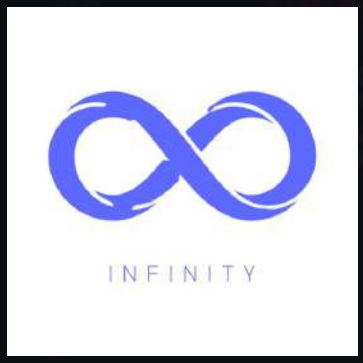
Coinsult

Advanced Manual Smart Contract Audit



Project: Infinity Trust

Website: https://infinitytrusts.com/

Low-Risk	Medium-Risk	High-Risk
7 low-risk code issues found	0 medium-risk code issues found	0 high-risk code issues found

Contract Address

0x233DeA98806F91d175d23068cea548aDBb1876fE

Disclaimer: Coinsult is not responsible for any financial losses. Nothing in this contract audit is financial advice, please do your own research.

Disclaimer

Coinsult is not responsible if a project turns out to be a scam, rug-pull or honeypot. We only provide a detailed analysis for your own research.

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Tokenomics

Rank	Address	Quantity (Token)	Percentage
1	0x9cbf9fd973f9d6df2bf66742a7b6c26caea143c8	598,000,000	59.8000%
2	0x4e708abb624f2813fc0b010b6ad2ad4b1c98d0e4	402,000,000	40.2000%

Source Code

Coinsult was comissioned by Infinity Trust to perform an audit based on the following smart contract:

https://bscscan.com/address/0x233DeA98806F91d175d23068cea548aDBb1876fE#code

Manual Code Review

In this audit report we will highlight all these issues:

Low-Risk

7 low-risk code
issues found

Medium-Risk

0 medium-risk code
issues found

High-Risk

0 high-risk code
issues found

The detailed report continues on the next page...

🟢 **Low-Risk:** Could be fixed, will not bring problems.

Contract contains Reentrancy vulnerabilities

Additional information: This combination increases risk of malicious intent. While it may be justified by some complex mechanics (e.g. rebase, reflections, buyback).

More information: Slither

```
function _transferFrom(
    address sender,
    address recipient,
    uint256 amount
) internal returns (bool) {
    // antiwhale
    if ((sender == pair) || (recipient == pair)) {
        if (
            !isAntiWhaleEnded() &amp;amp;
            !(addLPaddress[sender] || addLPaddress[recipient])
        ) {
            require(amount &lt;= antiWhaleAmount, &quot;AntiWhale&quot;);
        }
    }
    // antiwhale

    if (inSwap) {
        return _basicTransfer(sender, recipient, amount);
    }
    if (shouldRebase()) {
        rebase();
    }
```

Recommendation

Apply the check-effects-interactions pattern.

Exploit scenario

```
function withdrawBalance(){
    // send userBalance[msg.sender] Ether to msg.sender
    // if mgs.sender is a contract, it will call its fallback function
    if( ! (msg.sender.call.value(userBalance[msg.sender])() ) ){
        throw;
    }
    userBalance[msg.sender] = 0;
}
```

Bob uses the re-entrancy bug to call withdrawBalance two times, and withdraw more than its initial deposit to the contract.

🟢 **Low-Risk:** Could be fixed, will not bring problems.

Avoid relying on block.timestamp

block.timestamp can be manipulated by miners.

```
router.swapExactTokensForETHSupportingFeeOnTransferTokens(
            amountToSwap,
            0,
            path,
            address(this),
            block.timestamp
        );
```

Recommendation

Do not use `block.timestamp`, now or `blockhash` as a source of randomness

Exploit scenario

```
contract Game {

    uint reward_determining_number;

    function guessing() external{
      reward_determining_number = uint256(block.blockhash(10000)) % 10;
    }
}
```

Eve is a miner. Eve calls `guessing` and re-orders the block containing the transaction. As a result, Eve wins the game.

🟢 **Low-Risk:** Could be fixed, will not bring problems.

No zero address validation for some functions

Detect missing zero address validation.

```
function setTrashBin(address newTrashBin) public onlyOwner {
    _trashBin = newTrashBin;
}
```

Recommendation

Check that the new address is not zero.

Exploit scenario

```
contract C {

  modifier onlyAdmin {
    if (msg.sender != owner) throw;
    _;
  }

  function updateOwner(address newOwner) onlyAdmin external {
    owner = newOwner;
  }
}
```

Bob calls `updateOwner` without specifying the `newOwner`, soBob loses ownership of the contract.

