Rodeo Solutions

Develop - Audit - Coach

Doge Coin Collection Smart Contract Audit

Rodeo Solutions
June 2021

Doge Coin Collection Smart Contract Audit

Commision

Audited Project	Doge Coin Collection
Project website	https://www.dogecoincollection.info/
Contract Owner	0x dbde0b5d766e16f981c4372717403627f2a9b27d
SmartContract Address	0x29e7FC61bd30Bc6797e3c502dD822a7022F9083b
Blockchain	Binance Main Smart Chain

Rodeo Solutions was commissioned by Doge Coin Collection owners to perform an audit of their main smart contract.

The purpose of the audit was to achieve the following:

- Ensure that the smart contract functions as intended.
- Identify potential security issues with the smart contract.

The information in this report should be used to understand the risk exposure of the smart contract, and as a guide to improve the security posture of the smart contract by remediating the issues that were identified.

Disclaimer

This is a limited report on our findings based on our analysis, in accordance with good industry practice as at the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, the details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report. While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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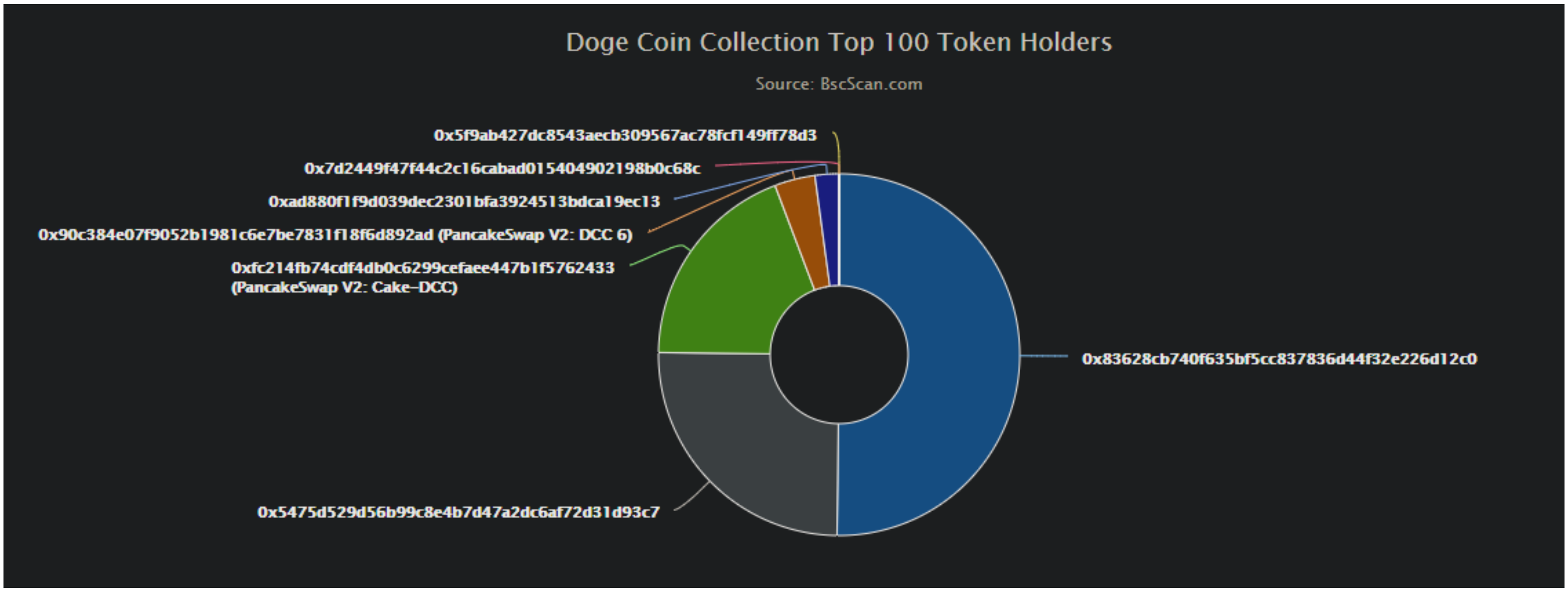
$DCC Properties

