VEON

<a p2p code auditing platform built on ethereum />

VEON is an innovative platform that aims to introduce crypto-economic incentives to both publishers, and auditors of code across the software application industry.

Our vision is to become the software auditing solution of choice for developers.

We have identified fundamental weaknesses and flaws with how traditional code auditing companies exist in their current state.

First and foremost, auditing companies are centralized, meaning they are dependent on sourcing talent internally originating from their inherent hierarchical structure. This fundamentally limits the existing pool of talent to expand and direct resources from in order to identify as many potential bugs and zero day exploits.

As a software provider, selecting an auditor is often a timely and challenging task. This is because, with the range of rather opaque existing entities to choose from in this industry, it can often be difficult to know who to trust, and determining who can provide the best value for such services over one another.

What makes VEON unique, is we are the first code auditing company that is decentralized. By utilizing blockchain technology, alongside incorporating ourselves as a distributed autonomous organisation, this enables us to harness the benefits of Collective Intelligence.

Collective Intelligence is defined by the P2P Foundation as the following:

The capacity of a human community to evolve towards higher order complexity of thought, problem-solving and integration through collaboration and innovation from the competition of many individuals.

Platform Overview
VEON is able to introduce fair competition between many individuals by:

Allowing publishers of code to upload tasks to be reviewed by one or as many auditors as they wish to employ.

When a task is uploaded, the publisher may specify the following:

- Fixed budget price in ETH per auditor.
- Maximum number of auditors allowed to submit a review.
- Minimum Reputation Score of the desired auditor.

If the publisher wishes to list their task, they must meet their own budget price requirements by depositing the amount of ETH they have chosen, into the provided Escrow Smart Contract linked with their listing.

This task then becomes available as a public listing on the TERMINAL which can be viewed by active auditors on the platform.

If an auditor requests a task, the publisher is notified with the auditors credentials and proposal where they can choose to either accept or decline.

Upon successful completion and satisfaction of the publishers task, the auditor will be able to redeem the amount of ETH sitting in escrow using a 2-of-2 multisig.

- ❏ A success fee will be deducted upon redemption of the ETH in escrow.
- ❏ Collected ETH will be deposited into a separate VEON DAO contract.
- ❏ Existing VEON token holders will be able to redeem ETH in the form of quarterly rewards (“dividends”) that the VEON DAO accumulates from completion of successful code auditing.
- ❏ Rewards are directly proportional to how many VEON each stakeholder owns as a % of the total supply.
- ❏ If a stakeholder owns 0.1% of total VEON supply + DAO balance = 1,000 ETH. In this instance, stakeholders would have a quarterly claim to 1 ETH.
- ❏ VEON value fluctuates based on exchange rates and market forces.
- ❏ There will be a fixed supply of 10,000,000 VEON in existence.

VEON DAO
The VEON DAO is a smart contract that will contain a shared pool of ETH collected from success fees on the VEON platform. This ETH (“dividend”) can be redeemed quarterly by the VEON DAO members who hold VEON tokens.

VEON TOKEN
The VEON token will utilize the ERC-20 standard used on the Ethereum blockchain. With each successful code audit review that is completed using VEON, this results in ETH flowing into the VEON DAO, giving the VEON token a greater backing value.

The dividend token model outlined above was inspired by the DGD Digix token.

Instead of being backed by gold, the VEON token is backed by human labor resulting in ETH proceeds from code that is successfully audited on the platform.

Token holders with at least 1,000 VEON will also be able to stake their tokens to opt-in to the jury member voting pool, and claim dispute fees of 5% from the total amount of ETH in escrow, in the event of a disagreement between either the auditor or publisher occurring.

Github Integration

VEON will include API and various key features + integration with Github, to enable seamless integration for publishers code to be reviewed. This will enable auditor-only access for required tasks, making effective use of already existing code reviewing tools.

Reputation Scoring

An important part of creating an open market for code auditing practices is the inclusiveness of a built-in reputation system for both publishers and auditors.

Reputation can only be given upon completion of fulfilling the requirements of the 2-of-2 multisig escrow contract that holds the ETH funds for the task.

As a result, this has the added benefit of being a mandatory part of the VEON platform ensuring that for every completed task, a credibility score can be assigned to users. This enables a healthy ecosystem where meritocracy is favoured.

Dispute System

Upon a task entering into the review stage, a 2-of-2 multisig escrow contract will be activated between the publisher and the auditor.

This will require both parties to sign in order to release the ETH funds from escrow once the audit has been successfully completed.

The auditor will upload their review in effect resulting in the signing of the multi-sig, notifying the publisher to check that the task has been completed.

If the publisher is not satisfied with the end result of the audit --

Inside of the escrow contract is a built in moderation system, whereby in the case of a disagreement between the two parties, this will automatically summon members from the jury voting pool before any contained ETH can be granted to the respective owner.

A stakeholder who holds at least 1,000 VEON will be eligible to opt-in optionally as a jury member in order to view evidence presented by both the auditor and publisher.

