



CHAINSTARS - BLOCKCHAIN  
SECURITY SERVICES

# SMART CONTRACT AUDIT OF POLYSTARK

POLYSTARK Findings & Analysis Report by  
Chainstars LLC

OCTOBER 5TH, 2022

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# Overview

Chainstars - Blockchain Security and Development LLC ("Chainstars") was engaged by a representative party of "POLYSTARK" platform to conduct a review of the following smart contract:

<https://bscscan.com/address/0x69448D2B9Dd6EC25A729F9CF61E1E21b7B70C796>

Project Name	Polystark Token (PYSK)
Platform	BSC
Website	<a href="https://polystark.io/">https://polystark.io/</a>
Deployer	0xb44c40CF8a9497C643Cd41D220FC5f4Db4B942Bb

## Audit Summary

Methodology	Static Analysis, Manual Review
Delivery Date	October 5, 2022
Total Issues Found	0
Major	0
Medium	1
Minor	0
Optimization	2

# Risk Analysis



Overview of the project functionality and risks found while testing

## Project Functionality

Polystark (PYSK) is a new Decentralized trading protocol powered by a virtual Automated Market Maker (vAMM\*\*)

There are 100,000,000 PYSK (100 Million) tokens minted at deployment.

## Holders Summary

BSC Contract:

- A proportion of 45% tokens are prepared for presale as stated
- The remaining tokens are distributed for Private Sale, Marketing, Liquidity and team

Test Parameter	Outcome
Buy Tax	10%
Sell Tax	10%
MaxTx	No
Proxy	No

Owner Privileges	Outcome
Change Taxes	Yes - to 100%
Blacklist	No
Mint	No
Burn	No
Pause	No
MaxTx	No

# Findings



ID	Title	Category	Severity
P-01	Fees Without Limit	Privileges	Medium
CO-01	Unlocked compiler version	Code Optimization	Optimization
CO-02	State Variable Default Visibility	Code Optimization	Optimization

## P-01 ➤ Fees Without Limit

Category	Location	Severity
Privileges	Polystark.sol (Lines # 614-624)	Medium

### Description

The `_owner` can set the `_taxFee`, `_rndFee` and `_earlyinvestorFee` values in the contract and there is no upper limit on what the rate can be. In the extreme case, the rate can be as high as 100%, which would imply that users cannot buy or sell the token.

### Recommendation

We recommend setting a reasonable upper limit (under 25%) for tax related variables.

## C0-01 ➤ Unlocked compiler version

Category	Location	Severity
Code Optimization	Polystark.sol (Line #7)	Optimization

### Description

The contract has unlocked compiler version. An unlocked compiler version in the source code of the contract permits the user to compile it at or above a particular version. This leads to differences in the generated bytecode between compilations due to different compiler versions.

### Recommendation

We advise that the compiler version is instead locked at the lowest version possible that the contract can be compiled at.  
For example, replace the line with: `pragma solidity 0.8.9;`

## CO-02 ➤ State Variable Default Visibility

Category	Location	Severity
Code Optimization	Polystark.sol (Line #488)	Optimization

### Description

inSwapAndLiquify

Labeling the visibility explicitly makes it easier to catch incorrect assumptions about who can access the variable.

### Recommendation

Variables can be specified as being public, internal or private. Explicitly define visibility for all state variables.



# Disclaimer

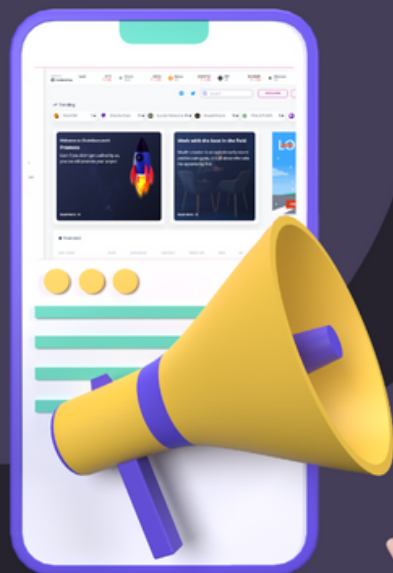
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Additionally, we ("Chainstars") would like to emphasize that the use of our services does not guarantee the full security of a smart contract or set of smart contracts and does not guarantee against attacks. One audit on its own is not enough for a project to be considered secure.

All smart contract software should be used at the sole risk and responsibility of users.

This report should not be used in any way to make decisions around investment or involvement with any particular project. This report in no way provides investment advice, nor should be leveraged as investment advice of any sort. This report represents an extensive assessing process intending to help our customers increase the quality of their code while reducing the high level of risk presented by cryptographic tokens and blockchain technology.

Blockchain technology and cryptographic assets present a very high level of ongoing risk. Our position is that each company and individual are responsible for their own due diligence and continuous security.



**Promote  
Your Token  
on our  
Website!**

**Be a  
Blockchain  
Star!**



Questions? Contact us.



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