Coinsult

Advanced Manual Smart Contract Audit

Project: Criba Inu (Router)

Website: https://www.cribainu.com/

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

Contract Address

0x31d21Ec3722Cf628380b330ca01fc71A5F5e4c65

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.

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

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Tokenomics

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Source Code

Coinsult was comissioned by Criba Inu (Router) to perform an audit based on the following smart contract:

https://cronoscan.com/address/0x31d21ec3722cf628380b330ca01fc71a5f5e4c65#code

Contract is setup as a router

Manual Code Review

In this audit report we will highlight all these issues:

Low-Risk

5 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.

Avoid relying on block.timestamp

block.timestamp can be manipulated by miners.

```
modifier ensure(uint deadline) {
    require(deadline &gt;= block.timestamp, 'RouterV2: EXPIRED');
    _;
}
```

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.

Missing events arithmetic

Detect missing events for critical arithmetic parameters.

```
{
    require(path[0] == WETH, 'RouterV2: INVALID_PATH');
    uint amountIn = msg.value;
    IWETH(WETH).deposit{value: amountIn}();
    assert(IWETH(WETH).transfer(MainLibrary.pairFor(factory, path[0], path[1]), amountIn));
    uint balanceBefore = IERC20(path[path.length - 1]).balanceOf(to);
    _swapSupportingFeeOnTransferTokens(path, to);
    require(
        IERC20(path[path.length - 1]).balanceOf(to).sub(balanceBefore) &gt;= amountOutMin,
        'RouterV2: INSUFFICIENT_OUTPUT_AMOUNT'
    );
}
```

Recommendation

Emit an event for critical parameter changes.

Exploit scenario

```
contract C {

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

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

`updateOwner()` has no event, so it is difficult to track off-chain changes in the buy price.

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

Conformance to Solidity naming conventions

Allow _ at the beginning of the mixed_case match for private variables and unused parameters.

```
IWETH(WETH).withdraw(amountETH);
```

Recommendation

Follow the Solidity naming convention.

Rule exceptions

- Allow constant variable name/symbol/decimals to be lowercase (`ERC20`).
- Allow _ at the beginning of the `mixed_case` match for private variables and unused parameters.

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

Redundant Statements

Detect the usage of redundant statements that have no effect.

```
// refund dust eth, if any
if (msg.value &gt; amountETH) TransferHelper.safeTransferETH(msg.sender, msg.value - amountETH);

(remove comments)
```

Recommendation

Remove redundant statements if they congest code but offer no value.

Exploit scenario

```
contract RedundantStatementsContract {

    constructor() public {
        uint; // Elementary Type Name
        bool; // Elementary Type Name
        RedundantStatementsContract; // Identifier
    }

    function test() public returns (uint) {
        uint; // Elementary Type Name
        assert; // Identifier
        test; // Identifier
        return 777;
    }
}
```

Each commented line references types/identifiers, but performs no action with them, so no code will be generated for such statements and they can be removed.

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

Costly operations inside a loop

Costly operations inside a loop might waste gas, so optimizations are justified.

```
function _swap(uint[] memory amounts, address[] memory path, address _to) internal virtual {
    for (uint i; i &lt; path.length - 1; i++) {
        (address input, address output) = (path[i], path[i + 1]);
        (address token0,) = MainLibrary.sortTokens(input, output);
        uint amountOut = amounts[i + 1];
        (uint amount0Out, uint amount1Out) = input == token0 ? (uint(0), amountOut) : (amountOut, ui
        address to = i &lt; path.length - 2 ? MainLibrary.pairFor(factory, output, path[i + 2]) : _t
        IUniswapV2Pair(MainLibrary.pairFor(factory, input, output)).swap(
            amount0Out, amount1Out, to, new bytes(0)
        );
    }
}
```

Recommendation

Use a local variable to hold the loop computation result.

Exploit scenario

