DRAC Token

Smart Contract Audit Report

SYSFIXED

29 Jul 2022

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AUDITED DETAILS

Audited Project

Project name	Token ticker	Blockchain
DRAC Token	DRAC	Binance Smart Chain

Addresses

Contract address	0x123458c167a371250d325bd8b1fff12c8af692a7
Contract deployer address	0xc954bAB3f118E232acFFCd47bD5081abDA434182

Project Website

https://www.dracscan.io/

Codebase

https://bscscan.com/address/0x123458c167a371250d325bd8b1fff12c8af692a7#code

SUMMARY

DRAC Network is a public chain independently developed based on Ethereum. People-oriented, decentralization, autonomy, equal rights, and unique blockchain ident

Contract Summary

Documentation Quality

DRAC Token provides a very good documentation with standard of solidity base code.

- The technical description is provided clearly and structured and also dont have any high risk issue.

Code Quality

The Overall quality of the basecode is standard.

- Standard solidity basecode and rules are already followed by DRAC Token with the discovery of several low issues.

Test Coverage

Test coverage of the project is 100% (Through Codebase)

Audit Findings Summary

- SWC-101 | It is recommended to use vetted safe math libraries for arithmetic operations consistently on lines 62, 62, 92, 163, 164, 164, 195, 196, 196, 208, 217, 232, 234, 240, 241, 250, 252 and 277.
- SWC-103 | Pragma statements can be allowed to float when a contract is intended on lines 6.
- SWC-110 SWC-123 | It is recommended to use of revert(), assert(), and require() in Solidity, and the new REVERT opcode in the EVM on lines 48, 93, 93, 94 and 94.

CONCLUSION

We have audited the DRAC Token project released on July 2022 to discover issues and identify potential security vulnerabilities in DRAC Token Project. This process is used to find technical issues and security loopholes which might be found in the smart contract.

The security audit report provides satisfactory results with low-risk issues.

The issues found in the DRAC Token smart contract code do not pose a considerable risk. The writing of the contract is close to the standard of writing contracts in general. The low-risk issues found are some arithmetic operation issues, a floating pragma is set, a public state variable with array type causing reachable exception by default, and out-of-bounds array access which the index access expression can cause an exception in case of the use of an invalid array index value. The current pragma Solidity directive is ""^0.8.0"". Specifying a fixed compiler version is recommended to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

AUDIT RESULT

Article	Category	Description	Result
Default Visibility	SWC-100 SWC-108	Functions and state variables visibility should be set explicitly. Visibility levels should be specified consciously.	PASS
Integer Overflow and Underflow	SWC-101	If unchecked math is used, all math operations should be safe from overflows and underflows.	ISSUE FOUND
Outdated Compiler Version	SWC-102	It is recommended to use a recent version of the Solidity compiler.	PASS
Floating Pragma	SWC-103	Contracts should be deployed with the same compiler version and flags that they have been tested thoroughly.	ISSUE FOUND
Unchecked Call Return Value	SWC-104	The return value of a message call should be checked.	PASS
Unprotected Ether Withdrawal	SWC-105	Due to missing or insufficient access controls, malicious parties can withdraw from the contract.	PASS
SELFDESTRUCT Instruction	SWC-106	The contract should not be self-destructible while it has funds belonging to users.	PASS
Reentrancy	SWC-107	Check effect interaction pattern should be followed if the code performs recursive call.	PASS
Uninitialized Storage Pointer	SWC-109	Uninitialized local storage variables can point to unexpected storage locations in the contract.	PASS
Assert Violation	SWC-110 SWC-123	Properly functioning code should never reach a failing assert statement.	ISSUE FOUND
Deprecated Solidity Functions	SWC-111	Deprecated built-in functions should never be used.	PASS
Delegate call to Untrusted Callee	SWC-112	Delegatecalls should only be allowed to trusted addresses.	PASS

DoS (Denial of Service)	SWC-113 SWC-128	Execution of the code should never be blocked by a specific contract state unless required.	PASS
Race Conditions	SWC-114	Race Conditions and Transactions Order Dependency should not be possible.	PASS
Authorization through tx.origin	SWC-115	tx.origin should not be used for authorization.	PASS
Block values as a proxy for time	SWC-116	Block numbers should not be used for time calculations.	PASS
Signature Unique ID	SWC-117 SWC-121 SWC-122	Signed messages should always have a unique id. A transaction hash should not be used as a unique id.	PASS
Incorrect Constructor Name	SWC-118	Constructors are special functions that are called only once during the contract creation.	PASS
Shadowing State Variable	SWC-119	State variables should not be shadowed.	PASS
Weak Sources of Randomness	SWC-120	Random values should never be generated from Chain Attributes or be predictable.	PASS
Write to Arbitrary Storage Location	SWC-124	The contract is responsible for ensuring that only authorized user or contract accounts may write to sensitive storage locations.	PASS
Incorrect Inheritance Order	SWC-125	When inheriting multiple contracts, especially if they have identical functions, a developer should carefully specify inheritance in the correct order. The rule of thumb is to inherit contracts from more /general/ to more /specific/.	PASS
Insufficient Gas Griefing	SWC-126	Insufficient gas griefing attacks can be performed on contracts which accept data and use it in a sub-call on another contract.	PASS
Arbitrary Jump Function	SWC-127	As Solidity doesnt support pointer arithmetics, it is impossible to change such variable to an arbitrary value.	PASS