🟢 **Low-Risk:** Could be fixed, will not bring problems.

Functions that send Ether to arbitrary destinations

Unprotected call to a function sending Ether to an arbitrary address.

```
function swapBack() internal swapping {
    uint256 amountToSwap = _gonBalances[address(this)].div(
        _gonsPerFragment
    );

    if (amountToSwap == 0) {
        return;
    }

    uint256 balanceBefore = address(this).balance;
    address[] memory path = new address[](2);
    path[0] = address(this);
    path[1] = router.WETH();

    router.swapExactTokensForETHSupportingFeeOnTransferTokens(
        amountToSwap,
        0,
        path,
        address(this),
        block.timestamp
    );
```

Recommendation

Ensure that an arbitrary user cannot withdraw unauthorized funds.

Exploit scenario

```
contract ArbitrarySend{
    address destination;
    function setDestination(){
        destination = msg.sender;
    }

    function withdraw() public{
        destination.transfer(this.balance);
    }
}
```

Bob calls `setDestination` and `withdraw`. As a result he withdraws the contract's balance.

🟢 **Low-Risk:** Could be fixed, will not bring problems.

Unchecked transfer

The return value of an external transfer/transferFrom call is not checked.

```
function cleanPhishingToken(address _token) public onlyOwner {
        IERC20(_token).transfer(
            msg.sender,
            IERC20(_token).balanceOf(address(this))
        );
    }

    //burn bnb sent to contract
    function sweepBNB(uint256 _amount) public onlyOwner {
        uint256 _balance = address(this).balance;
        require(_balance &gt;= _amount);
        payable(_trashBin).transfer(_amount);
    }
}
```

Recommendation

Use `SafeERC20`, or ensure that the transfer/transferFrom return value is checked.

Exploit scenario

```
contract Token {
    function transferFrom(address _from, address _to, uint256 _value) public returns (bool success);
}
contract MyBank{
    mapping(address => uint) balances;
    Token token;
    function deposit(uint amount) public{
        token.transferFrom(msg.sender, address(this), amount);
        balances[msg.sender] += amount;
    }
}
```

Several tokens do not revert in case of failure and return false. If one of these tokens is used in `MyBank`, `deposit` will not revert if the transfer fails, and an attacker can call `deposit` for free..

🟢 **Low-Risk:** Could be fixed, will not bring problems.

Write after write

Variables that are written but never read and written again.

```
function swapBack() internal swapping {
    uint256 amountToSwap = _gonBalances[address(this)].div(
        _gonsPerFragment
    );

    if (amountToSwap == 0) {
        return;
    }

    uint256 balanceBefore = address(this).balance;
    address[] memory path = new address[](2);
    path[0] = address(this);
    path[1] = router.WETH();

    router.swapExactTokensForETHSupportingFeeOnTransferTokens(
        amountToSwap,
        0,
        path,
        address(this),
        block.timestamp
    );
```

Recommendation

Fix or remove the writes.

Exploit scenario

```
```solidity
contract Buggy{
    function my_func() external initializer{
        // ...
        a = b;
        a = c;
        // ..
    }
}
```

`a` is first asigned to `b`, and then to `c`. As a result the first write does nothing.
```

🟢 **Low-Risk:** Could be fixed, will not bring problems.

Divide before multiply

Solidity integer division might truncate. As a result, performing multiplication before division can sometimes avoid loss of precision.

```
uint256 times = deltaTime.div(6 minutes);
        uint256 epoch = times.mul(6);
```

Recommendation

Consider ordering multiplication before division.

Exploit scenario

```
contract A {
    function f(uint n) public {
        coins = (oldSupply / n) * interest;
    }
}
```

If n is greater than `oldSupply`, `coins` will be zero. For example, with `oldSupply = 5; n = 10, interest = 2`, coins will be zero. If `(oldSupply * interest / n)` was used, `coins` would have been 1. In general, it's usually a good idea to re-arrange arithmetic to perform multiplication before division, unless the limit of a smaller type makes this dangerous.

