

Draft
Security Assessment for

# 13-2021-06realitycards (10K-FR)

July 23, 2023

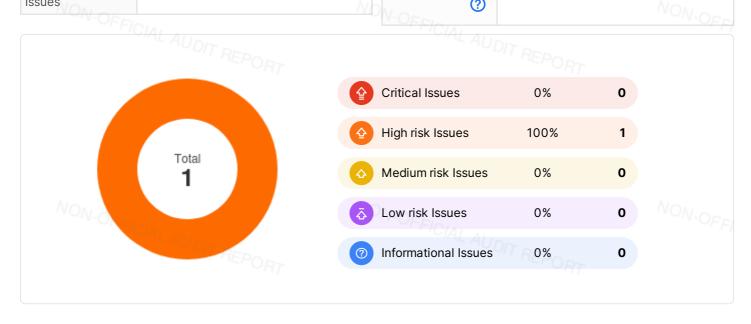


## **Executive Summary**

Overview	NO SIAL AUDIT -
Project Name	13-2021-06-realitycards (10K-FR)
Codebase URL	https://github.com/code-423n4/2021- 06-realitycards
Scan Engine	Al Analyzer
Scan Time	2023/07/23 21:38:19
Commit Id	86a816a

Total	
Critical Issues	CIAL AUDIT REPORT
High risk Issues	TEPORT
Medium risk Issues	0
Low risk Issues	0
Informational Issues	0

Critical Is		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		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 I	Risk 📤	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.
Informatio	onal Issue	The issue does not pose an immediate risk but is relevant to security best practices or Defence in Depth.





#### **Summary of Findings**

MetaScan security assessment was performed on **July 23, 2023 21:38:19** on project **13-2021-06-realitycards** (**10K-FR**) with the repository **https://github.com/code-423n4/2021-06-realitycards** 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 **1** vulnerabilities / security risks discovered during the scanning session, among which **0** critical vulnerabilities, **1** high risk vulnerabilities, **0** medium risk vulnerabilities, **0** low risk vulnerabilities, **0** informational issues.

ID	Description	Severity
MSA-001	MWE-205: Front Running	High risk

FICIAL AUDIT REPORT



## **Findings**



### **Critical** (0)

No Critical vulnerabilities found here

FICIAL AUDIT REPORT 4 High risk (1)



#### 1. MWE-205: Front Running





Users are required to transfer assets in advance and minting token/liquidity/earning thus could be frontrun.

#### File(s) Affected

contracts/RCTreasury.sol #703-745

```
function collectRentUser(address _user, uint256 _timeToCollectTo)
       public
       override
       returns (uint256 newTimeLastCollectedOnForeclosure)
       require(!globalPause, "Global pause is enabled");
       assert(_timeToCollectTo != 0);
       if (user[_user].lastRentCalc < _timeToCollectTo) {</pre>
           uint256 rentOwedByUser = rentOwedUser(_user, _timeToCollectTo);
 if (rentOwedByUser > 0 && rentant.)

// The User has run out of deposit already.

| The User has run out of deposit already.
           if (rentOwedByUser > 0 && rentOwedByUser > user[_user].deposit) {
               uint256 previousCollectionTime = user[_user].lastRentCalc;
           timeTheirDepsitLasted = timeSinceLastUpdate * (usersDeposit/rentOwed)
                                  = (now - previousCollectionTime) * (usersDeposit/rentOwed)
               uint256 timeUsersDepositLasts =
                   ((_timeToCollectTo - previousCollectionTime) *
                        uint256(user[_user].deposit)) / rentOwedByUser;
-OFFICIAL*/AL
           \textit{Users last collection time = previousCollectionTime + timeTheirDepsitLasted}
               rentOwedByUser = uint256(user[_user].deposit);
               newTimeLastCollectedOnForeclosure =
                   previousCollectionTime +
                   timeUsersDepositLasts;
                _increaseMarketBalance(rentOwedByUser, _user);
               user[_user].lastRentCalc = SafeCast.toUint64(
                   newTimeLastCollectedOnForeclosure
               );
               assert(user[_user].deposit == 0);
               isForeclosed[_user] = true;
emit LogUserForeclosed(_user, true);
} else {
               user[_user].lastRentCalc = SafeCast.toUint64(_timeToCollectTo);
           emit LogAdjustDeposit(_user, rentOwedByUser, false);
```

#### Recommendation

Put asset transfering and token minting in the same function to keep atomicity.



## A 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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