Typographical Error	SWC-129	A typographical error can occur for example when the intent of a defined operation is to sum a number to a variable.	PASS
Override control character	SWC-130	Malicious actors can use the Right-To-Left-Override unicode character to force RTL text rendering and confuse users as to the real intent of a contract.	PASS
Unused variables	SWC-131 SWC-135	Unused variables are allowed in Solidity and they do not pose a direct security issue.	PASS
Unexpected Ether balance	SWC-132	Contracts can behave erroneously when they strictly assume a specific Ether balance.	PASS
Hash Collisions Variable	SWC-133	Using abi.encodePacked() with multiple variable length arguments can, in certain situations, lead to a hash collision.	PASS
Hardcoded gas amount	SWC-134	The transfer() and send() functions forward a fixed amount of 2300 gas.	PASS
Unencrypted Private Data	SWC-136	It is a common misconception that private type variables cannot be read.	PASS

SMART CONTRACT ANALYSIS

Started	Thursday Jul 28 2022 04:09:07 GMT+0000 (Coordinated Universal Time)
Finished	Friday Jul 29 2022 01:12:18 GMT+0000 (Coordinated Universal Time)
Mode	Standard
Main Source File	DRAC.sol

Detected Issues

ID	Title	Severity	Status
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "++" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "/" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "*" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "+=" DISCOVERED	low	acknowledged

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SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-=" DISCOVERED	low	acknowledged
SWC-101	ARITHMETIC OPERATION "-" DISCOVERED	low	acknowledged
SWC-103	A FLOATING PRAGMA IS SET.	low	acknowledged
SWC-110	PUBLIC STATE VARIABLE WITH ARRAY TYPE CAUSING REACHABLE EXCEPTION BY DEFAULT.	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
SWC-110	OUT OF BOUNDS ARRAY ACCESS	low	acknowledged
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SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 62

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
61   MarketAddress = address(0xF3412cFEf2C0140C72cDc8E2F7C76E305fFC11FE);
62   _mint(_owner, 1 * 1e8 * 1e18);
63   IPancakeSwapV2Router01 _uniswapV2Router =
IPancakeSwapV2Router01(0x10ED43C718714eb63d5aA57B78B54704E256024E);
64   uniswapV2Pair = IPancakeSwapV2Factory(_uniswapV2Router.factory())
65   .createPair(address(this), _uniswapV2Router.WETH());
66
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 62

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
61   MarketAddress = address(0xF3412cFEf2C0140C72cDc8E2F7C76E305fFC11FE);
62   _mint(_owner, 1 * 1e8 * 1e18);
63   IPancakeSwapV2Router01 _uniswapV2Router =
IPancakeSwapV2Router01(0x10ED43C718714eb63d5aA57B78B54704E256024E);
64   uniswapV2Pair = IPancakeSwapV2Factory(_uniswapV2Router.factory())
65   .createPair(address(this), _uniswapV2Router.WETH());
66
```

SWC-101 | ARITHMETIC OPERATION "++" DISCOVERED

LINE 92

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
91   bool[] memory _whiteListEnable = new bool[](WhiteLists.length);
92   for (uint i = 0; i < WhiteLists.length; i++) {
93   _whiteList[i] = WhiteLists[i];
94   _whiteListEnable[i] = WhiteList[WhiteLists[i]];
95   }
96
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 163

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
162   if ( Pair[_msgSender()] || Pair[to]) {
163   _burn(_msgSender(), amount / 50 );
164   amount = amount * 98 / 100;
165   }
166
167
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 164

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
163   _burn(_msgSender(), amount / 50 );
164   amount = amount * 98 / 100;
165   }
166
167   address from = _msgSender();
168
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 164

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
163   _burn(_msgSender(), amount / 50 );
164   amount = amount * 98 / 100;
165   }
166
167   address from = _msgSender();
168
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 195

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
194   _spendAllowance(from, spender, amount);
195   _transfer(from, MarketAddress, amount / 50 );
196   _transfer(from, to, amount * 98 / 100);
197   return true;
198   }
199
```

