

Blockchain Security | Smart Contract Audits | KYC Development | Marketing

MADE IN GERMANY

# VetMe

# Audit

Security Assessment 03. April, 2023

For







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Version	Date	Description
1.0	01. April 2023	<ul><li>Layout project</li><li>Automated-/Manual-Security Testing</li><li>Summary</li></ul>

#### **Network**

Ethereum

#### Website

vetmeblock.com

#### **Telegram**

https://t.me/vetmeportal

#### **Twitter**

twitter.com/VetmeToken

#### **Description**

VetMe has created a platform that is anchored on four (4) utilities to ensure that people go about commercial activities in the crypto space and on the internet generally. These four (4) utilities are p2p escrow, vetting, over-the-counter (OTC) trading and know-your-client (KYC).

### **Project Engagement**

During the Date of 01 April 2023, **Team** engaged Solidproof.io to audit smart contracts that they created. The engagement was technical in nature and focused on identifying security flaws in the design and implementation of the contracts. They provided Solidproof.io with access to their code repository and whitepaper.

#### Logo



# Contract Link v1.0

- https://github.com/makerzy/Escrow-smart-contract/blob/main/ contracts/VetMe.sol
- · Commit: e36c275

**Note for Investors:** We only Audited one contract for **VetMe** (mentioned above). However, If the project has other contracts (for example, a Presale contract etc), and they were not provided to us in the audit scope then we cannot comment on its security and we are not responsible for it in any way.

# **Vulnerability & Risk Level**

Risk represents the probability that a certain source-threat will exploit vulnerability, and the impact of that event on the organization or system. Risk Level is computed based on CVSS version 3.0.

Level	Value	Vulnerability	Risk (Required Action)
Critical	9 - 10	A vulnerability that can disrupt the contract functioning in a number of scenarios, or creates a risk that the contract may be broken.	Immediate action to reduce risk level.
High	7 – 8.9	A vulnerability that affects the desired outcome when using a contract, or provides the opportunity to use a contract in an unintended way.	Implementation of corrective actions as soon aspossible.
Medium	4 – 6.9	A vulnerability that could affect the desired outcome of executing the contract in a specific scenario.	Implementation of corrective actions in a certain period.
Low	2 – 3.9	A vulnerability that does not have a significant impact on possible scenarios for the use of the contract and is probably subjective.	Implementation of certain corrective actions or accepting the risk.
Informational	O – 1.9	A vulnerability that have informational character but is not effecting any of the code.	An observation that does not determine a level of risk

# Auditing Strategy and Techniques Applied

Throughout the review process, care was taken to evaluate the repository for security-related issues, code quality, and adherence to specification and best practices. To do so, reviewed line-by-line by our team of expert pentesters and smart contract developers, documenting any issues as there were discovered.

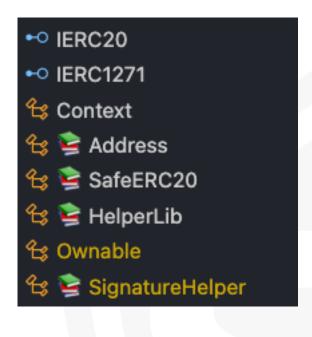
## Methodology

The auditing process follows a routine series of steps:

- 1. Code review that includes the following:
  - i) Review of the specifications, sources, and instructions provided to SolidProof to make sure we understand the size, scope, and functionality of the smart contract.
  - ii) Manual review of code, which is the process of reading source code line-byline in an attempt to identify potential vulnerabilities.
  - iii) Comparison to specification, which is the process of checking whether the code does what the specifications, sources, and instructions provided to SolidProof describe.
- 2. Testing and automated analysis that includes the following:
  - i) Test coverage analysis, which is the process of determining whether the test cases are actually covering the code and how much code is exercised when we run those test cases.
  - ii) Symbolic execution, which is analysing a program to determine what inputs causes each part of a program to execute.
- 3. Best practices review, which is a review of the smart contracts to improve efficiency, effectiveness, clarify, maintainability, security, and control based on the established industry and academic practices, recommendations, and research.
- 4. Specific, itemized, actionable recommendations to help you take steps to secure your smart contracts.

# **Used Code from other Frameworks/Smart Contracts (direct imports)**

Imported packages:



#### **Tested Contract Files**

This audit covered the following files listed below with a SHA-1 Hash.

