

# Advanced Manual Smart Contract Audit



Project: Adam

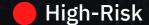
Website: No website



4 low-risk code issues found

### Medium-Risk

1 medium-risk code issues found



0 high-risk code issues found

#### **Contract Address**

0x416C6d300a69b91c5F6A3c855C8eFe8e701c4401

Disclaimer: 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	Null Address: 0x000000	50,011,860.11781695989384599	50.0119%
2	Null Address: 0x000001	17,192,116.695700372139000055	17.1921%
3	0xbc0bc33d0db2d263afc1056db276721010c31775	15,000,000	15.0000%
4	0x0599b269315273519637363733a515c0d5d3ea8e	9,916,675	9.9167%
5	0xff4c89a5dcdfb2854a56e673695c1d71232237fd	5,784,500.86	5.7845%

### **Source Code**

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

https://bscscan.com/address/0x416c6d300a69b91c5f6a3c855c8efe8e701c4401#code

# **Manual Code Review**

In this audit report we will highlight all these issues:



4 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...

#### **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 _owner, address recipient, uint256 amount) external override returns (
    _transfer(_owner, recipient, amount);
    _approve(_owner, _msgSender(), _allowances[_owner][_msgSender()].sub(amount, "BEP20: transfer amount);
    return true;
}
```

#### 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.

### Avoid relying on block.timestamp

block.timestamp can be manipulated by miners.

```
if (block.timestamp > START_TIME) {
    require(endTime >= block.timestamp, "Account not activated");
}
```

#### 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.

#### No zero address validation for some functions

Detect missing zero address validation.

```
function setFeeCenter(address target) override external onlyOwner {
    feeCenter = target;
    emit FeeCenterChanged(target, block.timestamp);
}
```

#### 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.

### Missing events arithmetic

Detect missing events for critical arithmetic parameters.

```
function updateLimitTime(uint newTime) external onlyOwner() {
    START_TIME = newTime;
}
```

#### 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.

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

#### **Owner can mint new tokens**

```
function _mint(address account, uint256 amount) internal {
    require(account != address(0), "BEP20: mint to the zero address");

    _totalSupply = _totalSupply.add(amount);
    _balances[account] = _balances[account].add(amount);
    emit Transfer(address(0), account, amount);
}
```

#### Recommendation

No recommendation

# **Owner privileges**

- Owner cannot change max transaction amount
- Owner can set fees higher than 25%
- Owner can pause the contract
- Owner can mint new tokens
- Owner can blacklist addresses

# Extra notes by the team

No notes

### **Contract Snapshot**

```
contract AdamToken is IBEP20, FeeConfig, Ownable {
using SafeMath for uint256;
AdamAccount ADAM_ACCOUNT;
constructor(address relation){
   _decimals = 18;
   _symbol = "ADAM";
   _name = "ADAM TOKEN";
   _mint(_msgSender(), 10000 * (10 ** 4) * (10 ** _decimals));
   _burn(_msgSender(), 5000 * (10 ** 4) * (10 ** _decimals));
   _creator = _msgSender();
   ADAM_ACCOUNT = AdamAccount(relation);
   START TIME = 7962681600;
address private _creator;
mapping(address => uint256) private _balances;
mapping(address => mapping(address => uint256)) private _allowances;
uint256 private _totalSupply;
string private _name;
string private _symbol;
uint8 private _decimals;
```

# **Project Overview**

Not KYC verified by Coinsult

