



Aeron Sequencer

Build your trading platform on the world's best trading infrastructure.

Modern trading systems demand high performance, consistency, and 24/7 availability. Yet, building resilient distributed systems at scale, capable of handling these complex demands, often introduces significant architectural hurdles and operational bottlenecks that limit innovation and growth.

Introducing Aeron Sequencer

Aeron Sequencer brings proven replicated state machine architecture to capital markets. Built by world-class distributed systems engineers, it delivers the availability, consistency, low latency, and throughput guarantees your trading systems need - so your teams can focus on the edge that drives your business.

The benefits

- + **Accelerate time-to-market:** Eliminate the need to build commoditized infrastructure & develop differentiated platforms that drive competitive advantage.
- + **Enable 24/7 market operations:** Adopt an architecture designed for always-on business with near zero-downtime maintenance and updates.
- + **Scale development:** Empower teams to deliver independently, allowing your platform to grow seamlessly as your business grows.
- + **Reduce risk & cost of ownership:** Minimize operational and maintenance burdens with high-performance, resilient software infrastructure - proven in production and maintained by our industry experts.
- + **Ensure regulatory compliance:** Facilitate compliance reporting and audit trails with total ordering for transparent and reliable record-keeping.
- + **Power business growth:** Avoid performance ceilings that restrict your growth and ambitions. Aeron meets the demands of today and the future.
- + **Gain business agility through application portability:** Deploy on-prem, in co-lo, or in the cloud - retain the flexibility to move between environments or cloud providers as your needs evolve.

By  Adaptive

Adaptive builds & operates bespoke trading technology solutions across asset classes for financial services firms wanting to own their tech stack to differentiate and compete in the long-term. Central to Adaptive's offering is Aeron, the global standard for high-throughput, low-latency and fault-tolerant trading systems - the open-source technology supported and sponsored by Adaptive.

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Technical Details

Core architecture

- + **Globally ordered log:** Highly available log processing millions of messages per second with platform-wide ordering guarantees.
- + **State Machine Replication:** Supports building replicated state machines resulting in high availability, consistency, low latency, and high throughput at scale.
- + **Microsecond latency:** Engineered to provide the latency performance required by today's capital markets.
- + **Automatic failover:** Fast recovery through snapshots and intelligent state management.

Developer experience

- + **Simple programming model:** Single-threaded, deterministic applications without complex distributed systems code.
- + **Deterministic replay:** Complete reproducibility for debugging, backtesting, and analysis.
- + **Rich client SDK:** Clean, well-crafted SDKs make distributed systems complexity manageable through logical, composable interfaces.
- + **Operational tooling:** Integrated monitoring and operational tooling to run your platform with confidence.
- + **Decoupled development:** Isolates business logic into separate services, allowing teams to own their specific domains and release on their own schedules.

Deployment flexibility

- + **Multiple availability modes:** Support for active/active and active/passive deployment patterns.
- + **Cloud-native architecture:** Designed for ephemeral hardware without multicast dependencies.
- + **On-premises support:** Compatibility within dedicated hardware environments.
- + **Persistent audit trail:** Complete history for consistency, fairness, and compliance requirements.
- + **24/7 operations:** Continuous operation with near zero-downtime maintenance, inter-day configuration updates and rolling upgrades.

Operational Considerations

- Aeron Sequencer is in late-stage development for deployment in both cloud and on-premises environments. [January 2026]
- To express interest in early access, email info@aeron.io.

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