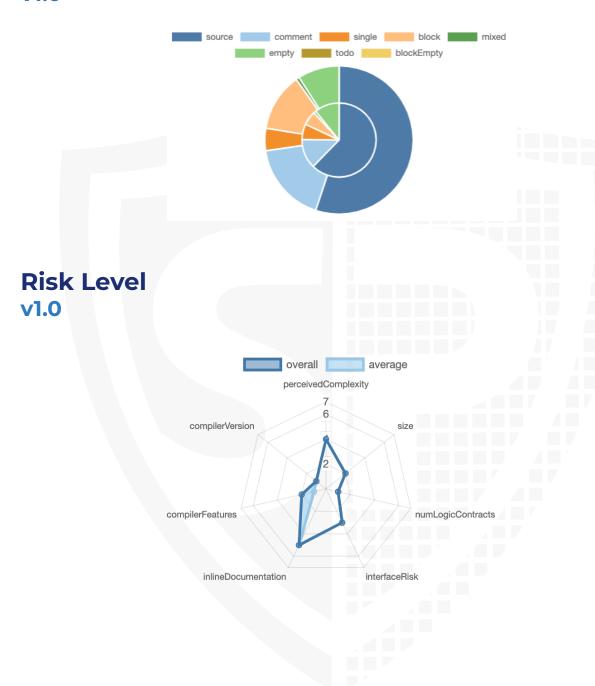
A file with a different Hash has been modified, intentionally or otherwise, after the security review. A different Hash could be (but not necessarily) an indication of a changed condition or potential vulnerability that was not within the scope of this review.

#### **v1.0**

File Name	SHA-1 Hash
contracts/VetMe.sol	19fa680b1807edb7a6cc410d4956948dfafb29a6

# **Metrics**

# Source Lines v1.0



# **Capabilities**

#### **Components**



#### **Exposed Functions**

This section lists functions that are explicitly declared public or payable. Please note that getter methods for public stateVars are not included.

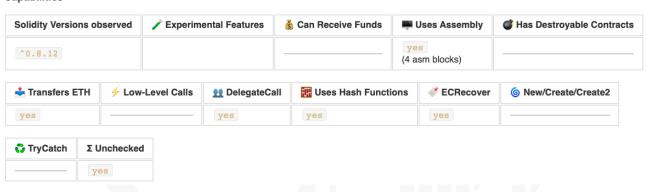


External	Internal	Private	Pure	View
16	62	3	11	16

#### **StateVariables**



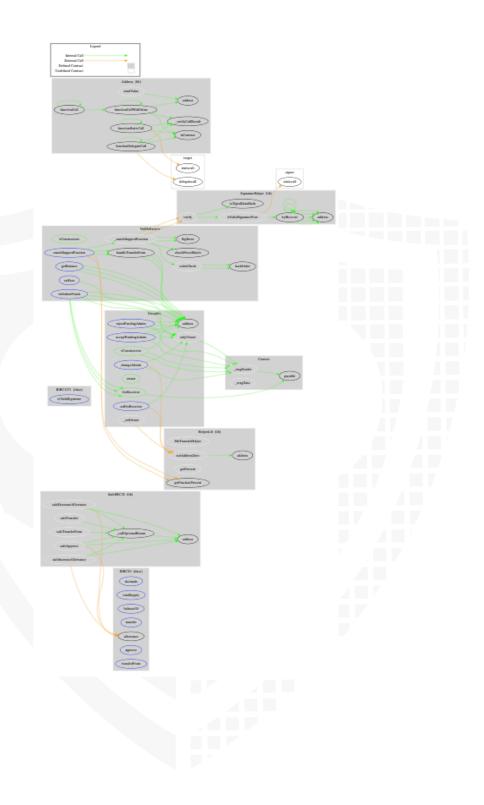
#### Capabilities



# Inheritance Graph v1.0



# CallGraph v1.0



#### **Scope of Work/Verify Claims**

The above token Team provided us with the files that needs to be tested (Github, Bscscan, Etherscan, files, etc.). The scope of the audit is the main contract (usual the same name as team appended with .sol).

We will verify the following claims:

- 1. Is contract an upgradeable
- 2. Correct implementation of Token standard
- 3. Deployer cannot lock user funds
- 4. Deployer cannot pause the contract
- 5. Deployer cannot set fees
- 6. Deployer cannot blacklist/antisnipe addresses
- 7. Overall checkup (Smart Contract Security)

### Is contract an upgradeable

Name	
Is contract an upgradeable?	No



# **Correct implementation of Token standard**

ERC20				
Function	Description	Exist	Tested	Verified
TotalSupply	Provides information about the total token supply	<b>√</b>	<b>√</b>	✓
BalanceOf	Provides account balance of the owner's account	$\checkmark$	<b>√</b>	$\checkmark$
Transfer	Executes transfers of a specified number of tokens to a specified address	<b>√</b>	<b>√</b>	✓
TransferFrom	Executes transfers of a specified number of tokens from a specified address	<b>√</b>	<b>√</b>	<b>√</b>
Approve	Allow a spender to withdraw a set number of tokens from a specified account	<b>√</b>	<b>√</b>	<b>√</b>
Allowance	Returns a set number of tokens from a spender to the owner	<b>√</b>	1	<b>√</b>

