



# SMART CONTRACT SECURITY AUDIT

Opsya

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Website: [soken.io](https://soken.io)

# Table of Contents

Table of Contents	2
Disclaimer	3
Procedure	4
Terminology	5
Limitations	5
Token Contract Details for 27.12.2021	6
Audit Details	6
Social Profiles	6
Project's list of addresses	7
Whitepaper Review	8
Audit scope	9
Vulnerabilities checking	10
Security Issues	11
Conclusion	12
Soken Contact Info	13

# Disclaimer

This is a comprehensive report based on our automated and manual examination of cybersecurity vulnerabilities and framework flaws. We took into consideration smart contract based algorithms, as well. Reading the full analysis report is essential to build your understanding of project's security level. It is crucial to take note, though we have done our best to perform this analysis and report, that you should not rely on the our research and cannot claim what it states or how we created it. Before making any judgments, you have to conduct your own independent research. We will discuss this in more depth in the following disclaimer - please read it fully.

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Security analysis is based only on the smart contracts. No applications or operations were reviewed for security. No product code has been reviewed.

# Procedure

## Our analysis contains following steps:

1. Project Analysis;
2. Manual analysis of smart contracts:
  - Deploying smart contracts on any of the network(Ropsten/Rinkeby) using Remix IDE
  - Hashes of all transaction will be recorded
  - Behaviour of functions and gas consumption is noted, as well.
3. Unit Testing:
  - Smart contract functions will be unit tested on multiple parameters and under multiple conditions to ensure that all paths of functions are functioning as intended.
  - In this phase intended behaviour of smart contract is verified.
  - In this phase, we would also ensure that smart contract functions are not consuming unnecessary gas.
  - Gas limits of functions will be verified in this stage.
4. Automated Testing:
  - Mythril
  - Oyente
  - Manticore
  - Solgraph

# Terminology

**We categorize the finding into 4 categories based on their vulnerability:**

- Low-severity issue — less important, must be analyzed
- Medium-severity issue — important, needs to be analyzed and fixed
- High-severity issue — important, might cause vulnerabilities, must be analyzed and fixed
- Critical-severity issue — serious bug causes, must be analyzed and fixed.

## Limitations

The security audit of Smart Contract cannot cover all vulnerabilities. Even if no vulnerabilities are detected in the audit, there is no guarantee that future smart contracts are safe. Smart contracts are in most cases safeguarded against specific sorts of attacks. In order to find as many flaws as possible, we carried out a comprehensive smart contract audit. Audit is a document that is not legally binding and guarantees nothing.

# Token Contract Details for 27.12.2021

Total Supply: **100 000 000**

Token Tracker: **OPSY**

## Audit Details



Project Name: **Opsya**

Language: **Solidity**

Compiler Version: **v0.8.4**

Blockchain: **Avalanche**

## Social Profiles

Project Website: **<https://www.opsya.org>**

Project Docs: **<https://docs.opsya.org/>**

Project Twitter: **<https://twitter.com/Opsyalns>**

## Project's list of addresses

Team Wallet

**0xA0BC90c020DF37029f6a5535F6d571a5736e3e69**

Marketing - Legal - Security

**0xE3ef89A5dcaAf493c21386D13356197800a656840**

Treasury

**0x2f84618d2b64A27A392B1C2542D258c78fB38B9d**

Charity Wallet

**0xDb97812Cb0aa5E5c15DBd39A7026B139D29a7155**

Ecosystem

**0xAE14A2df2a461c505D139814A9C574D4264a722f**

# Whitepaper Review

The whitepaper of Fair Trader project has been verified on behalf of Soken team.



## 2.2 Values

### ***Trust***

As all Crypto projects, trust is critical. This entails complete openness in all aspects of community and development work, as well as security efforts. We are building each feature, each part of our system with care to minimize safety breach. Our team is KYC.

### ***Longevity***

Our initial roadmap brings us to 2023 Q1 but Opsya is here to stay. All our development is based on the future. The first phase will represent the foundation then with our ecosystem fully operational we will be able to stay for decade giving better service every year. We know that our model is unique, and the need is real, more we have the vision to improve our system to reach every single crypto owner. Our team will grow as our organization, we are hiring people actively.

### ***Transparency***

Our contracts are accessible, every transaction will be trackable on the Avalanche Blockchain (Snowtrace). Opsya ecosystem would be fully ready end of 2022, from the official launch date and then every four-month users will have an access without restriction to the Opsya's organization report. Statistics and token financial. We could not be more transparent.

Whitepaper link: <https://docs.opsya.org/developer-section/whitepaper>



# Audit scope

- data
  - ShareHolder.sol
  - Tax.sol
- interfaces
  - IFactory.sol
  - IHODLRewardDistributor.sol
  - IOwnable.sol
  - IReflectionERC20.sol
  - IRouter.sol
  - IWAVAX.sol
- HodlRewardDistributor.sol
- ReflectionERC20.sol
- SwapHandler.sol

# Vulnerabilities checking

Issue Description	Checking Status
Compiler Errors	Completed
Delays in Data Delivery	Completed
Re-entrancy	Completed
Transaction-Ordering Dependence	Completed
Timestamp Dependence	Completed
Shadowing State Variables	Completed
DoS with Failed Call	Completed
DoS with Block Gas Limit	Completed
Outdated Compiler Version	Completed
Assert Violation	Completed
Use of Deprecated Solidity Functions	Completed
Integer Overflow and Underflow	Completed
Function Default Visibility	Completed
Malicious Event Log	Completed
Math Accuracy	Completed
Design Logic	Completed
Fallback Function Security	Completed
Cross-function Race Conditions	Completed
Safe Zeppelin Module	Completed

# Security Issues

## 1) Volatile Code | IRouter.sol

The return value of function

*swapExactTokensForETHSupportingFeeOnTransferTokens* is not properly handled.

### **Recommendation:**

We recommend using variables to receive the return value of the functions mentioned above and handle both success and failure cases if needed by the business logic.

# Conclusion

Low-severity issues exist within smart contracts. Smart contracts are free from any critical or high-severity issues.

NOTE: Please check the disclaimer above and note, that audit makes no statements or warranties on business model, investment attractiveness or code sustainability.

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