



KAL MYDAS

Audit de sécurité, étape 4.24

Omniscient Lab

RAPPORT DE CABINET EXTERNE

Protocole : Kal Mydas, contrats déployés sur Base mainnet.

Pièce source : AUDIT_OMNISCIENT_4.24_FINAL_EXTERNAL.md

Mise au propre : 25 juillet 2026, heure suisse.

Un audit de sécurité ne garantit pas l'absence de défaut après déploiement. L'usage du protocole comporte un risque de perte partielle ou totale du capital engagé.

Final Verdict: PASS — PROD-READY (After Remediation) **Auditor:** Omniscient Lab **Date:** April 25, 2026

1. Scope

The audit covered the `KalSoloPool.sol` contract (v1.1, ~500 lines), specifically focusing on solo-user choice mechanics, P&L reporting, and fee calculations.

2. Methodology

- **Deep Manual Review:** Analysis of state transitions, accounting, and security guards.
- **Invariant Fuzzing:** 300,000+ transitions via Foundry (Handler-based) testing total protocol health.
- **Hardhat Testing:** Verification of 61+ functional test cases.

3. Finding Highlights

[F-OMN-4.24-01] Management Fee vs Position Invariant (High)

The contract could accidentally reduce a user's total balance below their current bot position during fee accrual. This was corrected by capping instantaneous fee deductions to the liquid (untraded) balance.

[F-OMN-4.24-02] Loss Cap Settlement Block (High)

Strict percentage-based loss caps prevented the bot from settling accounts with very low balances or clearing large legitimate losses. A bypass was implemented for dust amounts (< 1 USDC) and full position closures.

[F-OMN-4.24-03] Management Fee Timer Leak (Medium)

Management fee timers were reset even if the elapsed time was too short for the smallest fee unit (\$0.000001). This was corrected to only reset timers when a fee is actually collected.

4. Conclusion

After the direct implementation of the recommended fixes, all Foundry invariants and functional tests pass. `KalSoloPool.sol` is now robust against identified edge cases and ready for mainnet deployment across its 5 strategy instances.

Pièce archivée par Kal Mydas. Contrats publics et vérifiables sur Basescan.