**Deployer cannot lock user funds** 

Name	Exist	Tested	Status
Deployer cannot lock	-	_	-



#### **Deployer cannot pause the contract**

Name	Exist	Tested	Status
Deployer cannot pause	-	_	-



### **Deployer cannot set fees**

Name	Exist	Tested	Status
Deployer can set fees over 25%	$\checkmark$	<b>√</b>	X
Deployer can set fees to nearly 100% or to 100%	<b>√</b>	<b>√</b>	×

#### Comments:

#### **v1.0**

· Fees can be set without any limitations

# Deployer can blacklist/antisnipe addresses

Name	Exist	Tested	Status
Deployer cannot blacklist/antisnipe addresses	-	-	-



### **Overall checkup (Smart Contract Security)**



#### Legend

Attribute	Symbol
Verified / Checked	$\checkmark$
Partly Verified	P
Unverified / Not checked	X
Not available	-

# Modifiers and public functions v1.0

changeAdmin rejectPendingAdmin setFeeReceiver acceptPendingAdmin

setFees withdrawFunds matchSupportFraction

## **Ownership Privileges**

- · Change admin (owner) address
- Set fee receiver address
- · Set fees to any arbitrary value
- Withdraw any type of tokens from the contract to the fee receiver address

Please check if an OnlyOwner or similar restrictive modifier has been forgotten.

# **Source Units in Scope** v1.0

File	Logic Contracts	Interfaces	Lines	nLines	nSLOC	Comment Lines	Complex. Score
contracts/VetMe.sol	7	2	862	652	478	187	297
Totals	7	2	862	652	478	187	297

#### Legend

Attribute	Description
Lines	total lines of the source unit
nLines	normalised lines of the source unit (e.g. normalises functions spanning multiple lines)
nSLOC	normalised source lines of code (only source-code lines; no comments, no blank lines)
Comment Lines	lines containing single or block comments
Complexity Score	a custom complexity score derived from code statements that are known to introduce code complexity (branches, loops, calls, external interfaces,)

# **Audit Results**

### **Critical issues**

#### No critical issues

# **High issues**

# No high issues

### **Medium issues**

Issue	File	Type	Line	Description
#1	Main	Fee can be 100% or more	736	The owner can set the fee to any arbitrary value including 100% or more which may result in loss of user funds

#### Low issues

Issue	File	Туре	Line	Description
#1	Main	Contract doesn't import npm packages from source (like OpenZeppelin etc.)		We recommend to import all packages from npm directly without flatten the contract. Functions could be modified or can be susceptible to vulnerabilities
#2	Main	A floating pragma is set		The current pragma Solidity directive is ""^0.8.12".

## Informational issues

Issue	File	Type	Line	Description
#1	Main	Dead Code	159-291	Remove unused functions.
				Before removing check the function, it could be possible, that you forget to implement it into the contract
#2	Main	Wrong Natspec Documentation	815	The comment says "make sure these is greater than 0" But there are no checks in the code to ensure it.

#### **Commented Code exist**

There are some instances of code being commented out in the following files that should be removed:

File	Line	Comment
Main	795	// require((isSupportedPairToken[sellOrder.tokenOutSwapPair] && isSupportedPairToken[buyOrder.tokenOutSwapPair])   ! swapping, "Not supported swap pair");

#### Recommendation

Remove the commented code, or address them properly.

#### **Audit Comments**

We recommend you to use the special form of comments (NatSpec Format, Follow link for more information <a href="https://docs.soliditylang.org/en/latest/natspec-format.html">https://docs.soliditylang.org/en/latest/natspec-format.html</a>) for your contracts to provide rich documentation for functions, return variables and more. This helps investors to make clear what that variables, functions etc. do.

#### 03. April 2023:

- · There is still an owner (Owner still has not renounced ownership.
- Owner can deploy a new version of the contract which can change any limit and give owner new privileges
- · Read whole report and modifiers section for more information

# **SWC Attacks**

ID	Title	Relationships	Status
<u>SW</u> <u>C-1</u> <u>36</u>	Unencrypted Private Data On-Chain	CWE-767: Access to Critical Private Variable via Public Method	PASSED
<u>SW</u> <u>C-1</u> <u>35</u>	Code With No Effects	CWE-1164: Irrelevant Code	PASSED
<u>SW</u> <u>C-1</u> <u>34</u>	Message call with hardcoded gas amount	CWE-655: Improper Initialization	PASSED
<u>SW</u> <u>C-1</u> <u>33</u>	Hash Collisions With Multiple Variable Length Arguments	CWE-294: Authentication Bypass by Capture-replay	PASSED
<u>SW</u> <u>C-1</u> <u>32</u>	Unexpected Ether balance	CWE-667: Improper Locking	PASSED
<u>SW</u> <u>C-1</u> <u>31</u>	Presence of unused variables	CWE-1164: Irrelevant Code	PASSED
<u>SW</u> <u>C-1</u> <u>30</u>	Right-To-Left- Override control character (U+202E)	CWE-451: User Interface (UI) Misrepresentation of Critical Information	PASSED
<u>SW</u> <u>C-1</u> <u>29</u>	Typographical Error	CWE-480: Use of Incorrect Operator	PASSED
<u>SW</u> <u>C-1</u> <u>28</u>	DoS With Block Gas Limit	CWE-400: Uncontrolled Resource Consumption	PASSED

