Coinsult

Advanced Manual Smart Contract Audit

Project: Divinity

Website: https://www.edendivinity.com

Low-Risk	Medium-Risk	High-Risk
7 low-risk code issues found	1 medium-risk code issues found	0 high-risk code issues found

Contract Address

0x66C26Ac8a7070C06015EbE92A4B90A1D08ae8d13

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

Rank	Address	Quantity (Token)	Percentage
1	0xee0934691d12dcc4cadd5a2f82ba4d7eeccce2e4	91,188,000,000	56.9925%
2	Null Address: 0x000...dEaD	40,442,513,114	25.2766%
3	0xd47ae1008d51348ae2d4684a372b9c1d2b8d3aa3	9,690,000,000	6.0563%
4	Binance: Hot Wallet 16	1,057,153,416	0.6607%
5	0x2a1ed834b18cd7e022fef91dc2d896a7295832a2	1,052,463,775	0.6578%
6	0x566f42395d1358528d29fda919588cb6f416b662	928,884,000	0.5806%
7	0xc3c9ae9866ebb33bde88aedf0f26b13e37eb384d	928,884,000	0.5806%
8	0xac5f26bb30c9fed45326a42b65251677204b545a	882,943,842	0.5518%
9	0xb57eda267f9b0cb3620f795bf44a9d448fab6766	793,063,326	0.4957%
10	0xb4aafc46cb98acc6303bfb8de33454f4f16cb06d	688,960,525	0.4306%

Source Code

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

https://bscscan.com/address/0x66C26Ac8a7070C06015EbE92A4B90A1D08ae8d13#code

Manual Code Review

In this audit report we will highlight all these issues:

🟢 Low-Risk

7 low-risk code
issues found

🟡 Medium-Risk

1 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 _transfer(
    address from,
    address to,
    uint256 amount
) internal override {
    require(from != address(0), "ERC20: transfer from the zero address");
    require(to != address(0), "ERC20: transfer to the zero address");
    require(!_isEnemy[from] &amp;&amp; !_isEnemy[to], 'Enemy address');

    if(amount == 0) {
        super._transfer(from, to, 0);
        return;
    }

    uint256 contractTokenBalance = balanceOf(address(this));

    bool canSwap = contractTokenBalance &gt;= swapTokensAtAmount;

    if( canSwap &amp;&amp;
        !swapping &amp;&amp;
        !automatedMarketMakerPairs[from] &amp;&amp;
        from != owner() &amp;&amp;
```

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.

```
secondsUntilAutoClaimAvailable = nextClaimTime &gt; block.timestamp ?
                                                 nextClaimTime.sub(block.timestamp) :
                                                 0;
```

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.

Too many digits

Literals with many digits are difficult to read and review.

```
require(newValue &gt;= 200000 &amp;&amp; newValue &lt;= 500000, &quot;GasForProcessing must be betwe
```

Recommendation

Use: Ether suffix, Time suffix, or The scientific notation

Exploit scenario

```
contract MyContract{
    uint 1_ether = 10000000000000000000;
}
```

While `1_ether` looks like `1 ether`, it is `10 ether`. As a result, it's likely to be used incorrectly.

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

No zero address validation for some functions

Detect missing zero address validation.

```
function setMarketingWallet(address payable wallet) external onlyOwner{
      _marketingWalletAddress = wallet;
  }

function updateUniswapV2Router(address newAddress) public onlyOwner {
      require(newAddress != address(uniswapV2Router), "The router already has that address");
      emit UpdateUniswapV2Router(newAddress, address(uniswapV2Router));
      uniswapV2Router = IUniswapV2Router02(newAddress);
      address _uniswapV2Pair = IUniswapV2Factory(uniswapV2Router.factory())
          .createPair(address(this), uniswapV2Router.WETH());
      uniswapV2Pair = _uniswapV2Pair;
  }
```

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.

Unchecked transfer

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

```
function swapAndSendToFee(uint256 tokens) private  {
    uint256 initialCAKEBalance = IERC20(rewardToken).balanceOf(address(this));
    swapTokensForCake(tokens);
    uint256 newBalance = (IERC20(rewardToken).balanceOf(address(this))).sub(initialCAKEBalance);
    IERC20(rewardToken).transfer(_marketingWalletAddress, newBalance);
    AmountMarketingFee = AmountMarketingFee - tokens;
}
```

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.

Missing events arithmetic

Detect missing events for critical arithmetic parameters.

```
function setBuyTaxes(uint256 liquidity, uint256 rewardsFee, uint256 marketingFee, uint256 deadFee) e
    require(rewardsFee.add(liquidity).add(marketingFee).add(deadFee) &lt;= 25, &quot;Total buy fee i
    buyTokenRewardsFee = rewardsFee;
    buyLiquidityFee = liquidity;
    buyMarketingFee = marketingFee;
    buyDeadFee = deadFee;

}

function setSelTaxes(uint256 liquidity, uint256 rewardsFee, uint256 marketingFee, uint256 deadFee) e
    require(rewardsFee.add(liquidity).add(marketingFee).add(deadFee) &lt;= 25, &quot;Total sel fee i
    sellTokenRewardsFee = rewardsFee;
    sellLiquidityFee = liquidity;
    sellMarketingFee = marketingFee;
    sellDeadFee = deadFee;
}
```

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.

