

Draft
Security Assessment for

Hack-20210519-PancakeBunny (10K-FLP)

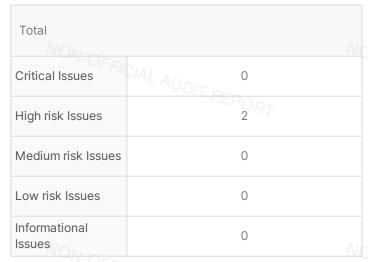
July 23, 2023



Executive Summary

Overview ORF	Overview	
Project Name	Hack-20210519-PancakeBunny (10K- FLP)	
Codebase URL	-	
Scan Engine	Al Analyzer	
Scan Time	2023/07/23 15:09:02	
Commit Id	No.	

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 V-OFF/C/A/ ♠	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.







Summary of Findings

MetaScan security assessment was performed on **July 23, 2023 15:09:02** on project **Hack-20210519-PancakeBunny (10K-FLP)** with the repository **Hack_20210519_PancakeHunny** 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-200: Insecure LP Token Value Calculation	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-200: Insecure LP Token Value Calculation





Security Analyzer

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

File(s) Affected

contracts/dashboard/calculator/PriceCalculatorBSC.sol #101-132

```
function valueOfAsset(address asset, uint amount) public view override returns (uint valueInBNB, ui
   if (asset == address(0) || asset == WBNB) {
       valueInBNB = amount;
       valueInUSD = amount.mul(priceOfBNB()).div(1e18);
   else if (keccak256(abi.encodePacked(IPancakePair(asset).symbol())) == keccak256("Cake-LP")) {
       if (IPancakePair(asset).totalSupply() == 0) return (0, 0);
       if (IPancakePair(asset).token0() == WBNB || IPancakePair(asset).token1() == WBNB) {
           valueInBNB = amount.mul(IBEP20(WBNB).balanceOf(address(asset))).mul(2).div(IPancakePail
           valueInUSD = valueInBNB.mul(priceOfBNB()).div(1e18);
     A uint balanceToken0 = IBEP20(IPancakePair(asset).token0()).balanceOf(asset);
            (uint token0PriceInBNB,) = valueOfAsset(IPancakePair(asset).token0(), 1e18);
           valueInBNB = amount.mul(balanceToken0).mul(2).mul(token0PriceInBNB).div(1e18).div(1PanceToken0)
           valueInUSD = valueInBNB.mul(priceOfBNB()).div(1e18);
       }
   }
   else {
       address pairToken = pairTokens[asset] == address(0) ? WBNB : pairTokens[asset];
       address pair = factory.getPair(asset, pairToken);
       if (IBEP20(asset).balanceOf(pair) == 0) return (0, 0);
    valueInBNB = IBEP20(pairToken).balanceOf(pair).mul(amount).div(IBEP20(asset).balanceOf(pair
       if (pairToken != WBNB) {
           (uint pairValueInBNB,) = valueOfAsset(pairToken, 1e18);
           valueInBNB = valueInBNB.mul(pairValueInBNB).div(1e18);
       valueInUSD = valueInBNB.mul(priceOfBNB()).div(1e18);
```

Recommendation

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



2. MWE-200: Insecure LP Token Value Calculation





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

File(s) Affected

contracts/bunny/BunnyMinterV2.sol #261-299

```
function _zapAssetsToBunnyBNB(address asset, uint amount, bool fromV2) private returns (uint bunnyF
   uint _initBunnyBNBAmount = IBEP20(BUNNY_BNB).balanceOf(address(this));
   if (asset == address(0)) {
       zapBSC.zapIn{ value : amount } (BUNNY_BNB);
   else if (keccak256(abi.encodePacked(IPancakePair(asset).symbol())) == keccak256("Cake-LP")) {
       IPancakeRouter02 router = fromV2 ? routerV2 : routerV1;
       if (IBEP20(asset).allowance(address(this), address(router)) == 0) {
           IBEP20(asset).safeApprove(address(router), uint(- 1));
                                                       AL AUDIT REPORT
       IPancakePair pair = IPancakePair(asset);
       address token0 = pair.token0();
       address token1 = pair.token1();
       (uint amountToken0, uint amountToken1) = router.removeLiquidity(token0, token1, amount, 0,
       if (IBEP20(token0).allowance(address(this), address(zapBSC)) == 0) {
           IBEP20(token0).safeApprove(address(zapBSC), uint(-1));
       if (IBEP20(token1).allowance(address(this), address(zapBSC)) == 0) {
           IBEP20(token1).safeApprove(address(zapBSC), uint(-1));
       zapBSC.zapInToken(token0, amountToken0, BUNNY_BNB);
       zapBSC.zapInToken(token1, amountToken1, BUNNY_BNB);
   }
   else {
       if (IBEP20(asset).allowance(address(this), address(zapBSC)) == 0) {
           IBEP20(asset).safeApprove(address(zapBSC), uint(-1));
       zapBSC.zapInToken(asset, amount, BUNNY_BNB);
   bunnyBNBAmount = IBEP20(BUNNY_BNB).balanceOf(address(this)).sub(_initBunnyBNBAmount);
```



contracts/bunny/BunnyMinterV2.sol #180-200

```
function mintFor(address asset, uint _withdrawalFee, uint _performanceFee, address to, uint) extern
uint feeSum = _performanceFee.add(_withdrawalFee);
    _transferAsset(asset, feeSum);

    if (asset == BUNNY) {
        IBEP20(BUNNY).safeTransfer(DEAD, feeSum);
        return;
}

uint bunnyBNBAmount = _zapAssetsToBunnyBNB(asset, feeSum, false);
if (bunnyBNBAmount == 0) return;

IBEP20(BUNNY_BNB).safeTransfer(BUNNY_POOL, bunnyBNBAmount);
ISEP20(BUNNY_BNB).safeTransfer(BUNNY_POOL, bunnyBNBAmount);

IStakingRewards(BUNNY_POOL).notifyRewardAmount(bunnyBNBAmount);

uint valueInBNB,) = priceCalculator.valueOfAsset(BUNNY_BNB, bunnyBNBAmount);

uint contribution = valueInBNB.mul(_performanceFee).div(feeSum);
uint mintBunny = amountBunnyToMint(contribution);
if (mintBunny == 0) return;
_mint(mintBunny, to);
}

mint (mintBunny, to);
```

Recommendation

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

🔥 Med

Medium risk (0)

No Medium risk vulnerabilities found here



No Low risk vulnerabilities found here



No Informational vulnerabilities found here



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