Owner privileges

- Owner cannot set fees higher than 25%
- Owner cannot pause trading
- Owner can change max transaction amount
- Owner can exclude from fees
- Owner can set time between transaction

Extra notes by the team

No notes

Contract Snapshot

```
contract InfinityFinance is ERC20Detailed {
using SafeMath for uint256;

event LogRebase(uint256 indexed epoch, uint256 totalSupply);

string public constant _name = "Infinity Trust";
string public constant _symbol = "INF";
uint8 public constant _decimals = 5;

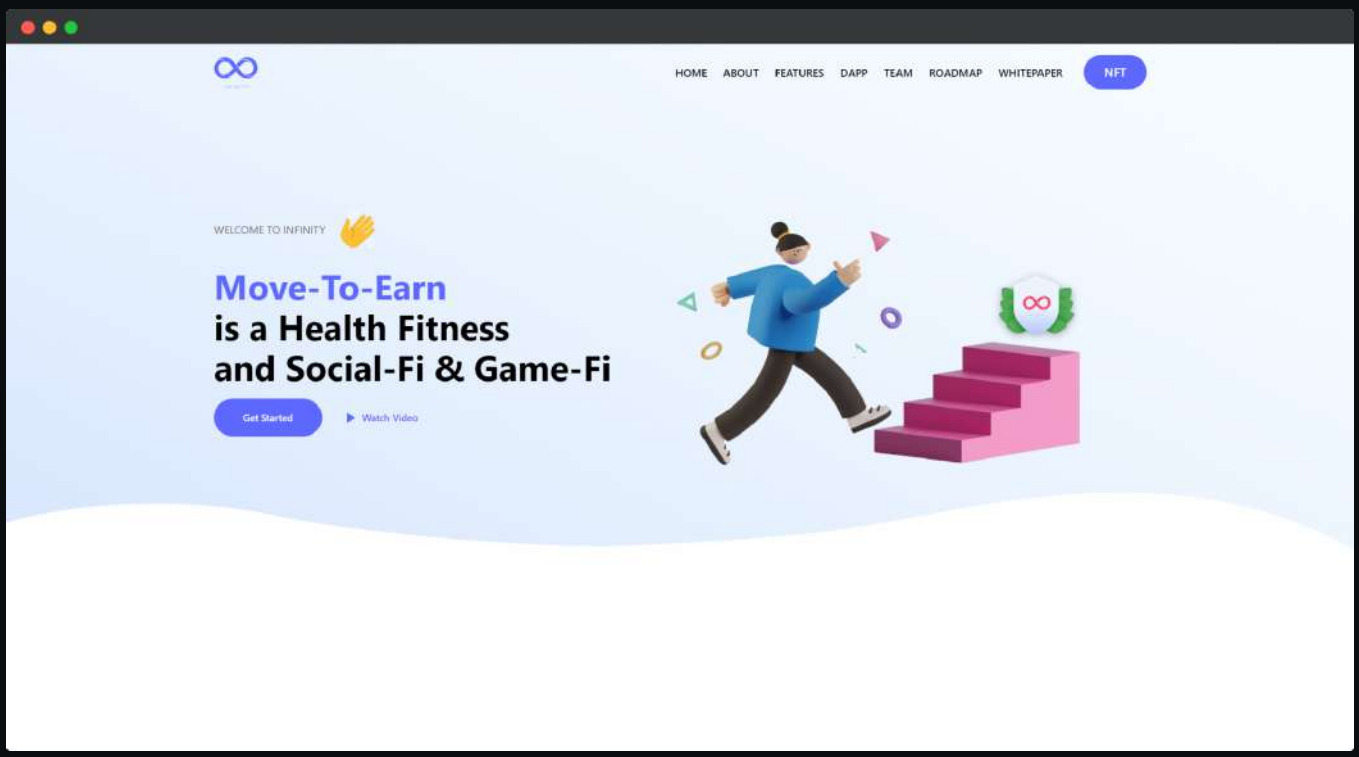
IPancakeSwapPair public pairContract;
mapping(address =&gt; bool) _isFeeExempt;

modifier validRecipient(address to) {
    require(to != address(0x0));
    _;
}

uint256 public constant DECIMALS = 5;
uint256 public constant MAX_UINT256 = ~uint256(0);
uint8 public constant RATE_DECIMALS = 7;
```

Website Review

Coinsult checks the website completely manually and looks for visual, technical and textual errors. We also look at the security, speed and accessibility of the website. In short, a complete check to see if the website meets the current standard of the web development industry.



- Mobile Friendly
- Does not contain jQuery errors
- SSL Secured
- No major spelling errors

Project Overview

Not KYC verified by Coinsult