



Smart Contract Security Audit Report

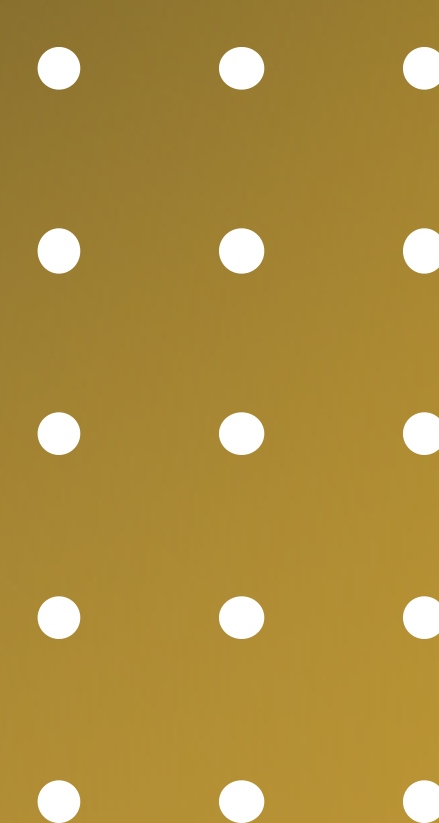
MurAll

April 2022

Security Status



www.hacksafe.io



Audit Details



Audited project

MurAll



Deployer address

0xCF90AD693aCe601b5B5582C4F95eC7266CDB3eEC



Client contacts

MurAll team



Blockchain

Ethereum



Website

<https://murall.art>

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 below disclaimer below – please make sure to read it in full.

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The analysis of the security is purely based on the smart contracts alone. No applications or operations were reviewed for security. No product code has been reviewed.

Background

HeckSafe was commissioned by MurAll to perform an audit of smart contracts:

- <https://etherscan.io/address/0x4c6ec08cf3fc987c6c4beb03184d335a2dfc4042#code>

Contract Details

Token contract details for 20.04.2022

Contract name	: PaintToken
Contract address	: 0x4C6eC08CF3fc987c6C4BEB03184D335A2dFc4042
Total supply	: 22,017,678,540.5
Token Ticker	: PAINT
Decimals	: 18
Token Holders	: 11,726
Transactions count	: 102,366
Contract deployer address	: 0xCF90AD693aCe601b5B5582C4F95eC7266CDB3eEC

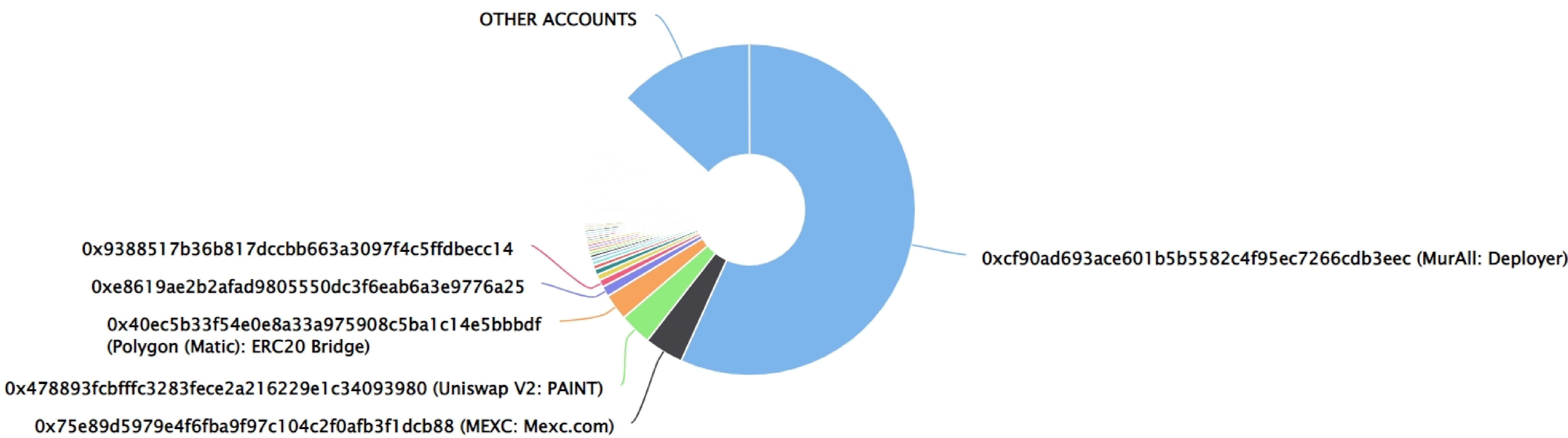
PAINT Token Distribution

The top 500 holders collectively own 86.71% (19,092,244,050.06 Tokens) of Paint

Token Total Supply: 22,017,678,540.50 Token | Total Token Holders: 11,726

Paint Top 500 Token Holders

Source: Etherscan.io



PAINT Top 10 Token Holders

(A total of 15,403,409,299.96 tokens held by the top 10 accounts from the total supply of 22,017,678,540.50 token)

