

ONESWAP

OneSwap Mainnet Operational Control Review

Prepared for Prospective liquidity providers and institutional counterparties

PREPARED FOR	Prospective liquidity providers and institutional counterparties
NETWORK	Mainnet
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PREPARED BY	OneSwap engineering

ASSESSMENT CONCLUSION

The current mainnet control environment presents ledger-anchored reserve controls, conservative settlement handling, and gated production change management

ASSESSMENT FOCUS

Reserve integrity, settlement discipline, runtime segregation, and release controls relevant to LP capital on the current OneSwap mainnet deployment.

Executive Summary

This review addresses the control areas most relevant to LP capital on OneSwap mainnet: reserve integrity, settlement handling, runtime segregation, and production release discipline.

As of 2026-04-29, the active mainnet pools were aligned between the database reserve view and the ledger-derived usable reserve view. Usable reserves are derived from live ledger holdings with explicit exclusions for balances that are not deployable liquidity, including reserved fees and other non-tradable balances. The database reserve view functions as an operational read model and is reconciled back to the ledger-based reserve position.

Settlement controls are conservative. Where the platform cannot establish a clean post-settlement state, the flow is not silently finalized. Instead, the case remains visible for recovery or operator follow-up. From an LP control perspective, that is the correct failure posture: ambiguous outcomes are held open rather than being treated as complete without evidence.

The production runtime is split across the HTTP backend, ledger-facing workers, maintenance services, and Temporal workers. Production rollout is gated by automated backend tests and a production dependency audit prior to deployment.

The remaining open item is uniform crash-safe checkpointing across all settlement and recovery paths. That item is a recoverability hardening matter. It is not currently assessed as a reserve solvency issue.

Scope and Method

This review is limited to the current OneSwap mainnet deployment and the operating controls most relevant to liquidity counterparties. The work performed for this document included:

- review of the code paths responsible for reserve accounting, settlement accounting, fee accounting, and background maintenance;
- direct inspection of the deployed mainnet runtime, including health status across backend and worker services;
- direct comparison of application reserve values against ledger-derived usable reserves for the active pools;
- review of production release gates and dependency control measures applied before EC2 deployment.

This document is not presented as an external third-party audit. It is an operator-prepared control review intended to support counterparty diligence.

Control Review

Reserve Integrity

The reserve model is ledger-anchored. The tradable reserve view is derived from live holdings on the pool swap parties rather than being inferred solely from a database counter. Balances that do not represent deployable liquidity are excluded from that usable reserve view by design. This includes reserved fee balances and other balances intentionally withheld from trading availability.

That design choice matters because it limits the chance of quoting against an optimistic reserve position. In practice, the reserve number used for trading is tied back to the ledger state rather than trusted from application memory or a stale accounting table alone.

Reconciliation of Operational Reserve State

OneSwap also maintains database reserve fields for application and operational use. Those fields are not treated as authoritative without comparison to the ledger-derived usable reserve view. The maintenance layer reconciles the database reserve position against the ledger state and corrects drift when it appears.

On the review date, the active mainnet pools were in sync between the database reserve view and the ledger-derived usable reserve view. No reserve mismatch was identified at the time of inspection.

Settlement Handling and Exception Management

Settlement completion depends on more than a request returning successfully. The control objective is to carry a swap through output transfer, reserve accounting, fee accounting, and final bookkeeping without silently finalizing an incomplete state.

Where clean completion cannot be established, the current posture is conservative. The platform leaves the case visible for recovery or follow-up rather than forcing a terminal success state. This is the appropriate behavior for capital-sensitive flows because it reduces the risk of misclassification where post-settlement evidence is incomplete.

Runtime Segregation

Mainnet operates as a split service runtime. The HTTP backend, ledger-facing workers, maintenance worker, and Temporal workers are separated rather than collapsed into a single process boundary. This reduces operational coupling and allows individual control planes to be restarted or recovered without taking down the entire execution path.

The practical consequence for LP counterparties is improved fault containment. A failure in one processing lane does not automatically imply loss of visibility across the broader operating stack.

Release Controls

Production deployment is gated before EC2 rollout. The current release flow runs the backend test suite and a production dependency audit before deployment proceeds. Dependency update automation is also in place to reduce the risk of avoidable lag in third-party packages.

These controls do not eliminate release risk, but they materially improve release discipline and reduce the probability of shipping a preventable regression directly into the live runtime.

Conclusion

On the review date, the mainnet control environment showed ledger-based reserve determination, active reconciliation of operational reserve state, conservative handling of ambiguous settlement outcomes, and gated production release controls. Those are the controls most directly relevant to LP capital protection in

normal operations.

The principal remaining item is completion of a uniform checkpointing model across the remaining settlement and recovery paths. That item should improve restart safety and operational recoverability. It does not alter the reserve alignment observed on the review date.