Contract name	Doge Coin Collection
Contract address	0x29e7FC61bd30Bc6797e3c502dD822a7022F9083b
Total supply	100B
Token ticker	DCC
Decimals	18
Token holders	12
Transactions count	36
Top 100 holders dominance	100.00%
Liquidity fee	No
Tax fee	No
Total fees	0%
Mintable	Yes
Burnable	No
Uniswap V2 pair	No pair available
Contract deployer address	0xdbde0b5d766e16f981c4372717403627f2a9b27d
Contract’s current owner address	0xdbde0b5d766e16f981c4372717403627f2a9b27d

As of 21/06/2021

Holders distribution



Doge Coin Collection Top 100 Token Holders

Source: BscScan.com

Contract Functions

Public

View

```
totalSupply()
balanceOf(address _owner)
allowance(address _owner, address _spender)
```

Virtual

Executables

```
transfer(address _to, uint256 _value)
mint(address _to, uint256 _amount ) hasMintPermission canMint
transferFrom(address _from, address _to, uint256 _value)
approve(address _spender, uint256 _value)
increaseApproval(address _spender, uint256 _addedValue)
decreaseApproval(address _spender, uint256 _subtractedValue)
```

Owner Executables

```
finishMinting() canMint
```

Libraries

```
Ownable.sol
SafeMath.sol
```

Checklist

Compiler errors.	Passed
Possible delays in data delivery.	Passed
Timestamp dependence.	Passed
Integer Overflow and Underflow.	Passed
DoS with Revert.	Passed
DoS with block gas limit.	Passed
Methods execution permissions.	Passed
Economy model of the contract.	Passed
Private user data leaks.	Passed
Malicious Event log.	Passed
Scoping and Declarations.	Passed
Uninitialized storage pointers.	Passed
Arithmetic accuracy.	Passed
Design Logic.	Passed
Cross-function race conditions.	Passed
Fallback function security.	Passed
Safe Open Zeppelin contracts implementation and usage.	Passed
Website-Code syncronicities.	Low severity issues

Potential Issues

Token logic doesn’t reflect website

Given the Whitepaper present on the website the following features are stated:

Deflationary Burns

Reducing the supply of DCC increases the price through deflation. Unlike many yield farming or staking projects that are burning tokens from what they mint on day one, we have implemented a 90-day burn, of 25% of the Total Supply. This being followed by a percentage to be burned from transactions after 90 days.

On-going deflation will push the price higher by making all of the tokens more scarce with every transaction. Over time the burn wallet will continue to grow. The burn cap for DCC at this time is set at 75% of the Total Supply. If the total burned supply reached 75% the remaining 25% will no longer continue to be burned.

Community Reward Tokens

Community Rewards is a way to reward and say thank you to DCC Token supporters that help spread the word about our Token. The decision was made to set 25% of the Total supply to the side for this.

To be eligible to receive award Tokens we must receive an email to include your Receiving Wallet address. The leadership team will decide, upon discussion to whom to send reward tokens and the amount of the tokens.

The rewards tokens will be limited per 90 days with a cap of no more than 1% of the total reward budget. Rewards tokens are still eligible to be burned based upon community input.

The token reward distribution will not start until 90 days after launch but will be accepting emails for rewards during that period.

Operational Reward Tokens

After the first 10 million dollar market cap 5% of the total Operational Wallet balance will be donated to a charity wallet for every 1 million dollar market cap increase.

After the first 25 million dollar market cap 5% of the total Operational Wallet balance will be donated to a charity wallet for every 5 million dollar market cap increase.

After the first 50 million dollar market cap 5% of the total Operational Wallet balance will be donated to a charity wallet for every 10 million dollar market cap increase.

After the first 500 million dollar market cap 5% of the total Operational Wallet balance will be donated to a charity wallet for every 50 million dollar market cap increase.

