **default branch**. The assessment was carried out by scanning the project's codebase using the scan engine **AI 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-200: Insecure LP Token Value Calculation | High risk |
| MSA-002 | MWE-202: Insecure Token Buying Behavior | High risk |



Findings

Critical (0)

No Critical vulnerabilities found here

High risk (2)

1. MWE-200: Insecure LP Token Value Calculation

 High risk Security Analyzer

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

File(s) Affected

contracts/contract/EGD_Defi.sol #111-115

```
111     function getEGDPrice() public view returns (uint){
112         uint balance1 = EGD.balanceOf(pair);
113         uint balance2 = U.balanceOf(pair);
114         return (balance2 * 1e18 / balance1);
115     }
```



contracts/contract/EGD_Defi.sol #240-270

```
240     function claimAllReward() external {
241         require(userInfo[msg.sender].userStakeList.length > 0, 'no stake');
242         require(!black[msg.sender], 'black');
243         uint[] storage list = userInfo[msg.sender].userStakeList;
244         uint rew;
245         uint outAmount;
246         uint range = list.length;
247         for (uint i = 0; i < range; i++) {
248             UserSlot storage info = userSlot[msg.sender][list[i - outAmount]];
249             require(info.totalQuota != 0, 'wrong index');
250             uint quota = (block.timestamp - info.claimTime) * info.rates;
251             if (quota >= info.leftQuota) {
252                 quota = info.leftQuota;
253             }
254             rew += quota * 1e18 / getEGDPrice();
255             info.claimTime = block.timestamp;
256             info.leftQuota -= quota;
257             info.claimedQuota += quota;
258             if (info.leftQuota == 0) {
259                 userInfo[msg.sender].totalAmount -= info.totalQuota;
260                 delete userSlot[msg.sender][list[i - outAmount]];
261                 list[i - outAmount] = list[list.length - 1];
262                 list.pop();
263                 outAmount++;
264             }
265         }
266         userInfo[msg.sender].userStakeList = list;
267         EGD.transfer(msg.sender, rew);
268         userInfo[msg.sender].totalClaimed += rew;
269         emit Claim(msg.sender, rew);
270     }
```

Recommendation

Do not use AMM pool or custom liquidity calculation to calculate LP token value/price.

2. MWE-202: Insecure Token Buying Behavior

 High risk Security Analyzer

Buying tokens via swap or AMM can be manipulated to cause sandwich attacks.

File(s) Affected

contracts/contract/EGD_Defi.sol #117-123

```
117     function _processReBuy(uint amount) internal {
118         U.approve(address(router), amount);
119         address[] memory path = new address[] (2);
120         path[0] = address(U);
121         path[1] = address(EGD);
122         router.swapExactTokensForTokensSupportingFeeOnTransferTokens(amount, 0, path, address(this), b
123     }
```

Recommendation

Do not use swap or AMM to buy tokens.

Medium risk (0)

No Medium risk vulnerabilities found here

Low risk (0)

No Low risk vulnerabilities found here

Informational (0)

No Informational vulnerabilities found here

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