

Solidity Smart Audit Report

Audit conducted on HedgePay Smart Contract
0xc75aa1fa199eac5adabc832ea4522cff6dfd521a

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Scope of the audit

This Audit Report mainly focuses on the overall security of the SPIN token Smart Contract. This audit was conducted with rigorous attention to the general implementation of the contract and by examining the overall architectural layout of the software implementation. The reliability and correctness of this smart contract's codebase are being assessed.

Security Scope

Identifying security related issues within each contract and the system of contract.

General Code Quality

A full assessment of the code quality and general software architecture patterns and best practices used.

Auditing Methods Used

Rigorous testing of the project has been performed. Detailed code base analysis was conducted, reviewing the smart contract architecture to ensure it is structured and safe.

A detailed, line by line inspection of the codebase was conducted to find any potential security vulnerabilities such as denial of service attacks, race conditions, transaction-ordering dependence, timestamp dependence, and denial of service attacks.

Automated and manual testing was employed that included:

- Analysis of on-chain data security
- Analysis of the code in-depth and detailed, manual review of the code, line-by-line.
- Deployment of the code on an in-house testnet blockchain and running live tests●
- Determining failure preparations and if worst-case scenario protocols are in place
- Analysis of any third-party code use and verifying the overall security of this

Tools Used:

Remix IDE, Ganache, Solhint, VScode, Mythril, Contract Library Hardhat

Assessing Possible Issues

Any issue detected during the conduction of this audit will be categorized under one of 4 severity levels: low, medium and high.

Low level Severity Issues

Issues that do not pose any serious threat to the functionality of the software

Medium level Severity issues

Issues that can cause potential problems to the overall health of the software application but that can be fixed without having any breaking changes on the current functionality

High level Severity issues

Critical issues that affect the smart contract's overall performance and functionality. These issues should be fixed urgently.

Code Base General Issues Report

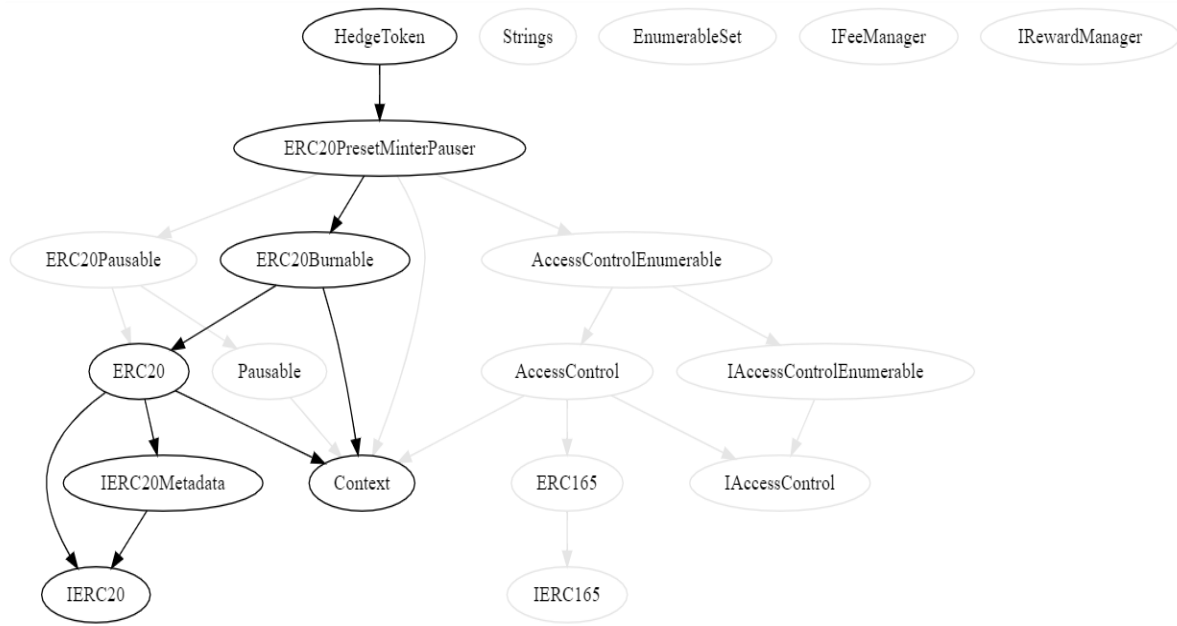
General issues that were found during manual and automatic assessments

No	Issue Verification	Status
1	Compiler warnings	Passed
2	Reentrancy and Race Conditions.	Passed
3	Possible delays in data delivery.	Passed
4	Oracle calls.	Passed
5	Front running.	Passed
6	DoS with block gas limit.	Passed
7	DoS with Revert.	Passed
8	Timestamp dependence.	Passed
9	Methods execution permissions.	Passed
10	Economy model.	Passed
11	The impact of the exchange rate on the logic.	Passed
12	Private user data leaks.	Passed
13	Scoping and Declarations.	Passed
14	Arithmetic accuracy.	Passed

Issues Found

Low Level Severity	Medium Level Severity	HighLevel Severity
0	1	0

Contract Dependency Graph



Manual Code Inspection

The code of the target contract and its dependencies was reviewed, deployed and manually tested by our developers.

No	Contract	Issues
1	HedgeToken	None
2	RewardManager	None
3	FeeManager	None

Issues Found

Low Level Severity	Medium Level Severity	HighLevel Severity
0	0	0

Inspections

Contract: HedgeToken

Address: [0xc75aa1fa199eac5adabc832ea4522cff6dfd521a](#)

Issues: 0

Notes: ERC-20 Token, The owner can mint tokens

Contract: FeeManager

Address: [0xb1588ca2529ff4f1a8e21d6fe24ba6d0b6e000b0](#)

Issues: 0

Contract: RewardManager

Address: [0x020f50300c85ee89cfd73e1a46d55e9e9a93844](#)

Issues: 0

Access Control And Privileges

The contract uses a single owner access control system for setting contract specific parameters.

Privileges

The owner can:

- Exclude Accounts from fee
- Set Fees
- Update the FeeProvider
- Update the RewardManager
- MintTokens

Notes

The owner of this contract can censor/restrict parties from accessing this contract's functionality.
The owner can mint tokens up to `totalSupply` amount

Conclusion

The HedgePay Smart contracts do not contain any high severity issues!

Audit Score

Section	Score
Codebase Security	100%
Codebase Complexity and Practices	100%
Owner Privileges And Control	90%
Overall Score	96%

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 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.