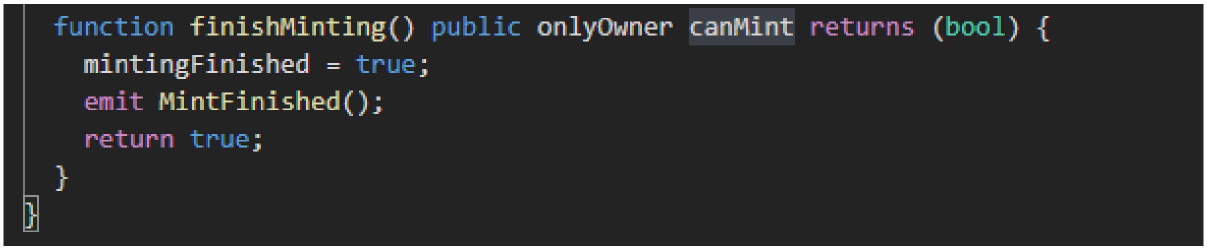
Said features are not present on the code to be performed automatically, nontheless they can be perfomed manually:

- Deflationary burns can be made transfering the given amount of tokens to a non existing address, such as 0×000000000000000000000000000000000000dEaD
- The Community rewards program can be performed with manual transfers

Both of the presented solutions rely on trusting the DCC team to perform them in time and form. This also render the Smart Contract not trustless.

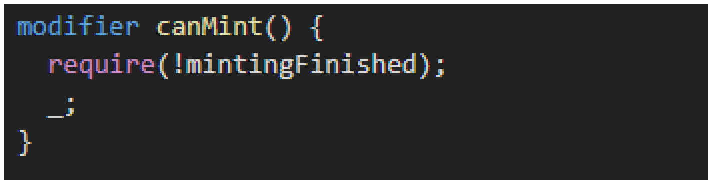
Owner privileges

- The owner is the only one allowed to finish the minting period.



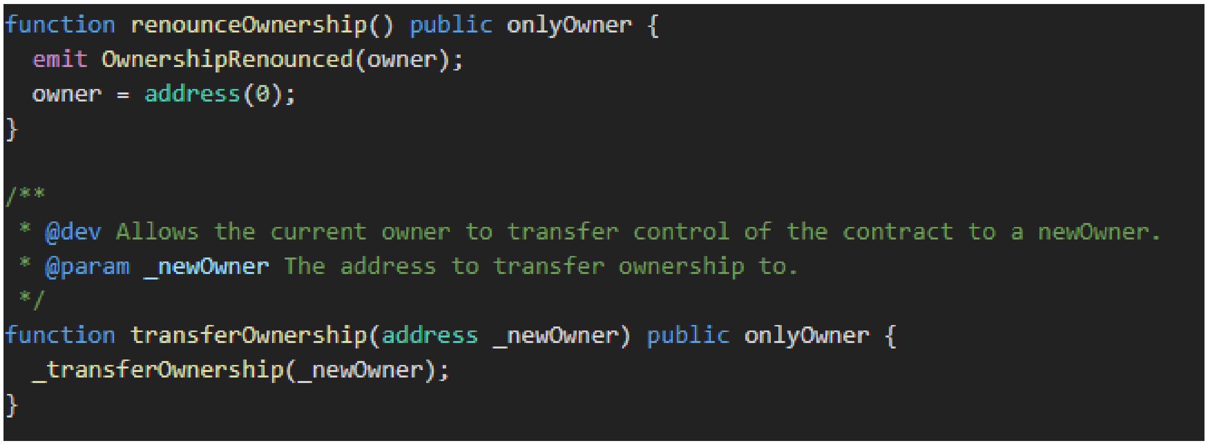
```
  function finishMinting() public onlyOwner canMint returns (bool) {
    mintingFinished = true;
    emit MintFinished();
    return true;
  }
}
```

- The owner is the only one allowed to mint new tokens



```
modifier canMint() {
  require(!mintingFinished);
  _;
}
```

- The remaining functions only allowed by the owner are only those corresponding to the Ownable library



