



# GameSwift Security Review

February 13, 2025 - February 13, 2025

Date: March 10, 2025

Conducted by: **KeySecurity**

**gkrastenov**, Lead Security Researcher

## Table of Contents

|          |  |          |
|----------|--|----------|
| <b>1</b> | <b>About KeySecurity</b>                     | <b>3</b> |
| <b>2</b> | <b>About GameSwift</b>                       | <b>3</b> |
| <b>3</b> | <b>Disclaimer</b>                            | <b>3</b> |
| <b>4</b> | <b>Risk classification</b>                   | <b>3</b> |
| 4.1      | Impact . . . . .                             | 3        |
| 4.2      | Likelihood . . . . .                         | 3        |
| 4.3      | Actions required by severity level . . . . . | 4        |
| <b>5</b> | <b>Executive summary</b>                     | <b>4</b> |
| <b>6</b> | <b>Findings</b>                              | <b>5</b> |
| 6.1      | Information . . . . .                        | 5        |
| 6.1.1    | Unnecessary refunding call . . . . .         | 5        |

## 1 About KeySecurity

KeySecurity is a new, innovative Web3 security company that hires top-talented security researchers for your project. We have conducted over 35+ security reviews for various projects, collectively holding over \$300,000,000 in TVL. For security audit inquiries, you can reach out to us on Twitter/X or Telegram [@gkrastenov](#) or check our previous work [here](#).

## 2 About GameSwift

GameSwift AI is a Layer 2 modular blockchain optimized for gaming, powered by the \$GSWIFT gas token. Using AI and computing power to drive the mass adoption of Web3 gaming.

## 3 Disclaimer

Audits are a time, resource, and expertise bound effort where trained experts evaluate smart contracts using a combination of automated and manual techniques to identify as many vulnerabilities as possible. Audits can show the presence of vulnerabilities **but not their absence**.

## 4 Risk classification

| Severity           | Impact: High | Impact: Medium | Impact: Low |
|--------------------|--------------|----------------|-------------|
| Likelihood: High   | Critical     | High           | Medium      |
| Likelihood: Medium | High         | Medium         | Low         |
| Likelihood: Low    | Medium       | Low            | Low         |

### 4.1 Impact

- **High** - leads to a significant loss of assets in the protocol or significantly harms a group of users.
- **Medium** - only a small amount of funds can be lost or a functionality of the protocol is affected.
- **Low** - any kind of unexpected behaviour that's not so critical.

### 4.2 Likelihood

- **High** - direct attack vector; the cost is relatively low to the amount of funds that can be lost.
- **Medium** - only conditionally incentivized attack vector, but still relatively likely.
- **Low** - too many or too unlikely assumptions; provides little or no incentive.

### 4.3 Actions required by severity level

- **Critical** - client **must** fix the issue.
- **High** - client **must** fix the issue.
- **Medium** - client **should** fix the issue.
- **Low** - client **could** fix the issue.

## 5 Executive summary

### Overview

|                    |   |
|--------------------|---|
| Project Name       | GameSwift   |
| Repository         | <a href="https://github.com/gswiftcommunity/gs-evm-contracts">https://github.com/gswiftcommunity/gs-evm-contracts</a> |
| Commit hash        | b1a9aeb2d2ac0008e28c2d3a2e05ecba61f50f38  |
| Review Commit hash | 54ac5a55bc96b46d4d888a52bb4a4d153fcbbbbb0   |
| Documentation      | N/A   |
| Methods            | Manual review   |

### Scope

|                     |
|---------------------|
| MigratedVesting.sol |
|---------------------|

### Timeline

|                   |                    |
|-------------------|--------------------|
| February 13, 2025 | Audit kick-off     |
| February 13, 2025 | Preliminary report |
| February 13, 2025 | Mitigation review  |

### Issues Found

| Severity     | Count    |
|--------------|----------|
| Critical     | 0        |
| High         | 0        |
| Medium       | 0        |
| Low          | 0        |
| Information  | 1        |
| <b>Total</b> | <b>1</b> |

## 6 Findings

### 6.1 Information

#### 6.1.1 Unnecessary refunding call

**Severity:** *Information*

**Context:** MigratedVesting.sol#L45

**Description:** When the fee is taken from the caller, the dust amount is refunded to the user. It is very unlikely that a user will overpay the fee when claiming their tokens.

**Recommendation:** Remove the unnecessary refunding call.

**Resolution and Client comment:** Acknowledged.