```
Function IUniswapV2Router01.WETH() (#539) is not in mixedCase
Function IUniswapV2Pair.DOMAIN_SEPARATOR() (#703) is not in mixedCase
Function IUniswapV2Pair.PERMIT_TYPEHASH() (#704) is not in mixedCase
Function IUniswapV2Pair.MINIMUM_LIQUIDITY() (#721) is not in mixedCase
```

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.

🟡 **Medium-Risk:** Should be fixed, could bring problems.

Owner can set deadwallet address to any address

```
function setDeadWallet(address addr) public onlyOwner {
        deadWallet = addr;
}
```

Recommendation

Remove this function and hard-code the dead wallet address. If the owner changes this address to a normal address, he can get all the tokens which are meant for the dead wallet.

Owner privileges

- 🟢 Owner cannot set fees higher than 25%
- 🟡 Owner can change max transaction amount
- 🟡 Owner can exclude from fees
- 🟡 Owner can pause the contract
- 🔴 Owner can blacklist addresses
- ⚠️ Owner can set dead wallet address

Extra notes by the team

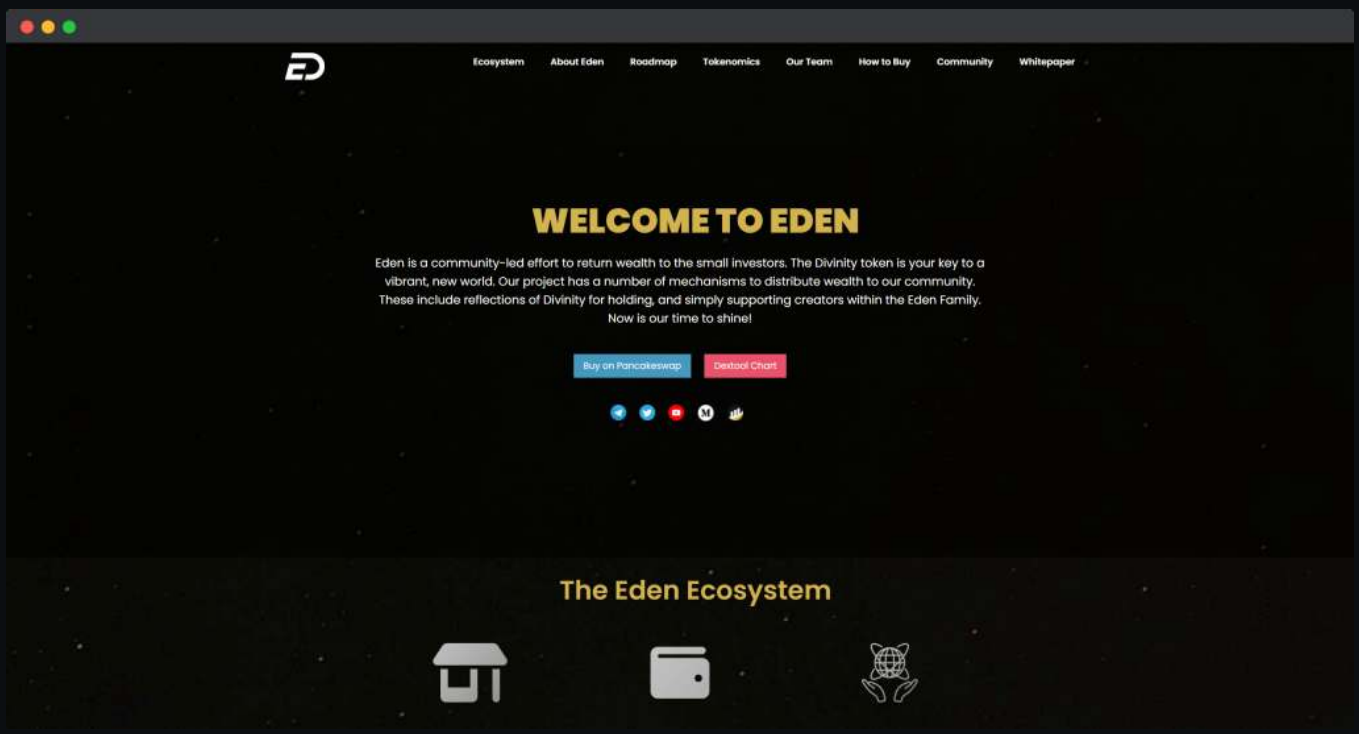
No notes

Contract Snapshot

```
contract CoinToken is ERC20, Ownable {
using SafeMath for uint256;

IUniswapV2Router02 public uniswapV2Router;
address public  uniswapV2Pair;

bool private swapping;

TokenDividendTracker public dividendTracker;

address public rewardToken;

uint256 public swapTokensAtAmount;

uint256 public buyTokenRewardsFee;
uint256 public sellTokenRewardsFee;
uint256 public buyLiquidityFee;
uint256 public sellLiquidityFee;
uint256 public buyMarketingFee;
uint256 public sellMarketingFee;
uint256 public buyDeadFee;
uint256 public sellDeadFee;
uint256 public AmountLiquidityFee;
uint256 public AmountTokenRewardsFee;
uint256 public AmountMarketingFee;

address public _marketingWalletAddress;
address private _node;

address public deadWallet = 0x000000000000000000000000000000000000dEaD;
mapping(address =&gt; bool) public _isEnemy;

uint256 public gasForProcessing;

 // exlcude from fees and max transaction amount
mapping (address =&gt; bool) private _isExcludedFromFees;
```

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

KYC verified by Coinsult