SWC-101 | ARITHMETIC OPERATION "/" DISCOVERED

LINE 196

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
195   _transfer(from, MarketAddress, amount / 50 );
196   _transfer(from, to, amount * 98 / 100);
197   return true;
198   }
199
200
```

SWC-101 | ARITHMETIC OPERATION "*" DISCOVERED

LINE 196

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
195   _transfer(from, MarketAddress, amount / 50 );
196   _transfer(from, to, amount * 98 / 100);
197   return true;
198   }
199
200
```

SWC-101 | ARITHMETIC OPERATION "+" DISCOVERED

LINE 208

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
207   address from = _msgSender();
208   _approve(from, spender, allowance(from, spender) + addedValue);
209   return true;
210   }
211
212
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 217

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
216   unchecked {
217   _approve(from, spender, currentAllowance - subtractedValue);
218   }
219   return true;
220   }
221
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 232

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
231   unchecked {
232   _balances[from] = fromBalance - amount;
233   }
234   _balances[to] += amount;
235   emit Transfer(from, to, amount);
236
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 234

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
233   }
234   _balances[to] += amount;
235   emit Transfer(from, to, amount);
236   }
237
238
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 240

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
239   require(account != address(0), "DRAC: mint to the zero address");
240   _totalSupply += amount;
241   _balances[account] += amount;
242   emit Transfer(address(0), account, amount);
243   }
244
```

SWC-101 | ARITHMETIC OPERATION "+=" DISCOVERED

LINE 241

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
240   _totalSupply += amount;
241   _balances[account] += amount;
242   emit Transfer(address(0), account, amount);
243   }
244
245
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 250

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
249   unchecked {
250   _balances[account] = accountBalance - amount;
251   }
252   _totalSupply -= amount;
253   emit Transfer(account, address(0), amount);
254
```

SWC-101 | ARITHMETIC OPERATION "-=" DISCOVERED

LINE 252

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
251   }
252   _totalSupply -= amount;
253   emit Transfer(account, address(0), amount);
254
255   }
256
```

SWC-101 | ARITHMETIC OPERATION "-" DISCOVERED

LINE 277

low SEVERITY

This plugin produces issues to support false positive discovery within mythril.

Source File

- DRAC.sol

Locations

```
276   unchecked {
277   _approve(from, spender, currentAllowance - amount);
278   }
279   }
280   }
281
```

SWC-103 | A FLOATING PRAGMA IS SET.

LINE 6

low SEVERITY

The current pragma Solidity directive is ""^0.8.0"". It is recommended to specify a fixed compiler version to ensure that the bytecode produced does not vary between builds. This is especially important if you rely on bytecode-level verification of the code.

Source File

- DRAC.sol

Locations

```
5   // SPDX-License-Identifier: MIT
6   pragma solidity ^0.8.0;
7
8   interface IDRAC {
9   event Transfer(address indexed from, address indexed to, uint256 value);
10
```

SWC-110 | PUBLIC STATE VARIABLE WITH ARRAY TYPE CAUSING REACHABLE EXCEPTION BY DEFAULT.

LINE 48

low SEVERITY

The public state variable "WhiteLists" in "DRAC" contract has type "address[]" and can cause an exception in case of use of invalid array index value.

Source File

- DRAC.sol

Locations

```
47   bool public addLiquidityEnable;
48   address[] public WhiteLists;
49   mapping(address => bool) private WhiteList;
50   mapping(address => bool) private Pair;
51
52
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 93

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- DRAC.sol

Locations

```
92   for (uint i = 0; i < WhiteLists.length; i++) {
93   _whiteList[i] = WhiteLists[i];
94   _whiteListEnable[i] = WhiteList[WhiteLists[i]];
95   }
96   return (_whiteList, _whiteListEnable);
97
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 93

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- DRAC.sol

Locations

```
92   for (uint i = 0; i < WhiteLists.length; i++) {
93   _whiteList[i] = WhiteLists[i];
94   _whiteListEnable[i] = WhiteList[WhiteLists[i]];
95   }
96   return (_whiteList, _whiteListEnable);
97
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 94

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- DRAC.sol

Locations

```
93    _whiteList[i] = WhiteLists[i];
94    _whiteListEnable[i] = WhiteList[WhiteLists[i]];
95    }
96    return (_whiteList, _whiteListEnable);
97    }
98
```

SWC-110 | OUT OF BOUNDS ARRAY ACCESS

LINE 94

low SEVERITY

The index access expression can cause an exception in case of use of invalid array index value.

Source File

- DRAC.sol

Locations

```
93   _whiteList[i] = WhiteLists[i];
94   _whiteListEnable[i] = WhiteList[WhiteLists[i]];
95   }
96   return (_whiteList, _whiteListEnable);
97   }
98
```

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This is a limited report on our findings based on our analysis, in accordance with good industry practice as of 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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