Rank	Address	Quantity (Token)	Percentage
1	MurAll: Deployer	12,499,122,319.65308314490726055	56.7686%
2	MEXC: Mexc.com	833,931,015.863090041157055513	3.7876%
3	Uniswap V2: PAINT	693,419,502.82718924041317147	3.1494%
4	Polygon (Matic): ERC20 Bridge	566,754,386.887759204082803616	2.5741%
5	0xe8619ae2b2afad9805550dc3f6eab6a3e9776a25	220,654,905.250713357904161769	1.0022%
6	0x9388517b36b817dccbb663a3097f4c5ffdbecc14	157,043,750	0.7133%
7	0xf7a3bbe1711eb43967cdbf58fa61342a25e3c845	128,655,975.69839871086195958	0.5843%
8	0xc9629673b46b80d4aadb01157c3faba284f4edc1	122,546,687.097094255013374843	0.5566%
9	0x00e82de811f35d392c216c11133080368457a01b	91,395,083.005371	0.4151%
10	0x6bcbe6c086cc66806b0b7b4a53409058d85f61c8	89,885,673.674505056442532268	0.4082%

Contract functions details

+ Context

- [Int] _msgSender
- [Int] _msgData

+ [Int] IERC20

- [Ext] totalSupply
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] allowance
- [Ext] approve #
- [Ext] transferFrom #

+ [Lib] SafeMath

- [Int] add
- [Int] sub
- [Int] sub
- [Int] mul
- [Int] div
- [Int] div
- [Int] mod
- [Int] mod

+ [Lib] Address

- [Int] isContract
- [Int] sendValue
- [Int] functionCall
- [Int] functionCall
- [Int] functionCallWithValue
- [Int] functionCallWithValue
- [Pvt] _functionCallWithValue

+ ERC20 (Context, IERC20, IERC20Metadata)

- [Pub] <constructor> #
- [Pub] name
- [Pub] symbol
- [Pub] decimals
- [Pub] totalSupply
- [Pub] balanceOf
- [Pub] transfer #

Contract functions details

- [Pub] allowance
- [Pub] approve #
- [Pub] transferFrom #
- [Pub] increaseAllowance #
- [Pub] decreaseAllowance #
- [Int] _transfer #
- [Int] _mint #
- [Int] _burn #
- [Int] _approve #
- [Int] _setupDecimals #
- [Int] __beforeTokenTransfer

+ ERC20Burnable (Context, ERC20)

- [Pub] burn #
- [Pub] burnFrom #

+ PaintToken (ERC20, ERC20Burnable)

- [Pub] < constructor > #

Issues Checking Status

No.	Title	Status
1.	Unlocked Compiler Version	Low issue
2.	Missing Input Validation	Passed
3.	Race conditions and Reentrancy. Cross-function race conditions.	Passed
4.	Possible delays in data delivery	Passed
5.	Oracle calls.	Passed
6.	Timestamp dependence.	Passed
7.	Integer Overflow and Underflow	Passed
8.	DoS with Revert.	Passed
9.	DoS with block gas limit.	Passed
10.	Methods execution permissions.	Passed
11.	Economy model of the contract.	Passed
12.	Private use data leaks.	Passed
13.	Malicious Event log.	Passed
14.	Scoping and Declarations.	Low issue
15.	Uninitialized storage pointers.	Passed
16.	Arithmetic accuracy.	Passed
17.	Design Logic.	Passed
18.	Safe Open Zeppelin contracts implementation and usage.	Passed
19.	Incorrect Naming State Variable	Passed

Severity Definitions

Risk Level	Description
Critical	Critical vulnerabilities are usually straightforward to exploit and can lead to assets loss or data manipulations.
High	High-level vulnerabilities are difficult to exploit; however, they also have a significant impact on smart contract execution, e.g., public access to crucial functions
Medium	Medium-level vulnerabilities are important to fix; however, they can't lead to assets loss or data manipulations.
Low	Low-level vulnerabilities are mostly related to outdated, unused, etc. code snippets that can't have a significant impact on execution.

Security Issues

✔ Critical Severity Issues

No critical severity issue found.

✔ High Severity Issues

No high severity issue found.

✔ Medium Severity Issues

No medium severity issues found.

✔ Low Severity Issues

Two low severity issues found.

1. Unlocked Compiler Version.

- **Description**

The contract utilizes an unlocked compiler version. An unlocked compiler version in the contract's source code permits the user to compile it at or above a particular version. This, in turn, leads to differences in the generated bytecode between compilations due to differing compiler version numbers. This can lead to ambiguity when debugging as compiler-specific bugs may occur in the codebase that would be difficult to identify over a span of multiple compiler versions rather than a specific one.

- **Recommendation**

It is advisable that the compiler version is alternatively locked at the lowest version possible so that the contract can be compiled. For example, for version v0.6.0 the contract should contain the following line:

```
pragma solidity 0.6.0;
```

2. Scoping and Declarations.

Unused function.

- **Description**

The div, div, mod, mod, mul, _msgData, sendValue, sendValue, functionCall, functionCall, functionCallWithValue, functionCallWithValue, _functionCallWithValue functions do nothing.

- **Location**

Line no: 27, 191, 217, 233, 253, 269, 329, 355, 365, 380, 390, 395,

- **Recommendation**

We advise to remove unused code which can help you to develop clean coding style and save some computational gas power too.

Conclusion

Smart contract contains low severity issues! The further transfer and operations with the fund raised are not related to this particular contract.

HackSafe note: Please check the disclaimer above and note, the audit makes no statements or warranties on business model, investment attractiveness or code sustainability. The report is provided for the only contract mentioned in the report and does not include any other potential contracts deployed by Owner.