<u>SW</u> <u>C-1</u> <u>27</u>	Arbitrary Jump with Function Type Variable	CWE-695: Use of Low-Level Functionality	PASSED
SW C-1 25	Incorrect Inheritance Order	CWE-696: Incorrect Behavior Order	PASSED
<u>SW</u> <u>C-1</u> <u>24</u>	Write to Arbitrary Storage Location	CWE-123: Write-what-where Condition	PASSED
SW C-1 23	Requirement Violation	CWE-573: Improper Following of Specification by Caller	PASSED
<u>SW</u> <u>C-1</u> <u>22</u>	Lack of Proper Signature Verification	CWE-345: Insufficient Verification of Data Authenticity	PASSED
SW C-1 21	Missing Protection against Signature Replay Attacks	CWE-347: Improper Verification of Cryptographic Signature	PASSED
SW C-1 20	Weak Sources of Randomness from Chain Attributes	CWE-330: Use of Insufficiently Random Values	PASSED
<u>SW</u> <u>C-11</u> <u>9</u>	Shadowing State Variables	CWE-710: Improper Adherence to Coding Standards	PASSED
<u>SW</u> <u>C-11</u> <u>8</u>	Incorrect Constructor Name	CWE-665: Improper Initialization	PASSED
<u>SW</u> <u>C-11</u> <u>7</u>	Signature Malleability	CWE-347: Improper Verification of Cryptographic Signature	PASSED

<u>SW</u> <u>C-11</u> <u>6</u>	Timestamp Dependence	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
<u>SW</u> <u>C-11</u> <u>5</u>	Authorization through tx.origin	CWE-477: Use of Obsolete Function	PASSED
<u>SW</u> <u>C-11</u> <u>4</u>	Transaction Order Dependence	CWE-362: Concurrent Execution using Shared Resource with Improper Synchronization ('Race Condition')	PASSED
<u>SW</u> <u>C-11</u> <u>3</u>	DoS with Failed Call	CWE-703: Improper Check or Handling of Exceptional Conditions	PASSED
<u>SW</u> <u>C-11</u> <u>2</u>	Delegatecall to Untrusted Callee	CWE-829: Inclusion of Functionality from Untrusted Control Sphere	PASSED
<u>SW</u> <u>C-11</u> <u>1</u>	Use of Deprecated Solidity Functions	CWE-477: Use of Obsolete Function	PASSED
<u>SW</u> <u>C-11</u> <u>O</u>	Assert Violation	CWE-670: Always-Incorrect Control Flow Implementation	PASSED
SW C-1 09	Uninitialized Storage Pointer	CWE-824: Access of Uninitialized Pointer	PASSED
<u>SW</u> <u>C-1</u> <u>08</u>	State Variable Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED
SW C-1 07	Reentrancy	CWE-841: Improper Enforcement of Behavioral Workflow	PASSED
<u>SW</u> <u>C-1</u> <u>06</u>	Unprotected SELFDESTRUC T Instruction	CWE-284: Improper Access Control	PASSED

Unprotected Ether Withdrawal	CWE-284: Improper Access Control	PASSED
Unchecked Call Return Value	CWE-252: Unchecked Return Value	PASSED
Floating Pragma	CWE-664: Improper Control of a Resource Through its Lifetime	NOT PASSED
Outdated Compiler Version	CWE-937: Using Components with Known Vulnerabilities	PASSED
Integer Overflow and Underflow	CWE-682: Incorrect Calculation	PASSED
Function Default Visibility	CWE-710: Improper Adherence to Coding Standards	PASSED
	Ether Withdrawal  Unchecked Call Return Value  Floating Pragma  Outdated Compiler Version  Integer Overflow and Underflow  Function Default	Ether Withdrawal  Unchecked Call Return Value  Floating Pragma  Outdated Compiler Version  Integer Overflow and Underflow  Function Default Visibility  CWE-252: Unchecked Return Value  CWE-664: Improper Control of a Resource Through its Lifetime  CWE-937: Using Components with Known Vulnerabilities  CWE-682: Incorrect Calculation  CWE-710: Improper Adherence to Coding Standards











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