A notification will be sent to the opt-in jury members, where failure to take prompt action will result in the slashing of their staked VEON tokens. This is to incentivize active participation by prospective jury members.

Each jury member will consist of 3 randomly selected members from the jury voting pool. The majority decision will result in one of the following outcomes:

- Award back the ETH to the publisher in the scenario of the auditor not performing or completing the task sufficiently.
- Award back the ETH to the auditor in the event the publisher is found to be unable to support his/her argument with enough circumstantial evidence.

Jury members will be awarded a 15% dispute fee in total, to be split automatically and equally among each other once the final verdict has been reached.

This system was inspired by measures the Firstblood.io Project have adopted to encourage fair and honest behaviour by all parties involved.

Understanding The Software Audit Industry

What Is A Software Code Audit?

The practice of source code auditing is an assessment process that identifies security issues in software projects by examining the project's source code line-by-line. Auditing can be applied to any type of software (systems software, application libraries, web applications, mobile applications).

It is capable of identifying all types of security issues and provides the best possible assessment coverage during the security analysis of a software module.

According to industry analyst Gartner, the size of the worldwide software industry is estimated to be worth more than US$407.3 billion.

When Is A Code Audit Necessary?

Source Code Auditing can help identify security issues during the development phase of a software project. In this way, it effectively minimizes any post-release risks and supports the production of high quality products.

Auditing can be applied to a complete software module that is in release candidate status or to a specific functionality that has reached a certain milestone (e.g. auditing of a software patch).

Source Code Auditing can also be applied to acquired third party code.
In this case, the acquiring organization applies Source Code Auditing to eliminate any risks introduced by the third party codebase.

How Much Does A Code Audit Cost?

There exists a large number of factors affecting costs of a software security audit:

- What type of security audit do you require?
- Are you including your own code review?
- What languages is the app written in?
- What audience is the report to be written for?
- What is the purpose of the test?
- Compliance, audit, certification, other?
- What does the application do?
- How many user roles exist?

What Are The Benefits Of Source Code Auditing?
Source code auditing plays a crucial part in the delivery of higher quality software. It is the only assessment method that is capable of identifying all types of security vulnerabilities and its white-box assessment methodology makes it unique in that it can quickly uncover architectural flaws that could lead to multiple security vulnerabilities later on in the development of the project. Experience has shown that the close interaction between developers and source code auditors raises the development team's awareness level on security issues and leads to the output of more robust code on each development sprint.

Finally, it is a well established fact that fixing a security vulnerability after an application's release, comes with an increased cost to software vendors, both in terms of business and development. Source code auditing helps in minimizing these costs, by identifying and addressing security issues early on in the software development process.

Reports generated by users of the VEON platform will outline potential problems in the code, additional recommendations to increase security, alongside a general analysis of the implemented architecture dynamics.

Lessons Of The $250,000 Slock.it DAO Security Audit
A case study identifying the current flaws of the external software auditing process, can be examined further by studying the events of the DAO exploit occurring on July 20th, 2016. The DAO was a Smart Contract that held depositors ETH was then contributed towards various projects that were to be voted on by shareholders.

On this date, hackers exploited a vulnerability in the DAO code to enable them to siphon off one third of The DAO's funds to a subsidiary account.

Before going live the DAO contract was subject to peer-reviewing by those who had an interest in the project. However these reviewers were not economically incentivized for their time and efforts.

Slock.it, the creators of The DAO hired an auditing company to review the code. They paid $250,000 USD to have the following report produced over the course of two weeks:

https://www.docdroid.net/L9JEZ1W/deja-vu-security-slock-it-status-update-25mar2016.pdf.html

Contained within, is a three page document with under 100 words of text, concerning an 'Integer Division Error Accumulation' dating from March 25th.

Despite this, numerous critical flaws were still found within the DAO code.

Squashing bugs and lack of appropriate security oversight is one of the most crucial challenges facing the software industry today.

This is especially true when it comes to Smart Contracts deployed on Ethereum.

VEON seeks to reinvent and set the standards of software and code auditing practices to a higher standard, where everybody can be held accountable based on the quality of their efforts.

We believe by creating a platform with economic incentives, and tapping into a much wider pool of talent, developers using VEON will be able to leverage the **collective intelligence** of auditors and software experts from all around the world.

Auditors will be incentivized by being paid in cryptocurrency and tokens based on Ethereum, providing a much healthier ecosystem giving software, and application developers the platform needed to conduct external security reviews.

Crowdsale

Our goal is to raise $3,000,000 USD to achieve reaching our funding development costs to fully build out our vision of creating the VEON platform.

To do this we will be holding an ICO of 10,000,000 VEON tokens at soon to be announced date. [You can keep up to date by following us on our Medium.]

Participants who hold VEON tokens will have a proportional stake in the VEON DAO which will be the main source of revenue for token holders.

If you would like to contribute, have any feedback, or even are a developer yourself looking to become apart of an Ethereum project then we would love to hear from you on our Slack channel!

Join in the conversation at: https://veondao.herokuapp.com