



Smart Contract Security Audit Report

Uniswap

May 2022

Security Status



www.hacksafe.io



Audit Details



Audited project

Uniswap



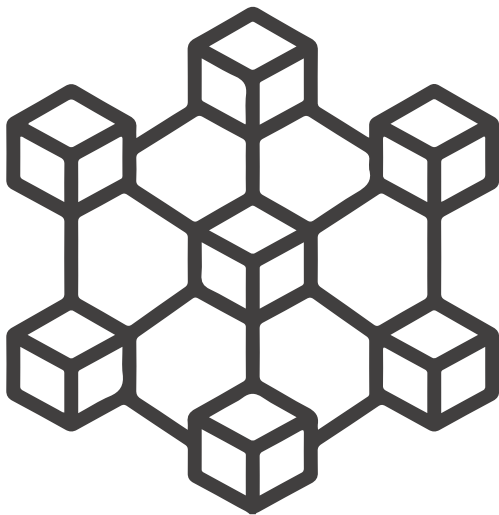
Deployer address

0x41653c7d61609D856f29355E404F310Ec4142Cfb



Client contacts

Uniswap team



Blockchain

Ethereum



Website

<https://uniswap.org/>

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 Uniswap to perform an audit of smart contracts:

- <https://etherscan.io/address/0x1f9840a85d5af5bf1d1762f925bdaddc4201f984#code>

Contract Details

Token contract details for 11.05.2022

Contract name	: Uni
Contract address	: 0x1f9840a85d5aF5bf1D1762F925BDADdC4201F984
Total supply	: 1,000,000,000
Token Ticker	: UNI
Decimals	: 18
Network	: Etherscan
Token Holders	: 308,865
Transactions count	: 3,416,340
Contract deployer address	: 0x41653c7d61609D856f29355E404F310Ec4142Cfb

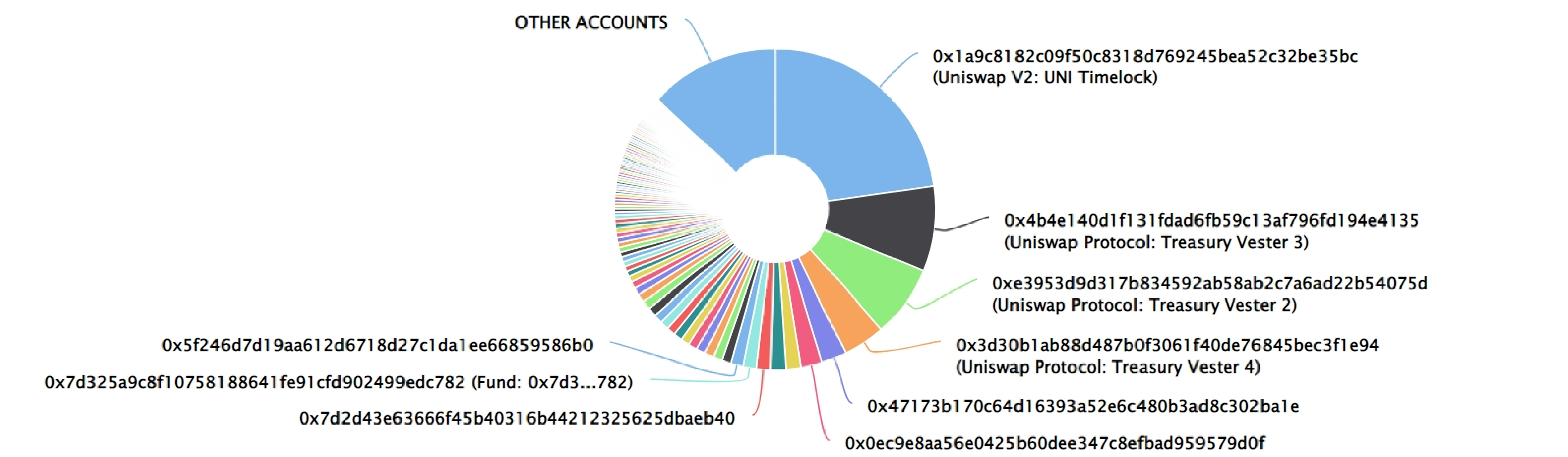
Uniswap Token Distribution

The top 100 holders collectively own 86.93% (869,253,713.71 Tokens) of Uniswap

Token Total Supply: 1,000,000,000.00 Token | Total Token Holders: 308,862

Uniswap Top 100 Token Holders

Source: Etherscan.io



Uniswap Top 20 Token Holders

(A total of 869,253,713.71 tokens held by the top 100 accounts from the total supply of 1,000,000,000.00 token)

Rank	Address	Quantity (Token)	Percentage
1	Uniswap V2: UNI Timelock	227,040,881.189497716904977167	22.7041%
2	Uniswap Protocol: Treasury Vester 3	86,000,000	8.6000%
3	Uniswap Protocol: Treasury Vester 2	71,929,417.810502283105022833	7.1929%
4	Uniswap Protocol: Treasury Vester 4	43,000,000	4.3000%
5	0x47173b170c64d16393a52e6c480b3ad8c302ba1e	24,679,867.136918	2.4680%
6	0x0ec9e8aa56e0425b60dee347c8efbad959579d0f	21,532,653.714	2.1533%
7	0x878f0822a9e77c1dd7883e543747147be8d63c3b	15,269,572.15	1.5270%
8	Uniswap: Token Distributor	15,089,632.513799843	1.5090%
9	0x7d2d43e63666f45b40316b44212325625dbaeb40	13,755,409.347	1.3755%
10	Fund: 0x7d3...782	13,500,000	1.3500%
11	0x5f246d7d19aa612d6718d27c1da1ee66859586b0	12,800,000	1.2800%
12	Compound: cUNI Token	9,318,105.864546174790897033	0.9318%
13	0x030d6830dc8ff125850390da620fa3e12decd437	9,000,000	0.9000%
14	0x177df24addc9a216f927d2a894ab0b6eec59eb09	9,000,000	0.9000%
15	0xa7e2067268901e118bbe0c132c17959c9ab929b6	9,000,000	0.9000%
16	0x63b53181bdc48a9fbf1d23d461d3cfd82b0abc83	9,000,000	0.9000%
17	0x973c877d5636e5cc6e15533ec440d52f299cdf9b	9,000,000	0.9000%
18	0xf731a187cb77d278b817939ce874741b074e3de8	9,000,000	0.9000%
19	0x69c5888ecd21287bdac5a43d1558b73c51e38b	9,000,000	0.9000%
20	0x3cc3bf9b66f424a1632fac87b941cda71ad491b6	9,000,000	0.9000%

Contract functions details

+ [Lib] SafeMath

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

+ Uni

- [Pub] <constructor>#
- [Ext] setMinter #
- [Ext] mint#
- [Ext] allowance
- [Ext] approve#
- [Ext] permit#
- [Ext] balanceOf
- [Ext] transfer #
- [Ext] transferFrom#
- [Pub] delegate#
- [Pub] delegateBySig#
- [Ext] getCurrentVotes
- [Pub] getPriorVotes
- [Ext] _delegate#
- [Int] _transferTokens#
- [Int] _moveDelegates#
- [Int] _writeCheckpoint #
- [Int] safe32
- [Int] safe96
- [Int] add96
- [Int] sub96
- [Int] getChainId

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.	Passed
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

one 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 v0.5.16 the contract should contain the following line:

```
pragma solidity 0.5.16;
```

Conclusion

Smart contract contains low severity issues!

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.