```
contract CostlyOperationsInLoop{

    function bad() external{
        for (uint i=0; i < loop_count; i++){
            state_variable++;
        }
    }

    function good() external{
      uint local_variable = state_variable;
      for (uint i=0; i < loop_count; i++){
        local_variable++;
      }
      state_variable = local_variable;
    }
}
```

Incrementing `state_variable` in a loop incurs a lot of gas because of expensive `SSTORE`s, which might lead to an `out-of-gas`.

Owner privileges

- No real owner privileges

Extra notes by the team

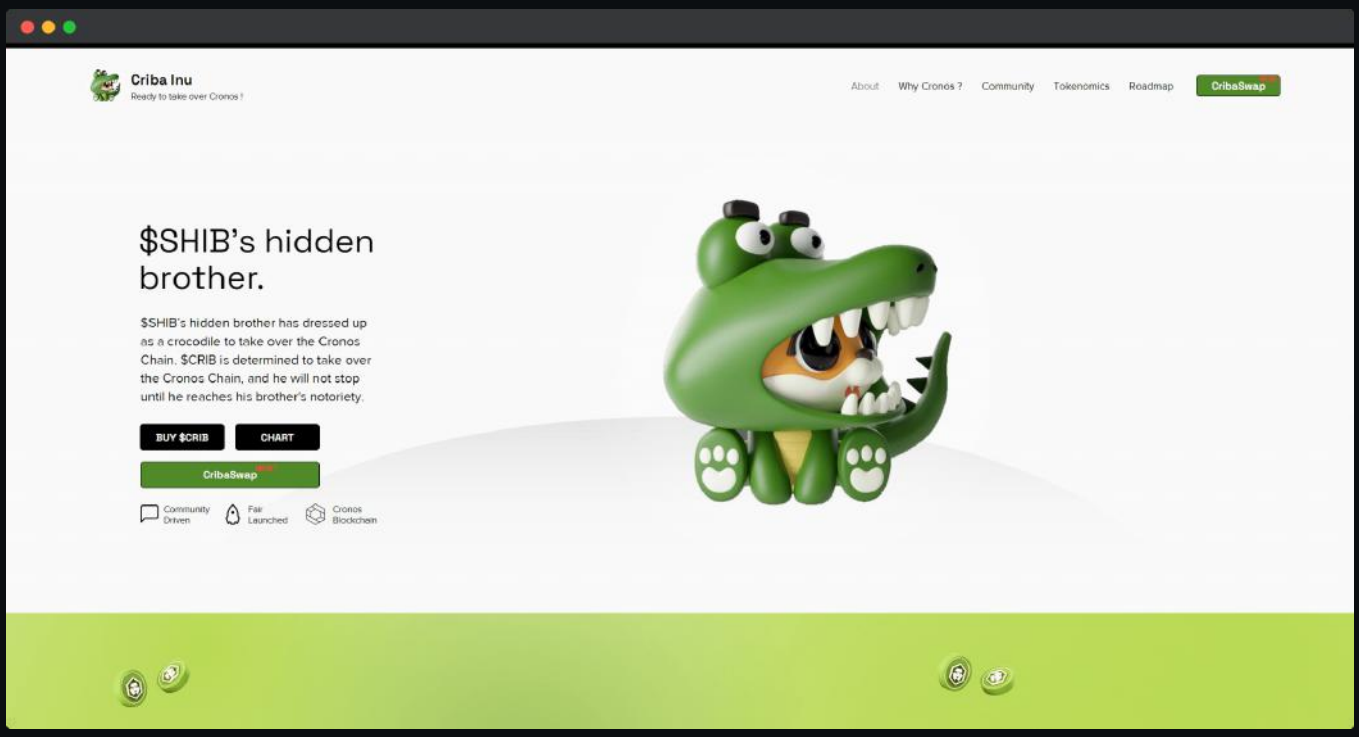
No notes

Contract Snapshot

```
contract RouterV2 is IUniswapV2Router02 {
using SafeMath for uint;

address public immutable override factory;
address public immutable override WETH;

modifier ensure(uint deadline) {
    require(deadline &gt;= block.timestamp, 'RouterV2: EXPIRED');
    _;
}

constructor(address _factory, address _WETH) {
    factory = _factory;
    WETH = _WETH;
}

receive() external payable {
    assert(msg.sender == WETH); // only accept ETH via fallback from the WETH contract
}

// **** ADD LIQUIDITY ****
function _addLiquidity(
    address tokenA,
    address tokenB,
    uint amountADesired,
    uint amountBDesired,
    uint amountAMin,
    uint amountBMin
```

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