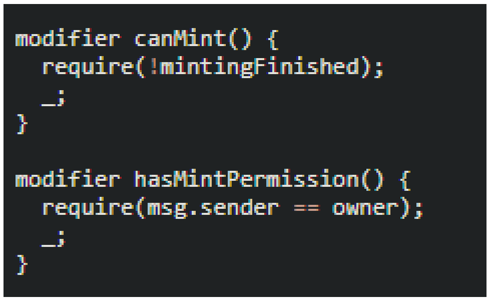
```
function renounceOwnership() public onlyOwner {
  emit OwnershipRenounced(owner);
  owner = address(0);
}

/**
 * @dev Allows the current owner to transfer control of the contract to a newOwner.
 * @param _newOwner The address to transfer ownership to.
 */
function transferOwnership(address _newOwner) public onlyOwner {
  _transferOwnership(_newOwner);
}
```

Conclusion

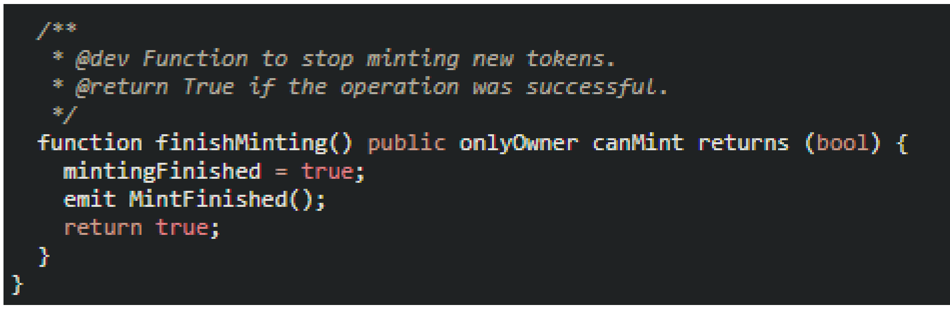
The Smart Contract presents a straight forward and ERC20 standard compliant logic. Most of the code is equal to those present in the OpenZeppelin standards as well as the Owner and SafeMath libraries.

It doesn’t present further modifications apart from the modifiers present in the minting section:

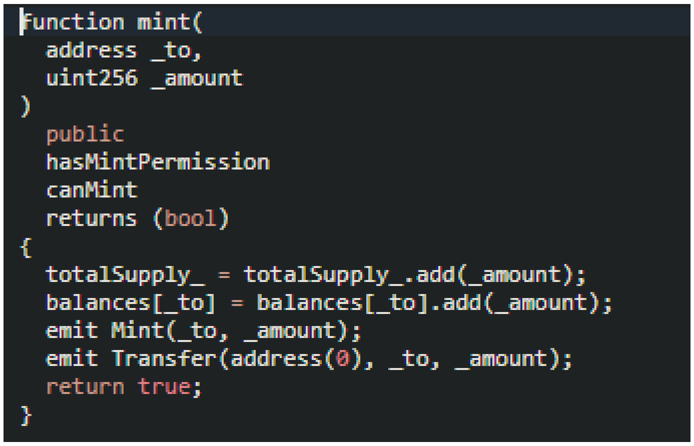


```
modifier canMint() {
  require(!mintingFinished);
  _;
}

modifier hasMintPermission() {
  require(msg.sender == owner);
  _;
}
```



```
  /**
   * @dev Function to stop minting new tokens.
   * @return True if the operation was successful.
   */
  function finishMinting() public onlyOwner canMint returns (bool) {
    mintingFinished = true;
    emit MintFinished();
    return true;
  }
}
```



```
function mint(
  address _to,
  uint256 _amount
)
  public
  hasMintPermission
  canMint
  returns (bool)
{
  totalSupply_ = totalSupply_.add(_amount);
  balances[_to] = balances[_to].add(_amount);
  emit Mint(_to, _amount);
  emit Transfer(address(0), _to, _amount);
  return true;
}
```

They can be seen more in depth in the “Owner priviliges” section.

As it can be seen in the Checklist section, the only warning raised is that the deflationary burns, as well as the rewards program, can only be executed manually by the DCC, rendering the Smart Contract non-trustless.

As of 21st of June, 2021 the Token has passed the audit with a warning.